

AP-125

2017 Annual Report

March 2018

1 of 2



TRANSWESTERN PIPELINE COMPANY
An ENERGY TRANSFER Company

March 14, 2018

Mr. John Kieling
New Mexico Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6313

**RE: Submittal of 2017 Groundwater Remediation Activities
For the Former Surface Impoundments Annual Report**
Roswell Compressor Station No. 9
Transwestern Pipeline Company, LLC
Roswell, Chavez County, New Mexico
NMOCD Case #GW-052/EPA ID NO. NMD986676955

Dear Mr. Kieling:

In general accordance with *Section IX – Reporting Requirements* of the March 2013 *Stipulated Final Order* for Transwestern Pipeline Company, LLC's (Transwestern) Roswell Compressor Station No. 9 (Site), attached for your review is the *2017 Groundwater Remediation Activities for the Former Surface Impoundments Annual Report* for the site.

If you have any questions or comments regarding this submission, please do not hesitate to contact me at 210.870.2725 (office) or JD Haines of EarthCon Consultants, Inc. at (317) 450-6126.

Sincerely,

Stacy Boultinghouse, PG_(TX4889/LA73)
Environmental Manager
Transwestern Pipeline Company, LLC
Stacy.Boultinghouse@energytransfer.com

Attachment: 2017 Groundwater Remediation Activities for the Former Surface
Impoundments Annual Report

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**REPORT OF 2017 GROUNDWATER REMEDIATION ACTIVITIES
FORMER SURFACE IMPOUNDMENTS
TRANSWESTERN COMPRESSOR STATION NO. 9
(ROSWELL COMPRESSOR STATION)
6381 NORTH MAIN STREET
ROSWELL, CHAVES COUNTY, NEW MEXICO
NMOCD GW-052
NMED 1656; EPA ID NMD986676955**

PREPARED FOR:

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EarthCon Project No. 02.20180005.00

March 2018

**Report of 2017 Groundwater Remediation Activities
Former Surface Impoundments
Transwestern Compressor Station No. 9
(Roswell Compressor Station)
6381 North Main Street
Roswell, Chaves County, New Mexico
NMOCD GW-052
NMED 1656; EPA ID NMD986676955**

Prepared For:

**Transwestern Pipeline Company, LLC
1300 Main
Houston, TX 77002**

March 2018

EarthCon Project No. 02.20180005.00

EarthCon Consultants, Inc. (EarthCon) is submitting to Transwestern Pipeline Company, LLC (Transwestern) this *Report of 2017 Groundwater Remediation Activities* for the Roswell Compressor Station in Roswell, Chaves County, New Mexico. This report has been prepared for the exclusive use of and reliance by Transwestern, and may not be relied upon by any other person or entity without the express written authorization of EarthCon.

Any reliance, use, or re-use of this document (or the opinions, findings, conclusions, or recommendations if any represented herein), by parties other than those expressly authorized by EarthCon is at the sole risk of those parties. This report was prepared by or performed under the direction of the EarthCon Professionals listed below and approved by Transwestern.

Signed:



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Date: March 13, 2018

**Report of 2017 Groundwater Remediation Activities
Former Surface Impoundments
Transwestern Compressor Station No. 9
(Roswell Compressor Station)
6381 North Main Street
Roswell, Chaves County, New Mexico
NMOCD GW-052
NMED 1656; EPA ID NMD986676955**


Prepared For:

**Transwestern Pipeline Company, LLC
1300 Main
Houston, TX 77002**

March 2018

**Certification Statement
40 CFR 270.11(d)(1)**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Stacy Boultinghouse, PG (TX, LA)
Environmental Manager-Emergency Response/Waste/Remediation
Transwestern Pipeline Company, LLC

3-14-18
Date

EXECUTIVE SUMMARY

This *Report of 2017 Groundwater Remediation Activities* was prepared by EarthCon Consultants, Inc. (EarthCon) on behalf of Transwestern Pipeline Company, LLC (Transwestern) for the Former Surface Impoundments at the Transwestern Compressor Station No. 9 (also known as the Roswell Compressor Station) property located at 6381 North Main Street in Roswell, New Mexico. On March 13, 2013, the New Mexico Environment Department (NMED) issued a Stipulated Order (SO) that governs activities associated with the Former Surface Impoundments. This annual groundwater report was developed in general accordance with *Section IX.D – Reporting Requirements* of the SO.

The Former Surface Impoundments were historically used to store waste hydrocarbons, including pipeline condensate, pigging wastes, spent solvents, and other wastes and debris from pipeline maintenance activities conducted at the Roswell Compressor Station. The wastes were removed from the Former Surface Impoundments and the area was backfilled with clean soil in 2001. A soil and groundwater remediation system was subsequently designed and installed to address dissolved-phase and phase separated hydrocarbons (PSH) detected in groundwater.

The remediation system in operation at the Roswell Compressor Station uses multiphase extraction (MPE) technology consisting of a soil vapor extraction (SVE) and treatment unit and a groundwater/PSH recovery and treatment unit. The recovery well network currently consists of 9 SVE-only wells and 35 MPE wells. A network of 30 monitoring wells (29 installed in the Uppermost Aquifer and one installed in the deeper regional San Andres Formation Aquifer) is used to assess groundwater conditions within the Project Area.

During 2017, the SVE portion of the recovery system operated year-round as well as the groundwater/PSH recovery portion of the remediation system, except for periods of maintenance, during the semi-annual sampling events, and between April 4 and May 3, 2017 for natural gas pipeline repairs. The groundwater portion of the system was also manually deactivated in January, February, March, and December of 2017 due to freezing temperatures.

In 2017, the operation of the SVE system was modified to conduct an optimization pilot study to evaluate the vapor-phase mass recovery rate while isolating the applied vacuum on select recovery wells. The select SVE recovery wells were grouped into clusters identified as Circuits A, B, C, and D. Each circuit was operated in isolation for a select time period to collect

measurements including vapor concentration measurements at the well heads and manifolds and groundwater drawdown and vacuum influence at each circuit well. The optimization pilot study concluded that isolating vacuum extraction efforts on select wells appears to increase mass recovery rates.

The remediation system recovered approximately 3,050 pounds of hydrocarbons (or approximately 480 gallons) in 2017 through the SVE system operation. The groundwater/PSH recovery system treated and discharged approximately 90,550 gallons of groundwater and recovered approximately 1,550 gallons of PSH. Approximately 8.6 pounds (approximately 1.4 equivalent gallons) of dissolved-phase hydrocarbons were removed by the groundwater/PSH recovery system 2017. The total hydrocarbons removed by the SVE and groundwater treatment portions of the remediation system increased compared to the amounts removed in 2016. A total of approximately 66 pounds of dissolved-phase hydrocarbons have been removed by the groundwater remediation system since May 2009. Treated groundwater was dispersed on-site via an irrigation system.

While the groundwater/PSH recovery portion of the remediation system was operational, water samples were collected monthly from four locations in the treatment process to assess treatment efficiency and compliance with discharge requirements. Additionally, semi-annual groundwater sampling was conducted in May/June and November 2017 to assess groundwater conditions.

Consistent with historical data, the May/June and November 2017 groundwater elevation data indicated groundwater flow in the Uppermost Aquifer was to the north on the northern portion of the Project Area and to the southeast on the southern portion of the Project Area. The divide in the hydraulic gradient appears to be located near the Former Surface Impoundments

During the 2017 semi-annual groundwater sampling events, PSH was present in groundwater monitoring wells and MPE wells located in the vicinity of the Former Surface Impoundments. Additionally, dissolved benzene, toluene, ethylbenzene, and xylenes (BTEX), and 1,1-DCE were detected in groundwater at concentrations exceeding the applicable cleanup levels during the sampling events. Delineation of PSH and dissolved constituents of concern to applicable New Mexico Water Quality Control Commission's (NMWQCC) standards and the EPA Maximum Contaminant Levels (MCLs) appears to be maintained within the existing monitoring network.

Groundwater Plume Analytics™ services, including the Ricker Method® Plume Stability Analysis (plume area, average concentration, and mass indicator), Center of Mass Movement over Time Analysis, Plume Spread Trends over Time Analysis, and Spatial Change Indicator™ Analysis (Pat. Pend.), were conducted for the groundwater plumes of 1,1-dichloroethane (1,1-DCA), 1,1-dichloroethene (1,1-DCE), benzene, and PSH located within the Project Area. The analyses concluded that decreasing trends in plume area, average concentration, and/or mass indicator were observed for each groundwater plume included in the study. While the 1,1-DCA and 1,1-DCE plumes appear to be migrating north, both plumes are also attenuating, and the constituents have not been detected in down-gradient monitoring wells at concentrations that exceed regulatory standards.

Based on the groundwater remediation activities completed in 2017, Transwestern recommends continued operation of the remediation system in 2018 to recover PSH and reduce dissolved-phase hydrocarbons, continued semi-annual groundwater monitoring, and continued monitoring of the effluent from the SVE system and discharge from the groundwater treatment system. Additionally, the SVE system will be operated in a manner such that vacuum extraction efforts are isolated on Circuits C and D, while pulsing operation of Circuits A and B, periodically.

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1.0 INTRODUCTION

This *Report of 2017 Groundwater Remediation Activities* was prepared by EarthCon Consultants, Inc. (EarthCon) on behalf of Transwestern Pipeline Company, LLC (Transwestern) to document ongoing corrective actions associated with the Former Surface Impoundments at the Transwestern Compressor Station No. 9 (also known as the Roswell Compressor Station) property, located at 6381 North Main Street in Roswell, New Mexico.

The Site consists of the Roswell Compressor Station (the “Facility”) and the area undergoing corrective action (the “Project Area”) (**Figure 1-1 and Figure 1-2**). On March 13, 2013, the New Mexico Environment Department (NMED) issued a Stipulated Order (SO) that governs environmental activities conducted within the Project Area. This report was developed in general accordance with *Section IX.D – Reporting Requirements* of the SO. A historical summary of submittals to NMED since the issuance of the SO is provided in **Appendix A**.

The Facility is an active natural gas compression station, owned and operated by Transwestern, located approximately 8 miles north of the city center of Roswell, New Mexico along the eastern side of U.S. Highway 285. The Facility occupies approximately 77 acres of land in Section 21 (SW¼ of the SW¼) and Section 28 (NW¼ of the NW¼) of Township 9S and Range 24E, Chaves County, New Mexico (**Figure 1-1**). Access is via U.S. Highway 285, and the entire Facility is secured by a chain-link fence with locked gates.

The Project Area encompasses a portion of the northeast corner of the Facility and a portion of a 40-acre easement of land to the northeast, leased from the New Mexico State Land Office (SLO) State Trust Land for remediation and monitoring purposes (**Figure 1-2**). Most the off-site extraction and monitoring wells are located within a fenced perimeter.

The Facility is located along the Transwestern natural gas pipeline that extends from Texas to the Arizona/California border, and serves as the district office for Transwestern's New Mexico operations. The compressor station services two 30-inch main lines and two 24-inch lateral pipelines. The primary function of the compressor station is to boost the pressure of the natural gas stream by means of compressors powered by natural gas-fueled internal combustion engines. Additionally, the Facility conducts gas transmission line maintenance operations that generate waste hydrocarbons, including pipeline condensate, pigging wastes, spent solvents, and other wastes and debris, which were historically discharged to the former surface impoundments (also referred to as

Pits 1 and 2). Wastes generated by current pipeline maintenance activities are temporarily stored in aboveground storage tanks at the Facility prior to off-site recycling.

The wastes were removed from the former surface impoundments and backfilled with clean soil in 2001. A soil and groundwater remediation system was subsequently designed and installed to address dissolved and phase separated hydrocarbons (PSH) detected in groundwater in 2002/2003.

The remediation system consists of a soil vapor extraction (SVE) and treatment unit, a groundwater/PSH recovery and treatment unit, and a network of 9 SVE-only wells and 35 multi-phase extraction (MPE) wells (**Figures 1-3 and 1-4**). Vapor-phase hydrocarbons is extracted via SVE-only wells and MPE wells and routed to two Baker Furnace thermal oxidizer units for treatment. Groundwater and PSH are recovered by pneumatic pumps installed in the MPE recovery wells. The recovered fluids are conveyed to a 90-barrel aboveground storage tank that serves as a surge tank and separation unit for PSH and groundwater. Separated groundwater is conveyed to a treatment train consisting of an air stripper, followed by a particulate filter vessel and two granulated activated carbon (GAC) units in series. The treated water is then conveyed to an irrigation water tank for dispersal via an irrigation system. PSH separated in the surge tank is removed and sent for recycling to a permitted off-site facility periodically. The SVE portion of the system began operation in March 2003, and the groundwater/PSH recovery portion of the system began operation April 2004.

Typically, the SVE portion of the system operates year-round, and groundwater/PSH recovery occurs from spring to fall, with brief shutdowns for repair and maintenance. In addition, the system is deactivated for 48 to 72 hours in preparation for semi-annual monitoring.

Currently, a network of 30 monitoring wells (29 installed in the Uppermost Aquifer and one installed in the deeper regional San Andres Formation Aquifer) is used to assess groundwater conditions within the Project Area.

This report documents groundwater remediation and monitoring activities conducted at the Project Area during year 2017. Field activities were conducted by CMB Environmental & Geologic Services, Inc. (CMB) of Roswell, New Mexico.

2.0 SCOPE OF ACTIVITIES

The activities performed at the Site during 2017 include the following and are summarized below:

- Semi-annual groundwater monitoring;
- Remediation system operation, maintenance, and monitoring;
- Remediation system optimization study;
- Plume Analytics™ services.

3.0 SEMI-ANNUAL GROUNDWATER MONITORING

Semi-annual groundwater sampling to assess groundwater conditions was conducted in May/June and November of 2017 by CMB in general accordance with the SO. On June 16, 2017, Transwestern notified the NMED via email that five monitoring wells were inadvertently not sampled during the May 2017 event and sampling of these wells would be performed in June 2017. The groundwater monitoring network at the Site consists of 30 monitoring wells. Groundwater samples were collected from 14 of these monitoring wells during the May/June 2017 sampling event and from 18 of these monitoring wells during the November 2017 sampling event, in accordance with the *Sampling and Analysis Plan* (SAP) presented in **Table 3-1**. Although not included in the SAP, two monitoring wells (MW-1B and MW-12) and three MPE wells (MPE-13, MPE-27, and MPE-39) were additionally sampled during the May/June and December 2017 sampling event to obtain groundwater data for the plume analytic evaluation presented in Section 6.0 of this report.

Prior to commencing semi-annual groundwater gauging and sampling, the remediation system was manually deactivated for a period of 48 to 72 hours. Depth to PSH, if present, and depth to groundwater was measured in each monitoring well and MPE well using a Solinst interface probe, which consists of an optical sensor probe capable of distinguishing between PSH and groundwater. Apparent PSH thickness and water levels were recorded to the nearest 0.01-foot and the data is presented in **Table 3-2**.

Prior to sampling, the selected monitoring wells were purged and monitored for stabilization of water quality parameters, including pH, specific conductance, dissolved oxygen (DO), oxidation-reduction potential (ORP), and temperature using a calibrated YSI 556 Meter. Purging was considered complete when the measured parameters of the purge water stabilized to within 10 percent for three consecutive measurements.

A combination of disposable bailers and bladder pumps with dedicated tubing was used to purge and collect groundwater samples from selected monitoring wells. The groundwater samples collected during each semi-annual sampling event were analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX) via EPA Method 8021B or for volatile organic compounds (VOCs) via EPA Method 8260B in accordance with the SAP. Quality control samples including groundwater sample duplicates, field blanks, equipment blanks and trip blanks were collected during the semi-annual sampling events. Purged groundwater and equipment decontamination water were collected in a clean 55-gallon drum during sampling and then transferred to the surge tank for on-site treatment and disposal as described in Section 1.0. Copies of the field documentation for the May/June and November 2017 sampling events are included in **Appendix B**.

3.1 Groundwater Monitoring Regulatory Criteria

Groundwater cleanup levels (GCLs) were identified for evaluating analytical data for groundwater samples collected during the semi-annual sampling events, in accordance with Section VI.A. of the March 2013 SO for the Site. The GCLs shown in **Table 3-3** were identified as described in the following paragraphs.

The target constituents-of-concern (COCs) for the Project Area include benzene, toluene, ethylbenzene, and xylenes (BTEX), 1,1-dichloroethane (1,1-DCA), and 1,1-dichloroethene (1,1-DCE). The GCLs for the target COCs were identified using the New Mexico Water Quality Control Commission's (NMWQCC) standards and the EPA Maximum Contaminant Levels (MCLs). Where standards exist in both regulations; the lower of the two levels is used as the applicable cleanup standard. If neither a NMWQCC standard nor an MCL has been established for a COC, then the cleanup level is identified as the screening level for tap water in Table A-1 of the February 2012 NMED *Risk Assessment Guidance for Site Investigation and Remediation*, or the EPA Region 6 Screening Levels for tap water.

The Project Area has been in active remediation since 2001 and the remediation system formerly operated under NMOCD's formal Discharge Permit GW-052. The NMOCD determined that the Discharge Permit is not necessary for the Site, and it is more practical to regulate the Site under a *Stage 2 Abatement Plan* (AP). In December 2015, the Discharge Permit for the Site was allowed to expire. A Stage 2 AP for the Site was submitted to the NMOCD and was approved on March 14, 2016.

3.2 Groundwater Monitoring & Chemical Analytical Data Results

The water bearing units at the Site consist of a perched aquifer within the area of the former surface impoundments, an uppermost aquifer within which most of the monitoring and remedial activities take place, and the deeper San Andres Formation Aquifer. To date, the deeper San Andres Formation Aquifer has not been impacted by the release associated with the Former Surface Impoundments. A network of 30 monitoring wells, of which 29 are installed in the Uppermost Aquifer and one installed in the deeper regional San Andres Formation Aquifer, is used to assess groundwater conditions within the Project Area. Well locations are illustrated in **Figure 3-1** and a summary of well construction information is provided in **Table 3-4**.

Groundwater elevations shown in **Table 3-2** were calculated using the May and November 2017 groundwater elevation data collected from the Site groundwater monitoring wells and top-of-casing data from a survey conducted by PR Patton & Associates in October 2013. The potentiometric surface maps for the Uppermost Aquifer presented in **Figures 3-2 and 3-3** indicate that groundwater flows to the north on the northern portion of the Project Area and to the southeast on the southern portion of the Project Area. The divide in the hydraulic gradient is located near the northeast corner of the Facility, indicating the presence of a complex water-bearing unit with areas of preferential flow. This pattern is consistent with previous years' observations.

Based on the groundwater elevation data, the hydraulic gradient for the northern component of groundwater flow, between monitoring wells MW-12 and MW-40, was 0.014 ft/ft during the May/June 2017 sampling event and 0.016 ft/ft during the November 2017 sampling event. The hydraulic gradient for the southeastern component of groundwater flow, between monitoring wells MW-16 and MW-35 was 0.006 ft/ft during the May/June 2017 sampling event and 0.004 ft/ft during the November 2017 sampling event. A review of historical groundwater elevation data for the Site monitoring wells (**Table 3-2**) indicates the Uppermost Aquifer within the Project Area has experienced an average decrease in groundwater level elevation of 1.88 feet between 2009 and November 2017. The maximum groundwater level drop was 5.46 feet in monitoring well MW-7 and the minimum groundwater level drop was 0.35 feet in monitoring well MW-16. The groundwater elevation in MW-24D, installed in the deeper regional San Andres Formation Aquifer decreased by 5.20 feet between 2009 and 2017.

Groundwater gauging data collected from Site monitoring and recovery wells during the May/June 2017 sampling event indicates that the average apparent PSH thickness was 1.44 feet, with a

maximum of 5.48 feet measured in MPE-40. Groundwater gauging data collected from Site monitoring and recovery wells during the November 2017 sampling event indicates that the average apparent PSH thickness was 1.25 feet, with a maximum of 6.86 feet measured in MPE-40. The May and November 2017 groundwater gauging data also indicates that two (SVE-22 and SVE-23) of the nine SVE wells installed in the Perched Zone continue to exhibit PSH. The areal extent of PSH in the Uppermost Aquifer, as measured during the May/June and November 2017 semi-annual sampling events, remains delineated within the Project Area and is consistent with 2016 data (**Figures 3-4 and 3-5**). Current and historical groundwater gauging data is presented in **Table 3-2**.

Groundwater samples were collected and analyzed for BTEX by EPA method 8021B or for VOCs via EPA Method 8260B in accordance with the SAP. The analytical results for groundwater samples collected during the May/June and November 2017 sampling events are summarized in **Table 3-3** and the laboratory analytical reports are included in **Appendix C**.

Transwestern implemented additional groundwater sampling in monitoring wells and MPE wells that accumulate PSH for assessing loading of the dissolved plume via the PSH. Groundwater samples were collected from selected wells immediately after bailing the wells to remove the PSH. The results of these samples are provided in **Table 3-5** and depicted on **Figures 3-6 through 3-9**. Laboratory data packages are included in **Appendix C**.

Analytical data indicates that BTEX and 1,1-DCE were detected at concentrations exceeding their respective GCLs during the May/June and November 2017 semi-annual sampling events. TEX was detected above the GCLs only in wells that exhibit PSH, thus associated with the extent of PSH. Based on the 2017 analytical data, the areal distribution of benzene, BTEX and 1,1-DCE in groundwater remains delineated within the Project Area and is consistent with the 2016 data (**Figures 3-6 through 3-11**).

Analytical results for the blanks are included in the laboratory data packages in **Appendix C** and indicate that there were no target analyte detections. For quality assurance purposes, the relative percent difference (RPD) of the reported concentrations between the original samples and their duplicates was calculated for each semi-annual sampling event. The RPDs were below 20% for each sampling event, with the calculations included in **Appendix C**.

4.0 REMEDIATION SYSTEM OPERATION, MAINTENANCE, AND MONITORING

During 2017, the SVE portion of the recovery system was operational year-round except for when the SVE system was deactivated for equipment repairs, semi-annual sampling events, and between April 4 and May 3, 2017 for natural gas pipeline repairs. In addition, an SVE optimization pilot study was performed at the site to evaluate the vapor-phase mass recovery rate while isolating the applied vacuum on select recovery wells at one-time.

The groundwater/PSH recovery portion of the remediation system operated from July 4, 2017 to December 1, 2017, except for periods of maintenance and during the semi-annual sampling events. Specifically, the groundwater/PSH recovery portion of the remediation system was deactivated in January, February, March and early December 2017 due to freezing temperatures, in April and early May 2017 for natural gas line pipeline repairs, and in June 2017 for system repairs.

The remediation system was monitored weekly to assess for continuous operation of components, maintenance needs, and early detection of potential leaks. System readings, such as flow rates, pressure, and temperature, were collected by the operator on a routine basis to monitor system performance and treatment efficiencies. During this reporting period, maintenance activities of the groundwater recovery system consisted of cleaning the air stripper, changing bag and sock filters, replacing the liquid level float switch on the surge tank, replacing a pressure gauge on the air compressor, and repairing the pump on the holding tank for Circuit D. Maintenance activities on the SVE portion of the treatment system during this reporting period included replacement of thermocouples on the east and west Baker Furnace, replacing the chart recorder paper periodically, replacing a gas valve on the west Baker Furnace, and replacing an inlet air butterfly valve.

Monthly samples were collected from July through November 2017 from the groundwater treatment system at four locations in the treatment process: at the inlet of the air-stripper (Pre-Treatment); at the outlet of the air stripper (Post Air Stripper); at the outlet of the first GAC unit (Between GACs); and at the outlet of the irrigation water holding tank (Post Treatment). The samples collected from the Pre-Treatment, Post Air Stripper, and Between GACs locations were analyzed for BTEX via method 8021B, and the Post Treatment sample was analyzed for anions via EPA method 300.0, dissolved metals via EPA method 200.7, and VOCs via EPA method 8260B.

Influent air samples from the process pipes prior to entering the east and west Baker Furnaces were collected and analyzed for total VOCs (TVOCs) by EPA Method TO-15 in March, June, August, and October 2017. Influent vapor was additionally monitored for VOC content on a weekly basis using a photoionization detector (PID), which reports total VOC concentrations in parts per million by volume (ppmV).

4.1 Soil Vapor Extraction System Monitoring Results

The average combined air flowrate of the SVE system was approximately 320 cfm with an applied vacuum ranging between 14 to 151 inches of water. The two thermal oxidizers maintained an average chamber treatment temperature of 1,470°F, which is above the required thermal destruction temperature of 1,400°F. Air samples of influent vapor were collected from the Baker Furnaces in March, June, August, and October 2017 and were analyzed for Total VOCs (TVOCs) using EPA method TO-15. Additionally, influent vapor was monitored from the Baker Furnaces by collecting air bag samples and measuring the vapor concentrations with a PID. Analytical data results summarized in **Table 4-1** indicate that the SVE system recovered approximately 3,050 pounds (or about 480 gallons) of TVOCs in 2017, which is greater than the approximate 2,000 pounds (or about 320 gallons) removed in 2016. Laboratory data packages are included in **Appendix D**. Historical SVE data was analyzed for TPH in the gasoline range organics (GRO) via EPA method 8015D. These historical tables have been included in **Appendix E**.

4.2 Groundwater Treatment System Monitoring Results

The groundwater extraction flowrate averaged 0.52 gallons per minute (gpm) in 2017. Operation records for the irrigation system presented in **Table 4-2** indicate that the volume of groundwater recovered, treated and discharged in 2017 was approximately 90,550 gallons. According to **Table 4-3**, approximately 8.6 pounds (1.4 equivalent gallons) of dissolved-phase hydrocarbons were removed by the groundwater/PSH recovery system in 2017. The amount of dissolved phase hydrocarbons removed in 2017 appears to have increased compared to 2016, during which 5.3 pounds (0.9 equivalent gallons) of dissolved phase hydrocarbons were removed from approximately 137,650 gallons of treated groundwater. A total of approximately 66 pounds of dissolved PSH has been removed by the groundwater remediation system since 2009. In addition, approximately 1,550 gallons of PSH accumulated in the surge tank in 2017, which is more than four times the amount of PSH accumulated in the surge tank in 2016 (350 gallons).

Monthly groundwater system water samples were collected from July through August 2017 from the groundwater treatment system as described in Section 2.2. Samples from the locations identified as Pre-Treatment, Between GACs, and Post Air Stripper were analyzed for BTEX via EPA Method 8021B, and the Post Treatment sample was analyzed for anions via EPA method 300.0, dissolved metals via EPA method 200.7, and VOCs via EPA method 8260B. The analytical data for these samples demonstrates that the treatment system is effectively removing the hydrocarbon constituents present in the recovered groundwater. Furthermore, analytical data for the post-treatment sample indicate that BTEX was not detected above laboratory reporting limits, except for toluene in September 2017 and benzene in September, October, and November 2017. The detected concentrations of benzene and toluene in the post-treatment samples were below their respective GCLs. Analytical data for the monthly samples is summarized in **Table 4-4** and laboratory data packages are included in **Appendix D**.

5.0 Soil Vapor Extraction Optimization Pilot Study

In 2017, a SVE optimization pilot study was performed to evaluate the vapor-mass recovery rate while applying vacuum on a select number of recovery wells at one time. The clusters of select recovery wells were identified as Circuit A, Circuit B, Circuit C, and Circuit D and are shown in **Figure 1-3**. The recovery wells located in each cluster are presented below:

Circuit A: MPE-7, MPE-8, MPE-9, MPE-10, and MPE-11

Circuit B: MPE-12, MPE-13, MPE-14, MPE-15, MPE-16, MPE-17, MPE-18, MPE-19, MPE-20, and MPE-21

Circuit C: MPE-30, MPE-31, MPE-32, MPE-33, MPE-35, MPE-36, MPE-37, MPE-39, MPE-40, and MPE-41

Circuit D: MPE-22, MPE-23, MPE-24, MPE-25, MPE-26, MPE-27, MPE-28, and MPE-29

During the study, various measurements were collected using handheld electronic devices or inline gauges located at the SVE blower and along the piping network. Data collected in the field is provided in **Appendix F**.

Pilot Study Data Evaluation

During the pilot study, vapor concentrations were measured from each recovery well line at the manifold of the selected Circuit. Vapor concentrations were measured by collecting an air sample in a tedlar bag and using a photoionization detector (PID). A summary of PID readings is provided in the table below.

Table A: PID Readings Summary of Wells at the Manifold			
Circuit	Minimum PID Reading	Maximum PID Reading	Average PID Reading
	ppmv	ppmv	ppmv
A	2.2	406	156
B	32.3	1,226	397
C	22.8	717	318
D	211	1980	794

Notes: ppmv- parts per million per volume

In Circuit A, five recovery wells were used during the study. PID readings of greater than 150 ppmV were observed in MPE-10 and MPE-11, while PID readings of less than 150 ppmV were observed in MPE-7, MPE-8, and MPE-9. The maximum PID reading of 406 ppmV was observed in MPE-10. A composite air sample was also collected from the Circuit A effluent main header line of the piping manifold. The average and maximum composite PID readings were measured to be 155 ppmV and 189 ppmV, respectively. The PID readings from the recovery wells appear to increase as the applied vacuum by the blower increases. The maximum applied wellhead vacuum achieved for Circuit A recovery wells was approximately 67.6 inches of water ("H₂O) or 5 inches of mercury ("Hg) in MPE-8.

In Circuit B, eleven recovery wells were used during the study. PID readings of greater than 150 ppmV were observed in seven of the eleven recovery wells (MPE-12, MPE-13, MPE-14, MPE-16, MPE-17, MPE-19, and MPE-20), while PID readings of less than 150 ppmV were observed in MPE-15, MPE-18, and MPE-38. The maximum PID reading was observed in MPE-17. The average and maximum Circuit B composite PID readings were measured to be 235 ppmV and 387 ppmV, respectively. The maximum applied vacuum achieved for Circuit B recovery wells was 81.57"H₂O (6"Hg).

In Circuit C, eleven recovery wells were used during the study. PID readings of greater than 150 ppmV were observed in six of the eleven recovery wells (MPE-30, MPE-31, MPE-32, MPE-35,

MPE-39, and MPE-40), while PID readings of less than 150 ppmV were observed in MPE-34, MPE-36, and MPE-37. The maximum PID reading of 717.5 ppmV was observed in MPE-31. A composite air sample was also collected from effluent main header line from Circuit C. The average and maximum composite PID readings were measured to be 338 ppmV and 363 ppmV, respectively. The maximum applied vacuum achieved for Circuit C recovery wells was 155.8"H₂O (11.4"Hg).

In Circuit D, nine recovery wells were used during the study. PID readings of greater than 200 ppmV were observed in each of the nine recovery wells (MPE-22, MPE-23, MPE-24, MPE-25, MPE-26, MPE-27, MPE-28, MPE-29, and MPE-41). The maximum PID reading of 1,980 ppmV was observed in MPE-24. A composite air sample was also collected from effluent main header line from Circuit D. The average and maximum composite PID readings were measured to be 235 ppmV and 387 ppmV, respectively. The maximum applied vacuum achieved for Circuit D recovery wells was 81.57"H₂O (6.0"Hg) in 2017. However, further field evaluation in 2018 determined that applied vacuum of 122"H₂O (9"Hg) can be achieved for Circuit D.

The applied vacuum that can be achieved appears to vary between Circuits. In January of 2018, further evaluation was performed to assess the blower vacuum and the applied vacuum. According to field evaluation, a maximum applied vacuum of approximately 4.5" Hg was maintained for Circuits A and B while an applied vacuum of greater than 9" Hg was maintained for Circuits C and D. The lower applied vacuums of Circuits A and B may be attributed to the number of operating wells and the soil bedding material used for the underground main natural gas pipe line, which may be short-circuiting air for the SVE blowers.

Vapor-phase Mass Removal

An evaluation was performed to approximate the mass removed for each circuit during the pilot study. The average PID reading for each circuit and the total blower flowrate was used in the mass removal calculations. A summary of the mass removed is provide in the table below.

Table B: Approximate Vapor-phase Mass Removal						
Circuit	Operation Time	Total Flowrate	Average PID Reading		Mass Removal Rate	Est. Mass Removed
	hours	scfm	ppmV	ug/m³	lb/hr	lb
A	552	320	156	359,583	0.43	238
B	2016	320	397	911,005	1.09	2,202
C	720	320	318	731,007	0.88	631
D	720	320	794	1,822,011	2.18	1,573
					Total	4,643

Note:

scfm = standard cubic feet per minute

ppmV = parts per million per volume

ug/m³ = micrograms per cubic meter

lb/hr = pound per hour

Vapor-phase concentrations determined by air laboratory analytical results compared to PID readings appear to be consistent considering that air samples were collected at various times during the isolation. Mass removal rates based on the average PID concentrations are approximately 1,600 pounds greater than the mass removal rates determined with air laboratory analytical results. This variance may be attributed to the actual time air bag samples were collected and the number of readings collected during the optimization study versus grab samples for the laboratory analyses.

Based on the information provided in Table B and assuming the average PID reading, vapor-phase mass removal rates were greater than 1 pound per hour (lb/hr) in Circuit B and Circuit D. The mass removal can potentially be improved by isolating recovery efforts from Circuits B, C, and D, which should be expected considering that Circuit D wells are in the source area, Circuit B wells are downgradient of the source area, and Circuit C wells also downgradient and adjacent to the source area. The estimated total pounds of mass removed (4,643 pounds) from the subsurface was achieved in 167 days (4,008 hours).

Based on the optimization study data, isolating vacuum extraction efforts on select wells appears to be increasing mass recovery rates. During the study, approximately 4,643 pounds of vapor-phase hydrocarbons were recovered in six months, which more than doubled the amount recovered in twelve months of SVE operation in 2016. Based on historical system operation data, approximately 2,000 pounds have been recovered annually (365 days). If recovery efforts were isolated on Circuit D for one year and the vapor concentrations remain consistent, mass removal amounts could potentially range between approximately 10,000 pounds and 20,000 pounds per year.

6.0 GROUNDWATER PLUME ANALYTICS™ SERVICES

6.1 Methodology

Plume Analytics Methodology

EarthCon performed Groundwater Plume Analytics™ Services for the Site using groundwater analytical data, including the following elements:

- Ricker Method® Plume Stability Analysis (plume area, average concentration, and mass indicator);
- Center of Mass Movement over Time Analysis;
- Plume Spread Trends over Time Analysis; and
- Spatial Change Indicator™ Analysis (Pat. Pend.)

The Plume Analytics™ Services were conducted for the following constituents:

- 1,1-DCA
- 1,1-DCE
- Benzene
- PSH

EarthCon performed the plume stability analysis using procedures described in A Practical Method to Evaluate Ground Water Contaminant Plume Stability (Ricker, 2008). The Ricker Method® Plume Stability Analysis compares relative changes in contaminant plume characteristics over time, including area, average concentration, and mass indicator. Note that the term “mass indicator” does not necessarily represent the entire mass in the subsurface, but rather an expression of it based on a fixed assumption of aquifer thickness and porosity. Calculation of the actual plume mass is often a very complicated exercise and typically more

data/inputs are needed than are available from typical delineation and/or remediation well information. Because the plume mass value is not necessarily an indication of actual contaminant mass, the term “mass indicator” is used to describe this metric. For PSH, only plume area and average apparent thickness were analyzed.

In order to demonstrate that a plume is decreasing or stable, temporal changes in these calculated values should result in an overall decreasing or stable trend. An increasing trend in any of these values may indicate that the plume is not stable and/or is possibly expanding. In addition to temporal trend analysis of plume characteristics, the center of plume mass is calculated. To further evaluate plume stability, the location of the plume center of mass (COM) should be evaluated over time.

The movement of the COM locations over time are analyzed and considered in conjunction with the other plume characteristics. For example, a stable or decreasing plume may actually show migration of center of mass in the downgradient direction in instances when focused remediation occurred in a source area of a site. In this case, this downgradient shift is due to the rapid loss of mass in the upgradient portion of the plume, as opposed to a gradual migration resulting from advective transport. The net direction of center of mass movement should also be considered along with other site-specific information such as site boundaries, location of receptors, and nearby bodies of water. Time and distance are also important to consider. For instance, movement toward a nearby body of water may not be of concern if the movement is minimum over time.

The plume COM evaluation for each constituent in each zone is performed by plotting each COM location on a site map with each COM location (representing discrete sampling events) color coded to visually assess spatial changes in COM location through time. Additionally, each COM movement from one sampling event to the next is represented by a color-coded vector that indicates the direction and distance of that movement. The COM vectors are then plotted together with each vector tail anchored at a common point to show variability in COM movement (similar to a wind rose diagram).

In addition to evaluating the plume COM, the spread of plume mass was evaluated. The plume spread of mass is similar to the COM evaluation in that it is a moment analysis around a fixed point. In this instance, the fixed point is the calculated COM for each plume. The plume spread

evaluation is a second-moment analysis that is meant to describe the distribution of mass around the plume center of mass.

Data Assessment and Input File Development

Groundwater analytical data and apparent PSH thickness were obtained from a period of 1996 to 2017, on a varying sampling schedule. In order to consolidate the data, dates were combined that were considered the sample sampling event. For instance, if different wells were sampled at different times during one month, the results from each well sampled during that month were consolidated into one event. Not all wells were sampled during each sampling event, which resulted in several “gaps” between sampling dates. These gaps were filled by either interpolating between those events with available data or by extrapolating prior to or subsequent to events with available data.

It should be noted that one of the benefits of the Ricker Method[®] is that it becomes more robust as the data set becomes larger. That is, the larger the data set, the less sensitive it is to adjustments in the data. For example, if the data set consists of a large number of actual data points (i.e. well concentrations), the relative impact of extrapolated/interpolated data is lessened. With this particular site the data set is sufficiently large such that assigned extrapolated/interpolated data values have relatively little influence on the overall trends and plume interpretation.

Groundwater Plume Map Development

Constituent concentration isopleth maps were developed for each constituent. Constituent concentration isopleth maps, or plume maps, were delineated to standard limits or, if not available, base contours were determined based on professional judgement. For this analysis, the following plume boundary limit concentrations were used:

- 1,1-DCA: 5 µg/L
- 1,1-DCE: 5 µg/L
- Benzene: 5 µg/L
- PSH: 0.01 ft.

It should be noted that there are varying remedial guideline concentrations for the above constituents. The resulting plume areas based on the above plume boundary limit concentrations may not be consistent with what would be indicated when comparing groundwater analytical data against the varying site-specific guidelines for each respective constituent. Further, the objective of the present

analysis is to assess plume behavior, and not necessarily to provide regulatory delineation for varying remedial guidelines.

The area of the constituent-specific plume for each year was calculated using the mathematical features of the contouring software used to develop the isopleth maps (i.e., Surfer[®] by Golden Software, Inc.) The kriging gridding method was used with the default linear variogram to develop the isopleth maps. Surfer[®] was also used for the computation of the average concentration (average apparent thickness for PSH) of each plume as described in Ricker (2008). The gridding method used for PSH was inverse distance weighting (IDW) with a power of 2.0. The plume area and average concentration were then used to calculate the plume mass indicator for each event. This was not done for PSH, due to the inability to accurately estimate plume mass based on area and apparent thickness.

The mass indicator is not necessarily an indication of the actual total mass of the contaminant in groundwater; rather it is a means to combine the variables of area and concentration into one meaningful indicator variable. Since the main purpose of the plume stability analysis is to observe relative changes in this value between sampling events, applying constants (i.e., porosity and aquifer thickness) to the mass indicator calculation has no bearing on the usefulness of the output of the analysis (i.e., relative rate of change in plume mass indicator).

Statistical Methodology

To evaluate the stability of each constituent plume, temporal trends of the metrics for each plume were evaluated statistically. The area, average concentration (average apparent thickness for PSH), and mass indicator for each year were initially plotted to observe changes in each parameter from event to event.

The temporal trends in the plume metric values were statistically evaluated using both linear regression techniques and the Mann-Kendall Test. Linear regression analyses were conducted using the regression analysis utility in Microsoft Excel. The Mann-Kendall Tests were also conducted using Microsoft Excel spreadsheets based on procedures described in Gilbert (1987). Linear regression is a parametric statistical procedure that is typically used for analyzing trends in data over time. The Mann-Kendall Test is a non-parametric statistical test; therefore, it is not dependent upon the magnitude of the data, assumptions of distribution, or regularly spaced sampling events.

The Mann-Kendall Test is used to assess whether a data set exhibits an increasing or decreasing trend at a predetermined level of significance (α). The test requires the calculation of a statistic “S” which is the difference between the number of paired differences that are positive, minus the number that are negative. If S is a large positive value, then there is evidence of an increasing trend in the data. If S is a large negative value, then there is evidence of a decreasing trend in the data. The null hypothesis, H_0 , for the Mann-Kendall Test is that there is no temporal trend in the data. The alternative hypothesis, H_A , is that of either an increasing trend or a decreasing trend.

If the null hypothesis is not rejected (i.e., no trend could be established statistically), it is expected that the plume is stable. However, a stable plume may not in fact be evident because the statistical test does not take into account magnitude or variation in the data. For example, a data set can exhibit a large amount of scatter, yet the test could conclude that the plume is stable. A methodology to counter the problem of scatter in the data involves comparing the calculated S statistic, a calculated confidence factor ($1-\alpha$), and the coefficient of variation for the data set. The S statistic indicates the direction of the trend, the confidence factor shows how strong the trend is, and the coefficient of variation indicates the degree of scatter in the data.

When evaluating trends using linear regression, trends may be obscured by scatter in the data. This condition is typically indicated by a low coefficient of determination (R^2) value. Even with low R^2 values (i.e., high degree of scatter), a confidence interval can still be constructed on the slope of the regression line. As described in AFCEE (2006), assuming the sign (i.e., positive or negative) of the estimated log-slope is correct, a level of confidence that the slope is not zero can be easily determined. The overall trend in the data may thus still be determined, where low levels of confidence correspond to stable or indeterminate trends and higher levels of confidence (e.g., > 90%) indicate the stronger likelihood of a trend.

For the plume stability analysis, significant trends are established when the calculated confidence factor is greater than or equal to 90%. In many cases the statistical results for both linear regression and Mann-Kendall Test agree with each other. In the case where two different results are obtained (e.g., one stable trend and one decreasing trend), visual analysis and professional judgment are used to determine the overall trend result.

Trend analysis results for plume area, average concentration (average apparent thickness for PSH), and mass indicator for each constituent are discussed in the following section.

Spatial Change Indicator™ Methodology

The Spatial Change Indicator™ evaluation (patent pending) shows relative changes in the plume over time. For this analysis, each plume map in a particular time period is compared to the first plume map in the series. The current plume is subtracted from the original plume to create a new isopleth map that shows areas of the plume that decreased in concentration (indicated by blue shading), increased in concentration (indicated by red shading), or did not change (indicated by clear or no shading). The visual aspect of this analysis allows the viewer to observe patterns of plume behavior (e.g., movement of dissolved mass) over time.

This analysis also has a quantitative component. Each Spatial Change Indicator™ map also shows the percent change (increase or decrease) of the plume between the two events in terms of area, average concentration (average apparent thickness for PSH), and mass indicator. Additionally, for areas that increased or decreased in concentration, a representative mass is calculated using Ricker Method® procedures. That is, the magnitude of mass increase (red shaded areas) and mass decrease (blue shaded areas) is also shown on each map.

6.2 Plume Analytics Findings

The findings of the Plume Analytics™ services conducted for the constituents 1,1-DCA, 1,1-DCE, benzene, and PSH are summarized below. An electronic copy of the Plume Analytics™ presentation is included in **Appendix G**.

1,1-DCA

The existing 1,1-DCA plume is located in the vicinity of monitoring wells MW-20 and MW-26. From 1997 to 2017, the plume exhibited no statistical trend in area and mass indicator; however, there was a statistical decrease in the average concentration. From November 2015 to November 2017, the plume exhibited strong decreases in mass indicator, average concentration, and area. The 1,1-DCA plume appears to be migrating and attenuating to the north, in the direction of groundwater flow, toward MW-26, but 1,1-DCA has consistently not been detected in monitoring wells down-gradient from MW-26.

1,1-DCE

The existing 1,1-DCE is located in the vicinity of monitoring wells MW-20, MW-26, and MW-39. From 1997 to 2017, the plume exhibited statistically decreasing trends in area, average concentration, and mass indicator. There is a strong correlation (0.69) between changes in the average concentration of the plume and changes in groundwater elevation in the plume area. The plume area appears to be migrating and attenuating to the north, in the direction of groundwater flow, toward monitoring well MW-39, but 1,1-DCE is consistently not detected or is detected below the GCL in monitoring wells down-gradient from MW-39.

Benzene

The existing benzene plume is located in the central portion of the Site between monitoring wells MW-27, MW-16, and MW-12. Multiple changes to the monitoring well network, such as the addition of new monitoring wells, created a shift in trends while performing a temporal analysis; therefore, the trended data was separated into multiple time periods: pre-2003, 2003 to 2011, 2012 to 2016 and 2017 to present. Trend analyses were performed for the 2003 to 2011 and the 2012 to 2016 time periods. Due to the limited number of sampling events available for the network established in 2017, trend analyses were not performed for this time period. Trends will be established for this network once four sampling events are available. This report will focus on the 2012 to 2016 trend analyses as they are the most recent trends available. From 2012 to 2016, decreasing trends were exhibited in the plume area, average concentration, and mass indicator. The benzene plume appeared to be attenuating which is demonstrated by decreased concentrations in the vicinity of MW-12 and MW-16.

PSH

The existing PSH plume is located in the central portion of the Site and the extent is somewhat concurrent with the benzene plume. Monitoring wells were added to the sampled network in Fall 2013. From Fall 2013 to 2017, the PSH plume area exhibited a statistically decreasing trend; specifically, there was a 46% decrease in the PSH plume area and a 31% decrease in average apparent thickness.

7.0 SUMMARY OF FINDINGS AND CONCLUSIONS

Based on the information presented in the previous sections regarding the operation of the remediation system installed at the Project Area, the following findings and conclusions are offered:

- The 2017 groundwater gauging data identified a northern component of groundwater flow with a gradient of 0.014 ft/ft during the May/June sampling event and 0.016 ft/ft during the November 2017 sampling event and a southeastern component of groundwater flow with a gradient of 0.006 ft/ft during the April/May sampling and 0.004 ft/ft during the November 2017 sampling event. These gradients are consistent with previous years' observations.
- Historical gauging data for the Site monitoring wells indicates that between 2009 and 2017 groundwater elevation in the Uppermost Aquifer of the Project Area has decreased by an average of 1.88 feet and groundwater elevation in the deeper San Andreas Formation Aquifer has decreased by an average of 5.20 feet.
- Groundwater gauging data collected from the Site monitoring and recovery wells during the May/June and November 2017 semi-annual groundwater monitoring event indicates that PSH remains delineated within the Project Area. The average apparent thicknesses of PSH measured in 2017 were 1.44 feet during the May/June sampling event and 1.88 feet during the November sampling event. The maximum apparent thicknesses of PSH in 2017 were measured in monitoring well MPE-40 and were 5.48 feet during the May/June sampling event and 6.86 feet during the November sampling event.
- Analytical data from the 2017 semi-annual groundwater monitoring events indicates that BTEX and 1,1-DCE were detected at dissolved concentrations exceeding the GCLs. These exceedances appear to be maintained within the existing monitoring network.
- During 2017, the SVE portion of the recovery system operated until year-round except for periods of maintenance, and the groundwater/PSH recovery portion of the system operated from March to November except for during periods of system maintenance, repairs to the nearby natural gas pipeline, and the semi-annual sampling events. Approximately, 3,050 pounds of TVOCs (approximately 480 equivalent gallons) were recovered by the SVE technology.

- The groundwater/PSH recovery system recovered, treated and discharged 90,550 gallons of groundwater in 2017. Approximately 8.6 pounds of dissolved-phase BTEX hydrocarbons were removed by the groundwater/PSH recovery system in 2017. A total of approximately 66 pounds have been removed by the system since May 2009. The groundwater/PSH recovery system recovered approximately 1,550 gallons of PSH in 2017.
- Samples collected on a monthly basis between July and November 2017 from the groundwater treatment system demonstrate that the treatment system is effectively removing the hydrocarbon constituents present in the recovered groundwater.
- A SVE system optimization pilot study was conducted in 2017. The SVE system operations were modified to evaluate the vapor-phase mass recovery rate while isolating the applied vacuum on select recovery wells. The select SVE recovery wells were grouped into clusters identified as Circuits A, B, C, and D. Each circuit was operated in isolation for a select time period to collect measurements including vapor concentration measurements at the well heads and manifolds and groundwater drawdown and vacuum influence at each circuit well. The optimization pilot study concluded that isolating vacuum extraction efforts on select wells, especially Circuits C and D, appears to increase mass recovery rates.
- Groundwater Plume Analytics™ services were conducted for the groundwater plumes of 1,1-DCA, 1,1-DCE, benzene, and PSH located within the Project Area. The analyses concluded that decreasing trends in plume area, average concentration, and/or mass indicator were observed for each groundwater plume included in the study. While the 1,1-DCA and 1,1-DCE plumes appear to be migrating north, both plumes are also attenuating and the constituents have not been detected in down-gradient monitoring wells at concentrations that exceed regulatory standards.

Based on the 2017 groundwater data, the groundwater treatment system appears to be controlling the migration of the PSH plume and continues to recover PSH and dissolved-phase hydrocarbons. In 2017, 1,550 gallons of PSH were recovered during the isolation study, which is five times more than the previous year. In addition, 1,000 pounds more of vapor-phase hydrocarbons were recovered during the isolation period than the previous year. The groundwater plume analytics information also suggests that dissolved-phase hydrocarbons extent is

decreasing and attenuating. The 2017 groundwater data indicated that fewer wells contained PSH than the previous year.

8.0 RECOMMENDATIONS

Based on the 2017 groundwater remediation activities, Transwestern recommends the following:

- Continued operation of the remediation system to recover PSH and reduce dissolved-phase hydrocarbons.
- Isolate vacuum extraction efforts on each recovery well circuit, focusing mainly on Circuits C and D, and pulsing with Circuits A and B.
- Semi-annual sampling conducted in accordance with SAP.
- Quarterly air sampling of the SVE/MPE influent to the Baker Furnaces and monthly sampling from the groundwater treatment system at the four locations or stages in the treatment train for comparison with NMWQCC standards.

TABLES

Table 3-1. Sampling and Analysis Plan
Transwestern Compressor Station No. 9 - Roswell, NM

Well ID	1st Semiannual Event Analytical Requirements	2nd Semiannual Event Analytical Requirements	Date of Most Recent Sample	Benzene (ppb) Most Recent Sample	1,1-Dichloroethene (1,1-DCE) (ppb) Most Recent Sample	Consecutive Events < NMWQCC Standard or EPA MCL	Comments
MW-13	---	BTEX	11/16/17	< 1	NA	21	Previously contained elevated benzene
MW-14	---	BTEX	11/15/17	< 1	NA	10	Previously contained elevated benzene
MW-16	BTEX	BTEX	11/15/17	87	NA	0	PSH in well, sampled below PSH
MW-20	VOCs	VOCs	11/15/17	< 1	7.3	0	COCs: DCE
MW-21	BTEX	BTEX	11/14/17	< 1	NA	20	Previously contained elevated benzene
MW-22	VOCs	VOCs	11/15/17	< 1	2.6	28	COCs: DCE
MW-24D	---	BTEX	11/16/17	< 1	NA	7	Clean deep well
MW-26	VOCs	VOCs	11/15/17	< 1	44	0	COCs: DCE
MW-27	BTEX	BTEX	11/14/17	82	NA	0	Previously below detection limits.
MW-29	BTEX	BTEX	11/14/17	< 1	NA	14	Previously contained elevated benzene
MW-32	---	BTEX	11/14/17	< 1	NA	20	Previously contained elevated benzene
MW-34	BTEX	BTEX	11/14/17	< 1	NA	6	Previously contained elevated benzene
MW-35	---	BTEX	11/14/17	< 1	NA	29	Clean downgradient well
MW-37	---	BTEX	11/14/17	< 1	NA	19	Clean downgradient well
MW-39	VOCs	VOCs	11/16/17	< 1	31	0	COCs: DCE
MW-40	VOCs	VOCs	11/16/17	< 1	< 1	7	Clean downgradient well
MW-41	VOCs	VOCs	11/16/17	< 1	1.3	7	COCs: DCE
MW-42	VOCs	VOCs	11/16/17	< 1	1.1	6	Clean downgradient well

Notes:

1) Non-detect results are shown with the "<" symbol followed by the reporting limit

2) NA - Not analyzed

3) BTEX (Benzene, Toluene, Ethylbenzene and Xylenes) and VOCs (Volatile Organic Compounds) to be analyzed by EPA method 8260

4) ppb - parts per billion

5) NMWQCC - New Mexico Water Quality Control Commission

6) EPA MCL - United States Environmental Protection Agency's Maximum Contamination Level

7) This SAP was approved in NMED's Approval with Modifications Letter dated November 6, 2017.

8) Monitoring wells MW-5, MW-6, MW-8, MW-9, MW-18, MW-19, MW-23D, MW-25D, MW-31, MW-36, and MW-38 were plugged and abandoned in August 2013.

Prepared by: RLA 1/19/2018

Checked by: SSD 2/9/18

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MW-1B	3/10/09	3609.96	60.46	62.20	1.74	3,549.08
	10/8/09		sheen	64.18	sheen	3,545.78
	1/26/10		60.32	60.60	0.28	3,549.57
	3/22/10		59.82	61.86	2.04	3,549.65
	4/17/11		60.18	62.05	1.87	3,549.33
	12/22/11		61.01	63.24	2.23	3,548.41
	4/17/12		60.65	62.45	1.80	3,548.88
	10/18/12		61.88	64.21	2.33	3,547.52
	1/22/13		61.38	63.55	2.17	3,548.06
	4/15/13		61.24	63.10	1.86	3,548.27
	11/3/13	3610.74 (h)	62.19	63.35	1.16	3,548.27
	4/30/14		61.50	62.73	1.23	3,548.94
	11/19/14		61.87	64.03	2.16	3,548.35
	4/21/15		61.76	63.25	1.49	3,548.62
	11/3/15		61.88	63.66	1.78	3,548.43
	4/29/16		61.81	63.28	1.47	3,548.58
	11/16/16		62.12	63.68	1.56	3,548.25
	5/22/17		61.80	62.90	1.10	3,548.68
	11/13/17		62.65	64.41	1.76	3,547.67
MW-2	3/10/09	3611.76	(a)	59.10	(a)	3,552.66
	10/8/09		(a)	60.39	(a)	3,551.37
	3/22/10		(a)	59.66	(a)	3,552.10
	4/17/11		(a)	59.77	(a)	3,551.99
	12/22/11		(a)	59.79	(a)	3,551.97
	4/17/12		(a)	60.30	(a)	3,551.46
	10/18/12		(a)	61.30	(a)	3,550.46
	1/22/13		(a)	61.07	(a)	3,550.69
	4/15/13		(a)	61.30	(a)	3,550.46
	11/3/13	3612.62 (h)	(a)	60.77	(a)	3,551.85
	4/30/14		(a)	60.48	(a)	3,552.14
	11/19/14		(a)	60.60	(a)	3,552.02
	4/21/15		(a)	58.85	(a)	3,553.77
	11/3/15		(a)	59.45	(a)	3,553.17
	4/28/16		(a)	59.59	(a)	3,553.03
	11/16/16		(a)	59.97	(a)	3,552.65
	5/22/17		(a)	60.29	(a)	3,552.33
	11/13/17		(a)	60.83	(a)	3,551.79
MW-3	3/10/09	3614.87	(a)	66.23	(a)	3,548.64
	10/8/09		(a)	66.77	(a)	3,548.10
	3/22/10		(a)	66.37	(a)	3,548.50
	4/17/11		(a)	66.39	(a)	3,548.48
	12/22/11		(a)	66.86	(a)	3,548.01
	4/17/12		(a)	66.67	(a)	3,548.20
	10/18/12		(a)	67.28	(a)	3,547.59
	1/22/13		(a)	67.22	(a)	3,547.65
	4/15/13		(a)	67.11	(a)	3,547.76
	11/3/13	3615.75 (h)	(a)	67.47	(a)	3,548.28
	4/30/14		(a)	67.31	(a)	3,548.44
	11/19/14		(a)	67.74	(a)	3,548.01
	4/21/15		(a)	67.52	(a)	3,548.23
	11/3/15		(a)	67.61	(a)	3,548.14
	4/29/16		(a)	67.42	(a)	3,548.33
	11/16/16		(a)	67.95	(a)	3,547.80
	5/22/17		(a)	67.55	(a)	3,548.20
	11/13/17		(a)	68.20	(a)	3,547.55

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MW-7	3/10/09	3599.20	(a)	58.24	(a)	3,540.96
	10/8/09		(a)	62.12	(a)	3,537.08
	3/22/10		(a)	58.68	(a)	3,540.52
	4/17/11		(a)	59.42	(a)	3,539.78
	12/22/11		(a)	63.09	(a)	3,536.11
	4/17/12		(a)	62.30	(a)	3,536.90
	10/18/12		(a)	66.14	(a)	3,533.06
	1/22/13		(a)	64.40	(a)	3,534.80
	4/15/13		(a)	63.71	(a)	3,535.49
	11/3/13	3599.96 (h)	(a)	66.07	(a)	3,533.89
	4/30/14		(a)	64.30	(a)	3,535.66
	11/19/14		(a)	64.02	(a)	3,535.94
	4/20/15		(a)	61.04	(a)	3,538.92
	11/3/15		(a)	63.24	(a)	3,536.72
	4/27/16		(a)	61.15	(a)	3,538.81
	11/16/16		(a)	63.8	(a)	3,536.16
	5/22/17		(a)	62.30	(a)	3,537.66
	11/13/17		(a)	64.46	(a)	3,535.50
MW-10	3/10/09	3617.85	(a)	68.49	(a)	3,549.36
	10/8/09		(a)	69.18	(a)	3,548.67
	3/22/10		(a)	68.85	(a)	3,549.00
	4/17/11		(a)	68.85	(a)	3,549.00
	12/22/11		(a)	69.32	(a)	3,548.53
	4/17/12		(a)	69.19	(a)	3,548.66
	10/18/12		(a)	69.78	(a)	3,548.07
	1/22/13		(a)	69.79	(a)	3,548.06
	4/15/13		(a)	69.70	(a)	3,548.15
	11/3/13	3618.81 (h)	(a)	70.04	(a)	3,548.77
	4/30/14		(a)	69.93	(a)	3,548.88
	11/19/14		(a)	70.23	(a)	3,548.58
	4/21/15		(a)	70.06	(a)	3,548.75
	11/3/15		(a)	70.07	(a)	3,548.74
	4/29/16		(a)	69.90	(a)	3,548.91
	11/16/16		(a)	70.43	(a)	3,548.38
	5/22/17		(a)	70.03	(a)	3,548.78
	11/13/17		(a)	70.62	(a)	3,548.19
MW-11	3/10/09	3613.31	(a)	64.30	(a)	3,549.01
	10/8/09		(a)	65.39	(a)	3,547.92
	3/22/10		(a)	64.69	(a)	3,548.62
	4/17/11		(a)	64.55	(a)	3,548.76
	12/22/11		(a)	65.36	(a)	3,547.95
	4/17/12		(a)	64.97	(a)	3,548.34
	10/18/12		(a)	66.03	(a)	3,547.28
	1/22/13		(a)	65.69	(a)	3,547.62
	4/15/13		(a)	65.45	(a)	3,547.86
	11/3/13	3614.08 (h)	(a)	65.95	(a)	3,548.13
	4/30/14		(a)	65.71	(a)	3,548.37
	11/19/14		(a)	66.47	(a)	3,547.61
	4/21/15		(a)	65.70	(a)	3,548.38
	11/3/15		(a)	65.53	(a)	3,548.55
	4/28/16		(a)	65.50	(a)	3,548.58
	11/16/16		(a)	66.67	(a)	3,547.41
	5/22/17		(a)	65.55	(a)	3,548.53
	11/13/17		(a)	66.83	(a)	3,547.25

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MW-12	3/10/09	3606.38	56.16	56.57	0.41	3,550.12
	10/8/09		57.17	57.18	0.01	3,549.21
	1/26/10		(a)	56.95	(a)	3,549.43
	3/22/10		56.34	58.23	1.89	3,549.59
	4/17/11		56.00	57.47	1.47	3,550.03
	12/22/11		57.01	57.18	0.17	3,549.33
	4/17/12		56.75	59.72	2.97	3,548.92
	10/15/12		57.33	58.28	0.95	3,548.82
	1/22/13		54.93	57.30	2.37	3,550.88
	4/15/13		57.28	60.74	3.46	3,548.27
	11/3/13	3606.98 (h)	57.71	60.15	2.44	3,548.68
	4/30/14		57.57	62.68	5.11	3,548.18
	11/19/14		56.9	59.91	3.01	3,549.36
	4/21/15		56.51	56.74	0.23	3,550.41
	11/3/15		56.03	56.18	0.15	3,550.91
	4/27/16		56.21	56.27	0.06	3,550.76
	11/16/16		56.58	56.60	0.02	3,550.40
	5/22/17		(a)	56.68	(a)	3,550.30
	11/13/17		(a)	57.21	(a)	3,549.77
MW-13	3/10/09	3612.46	(a)	63.76	(a)	3,548.70
	10/8/09		(a)	64.35	(a)	3,548.11
	1/26/10		(a)	64.05	(a)	3,548.41
	3/22/10		(a)	63.78	(a)	3,548.68
	4/17/11		(a)	63.65	(a)	3,548.81
	12/22/11		(a)	64.64	(a)	3,547.82
	4/17/12		(a)	64.31	(a)	3,548.15
	10/18/12		(a)	64.99	(a)	3,547.47
	1/22/13		(a)	64.70	(a)	3,547.76
	4/15/13		(a)	64.59	(a)	3,547.87
	11/3/13	3613.19 (h)	(a)	64.70	(a)	3,548.49
	4/30/14		(a)	64.91	(a)	3,548.28
	11/19/14		(a)	65.27	(a)	3,547.92
	4/21/15		(a)	64.93	(a)	3,548.26
	11/3/15		(a)	65.13	(a)	3,548.06
	4/29/16		(a)	65.03	(a)	3,548.16
	11/16/16		(a)	65.37	(a)	3,547.82
	5/22/17		(a)	65.10	(a)	3,548.09
	11/13/17		(a)	66.42	(a)	3,546.77
MW-14	3/10/09	3604.83	(a)	54.43	(a)	3,550.40
	10/8/09		(a)	54.57	(a)	3,550.26
	3/22/10		(a)	54.23	(a)	3,550.60
	4/17/11		(a)	54.72	(a)	3,550.11
	12/22/11		(a)	55.43	(a)	3,549.40
	4/17/12		(a)	h	(a)	NA
	10/15/12		(a)	55.52	(a)	3,549.31
	1/22/13		(a)	55.63	(a)	3,549.20
	4/15/13		(a)	55.61	(a)	3,549.22
	11/3/13	3605.55 (h)	(a)	55.89	(a)	3,549.66
	4/30/14		(a)	56.03	(a)	3,549.52
	11/19/14		(a)	56.08	(a)	3,549.47
	4/20/15		(a)	55.83	(a)	3,549.72
	11/3/15		(a)	55.89	(a)	3,549.66
	4/27/16		(a)	55.94	(a)	3,549.61
	11/16/16		(a)	56.14	(a)	3,549.41
	5/22/17		(a)	56.14	(a)	3,549.41
	11/13/17		(a)	56.67	(a)	3,548.88

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MW-15	3/10/09	3610.43	(a)	59.30	(a)	3,551.13
	10/8/09		(a)	58.82	(a)	3,551.61
	3/22/10		(a)	58.43	(a)	3,552.00
	4/17/11		(a)	58.94	(a)	3,551.49
	12/22/11		(a)	59.26	(a)	3,551.17
	4/17/12		(a)	59.45	(a)	3,550.98
	10/15/12		(a)	59.65	(a)	3,550.78
	1/22/13		(a)	59.88	(a)	3,550.55
	4/15/13		(a)	59.99	(a)	3,550.44
	11/3/13	3611.24 (h)	(a)	60.10	(a)	3,551.14
	4/30/14		(a)	60.36	(a)	3,550.88
	11/19/14		(a)	60.38	(a)	3,550.86
	4/20/15		(a)	60.50	(a)	3,550.74
	11/3/15		(a)	60.73	(a)	3,550.51
	4/27/16		(a)	60.81	(a)	3,550.43
	11/15/16		(a)	60.75	(a)	3,550.49
	5/22/17		(a)	60.67	(a)	3,550.57
	11/13/17		(a)	61.20	(a)	3,550.04
MW-16	3/10/09	3612.41	65.25	65.26	0.01	3,547.16
	10/8/09		65.91	65.92	0.01	3,546.50
	1/26/10		(a)	65.57	(a)	3,546.84
	3/22/10		(a)	65.19	sheen	3,547.22
	4/17/11		(a)	65.36	(a)	3,547.05
	12/22/11		(a)	65.99	sheen	3,546.42
	4/17/12		65.58	65.59	0.01	3,546.83
	10/15/12		(a)	66.55	(a)	3,545.86
	1/22/13		(a)	66.32	(a)	3,546.09
	4/15/13		(a)	66.17	(a)	3,546.24
	11/3/13	3613.16 (h)	(a)	66.48	(a)	3,546.68
	4/30/14		(a)	66.20	(a)	3,546.96
	11/19/14		66.8	66.91	0.11	3,546.33
	4/20/15		(a)	66.48	(a)	3,546.68
	11/3/15		67.29	67.46	0.17	3,545.83
	4/27/16		67.05	67.19	0.14	3,546.08
	11/16/16		68.11	68.15	0.04	3,545.04
	5/22/17		66.96	67.20	0.24	3,546.14
	7/14/17		68.72	69.11	0.39	3,544.35
	7/28/17		69.11	69.63	0.52	3,543.93
	8/7/17		69.07	69.61	0.54	3,543.96
	9/9/17		70.11	70.47	0.36	3,542.96
	11/13/17		68.44	68.55	0.11	3,544.69

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MW-17	3/10/09	3608.43 (d)	(a)	61.20	(a)	3,547.23
	10/8/09		(a)	61.64	(a)	3,546.79
	3/22/10		(a)	60.95	(a)	3,547.48
	4/17/11		(a)	61.11	(a)	3,547.32
	12/22/11		(a)	61.42	(a)	3,547.01
	4/17/12		(a)	61.43	(a)	3,547.00
	10/15/12		(a)	61.95	(a)	3,546.48
	1/22/13		(a)	62.17	(a)	3,546.26
	4/15/13		(a)	61.97	(a)	3,546.46
	11/3/13	3609.20 (h)	(a)	62.23	(a)	3,546.97
	4/30/14		(a)	62.12	(a)	3,547.08
	11/19/14		(a)	62.40	(a)	3,546.80
	4/20/15		(a)	62.21	(a)	3,546.99
	11/3/15		(a)	62.91	(a)	3,546.29
	4/27/16		(a)	62.51	(a)	3,546.69
	11/15/16		(a)	63.37	(a)	3,545.83
	5/22/17		(a)	62.89	(a)	3,546.31
	11/13/17		(a)	63.92	(a)	3,545.28
MW-20	3/10/09	3600.65	(a)	52.08	(a)	3,548.57
	10/8/09		(a)	58.30	(a)	3,542.35
	10/9/09		(a)	55.57	(a)	3,545.08
	3/22/10		(a)	52.62	(a)	3,548.03
	4/17/11		(a)	52.43	(a)	3,548.22
	12/22/11		(a)	58.35	(a)	3,542.30
	4/17/12		(a)	53.50	(a)	3,547.15
	10/15/12		(a)	54.92	(a)	3,545.73
	1/22/13		(a)	54.13	(a)	3,546.52
	4/15/13		(a)	53.90	(a)	3,546.75
	11/3/13	3601.34 (h)	(a)	54.35	(a)	3,546.99
	4/30/14		(a)	54.28	(a)	3,547.06
	11/19/14		(a)	55.82	(a)	3,545.52
	4/21/15		(a)	53.24	(a)	3,548.10
	11/3/15		(a)	52.47	(a)	3,548.87
	4/28/16		(a)	53.13	(a)	3,548.21
	11/16/16		(a)	54.28	(a)	3,547.06
	5/22/17		(a)	53.43	(a)	3,547.91
	11/13/17		(a)	56.10	(a)	3,545.24

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MW-21	3/10/09	3611.99 (d)	(a)	65.43	(a)	3,546.56
	10/8/09		(a)	66.30	(a)	3,545.69
	1/26/10		(a)	65.79	(a)	3,546.20
	3/22/10		(a)	65.31	(a)	3,546.68
	4/17/11		(a)	65.02	(a)	3,546.97
	12/22/11		(a)	65.28	(a)	3,546.71
	4/17/12		(a)	65.44	(a)	3,546.55
	10/15/12		(a)	65.57	(a)	3,546.42
	1/22/13		(a)	65.51	(a)	3,546.48
	4/15/13		(a)	65.54	(a)	3,546.45
	11/3/13	3612.71 (h)	(a)	66.08	(a)	3,546.63
	4/30/14		(a)	65.82	(a)	3,546.89
	11/19/14		(a)	66.17	(a)	3,546.54
	4/20/15		(a)	66.08	(a)	3,546.63
	11/3/15		(a)	66.15	(a)	3,546.56
	4/27/16		(a)	66.34	(a)	3,546.37
	11/15/16		(a)	66.43	(a)	3,546.28
	5/22/17		(a)	66.32	(a)	3,546.39
	7/14/17		(a)	67.38	(a)	3,545.33
	7/28/17		(a)	67.28	(a)	3,545.43
	8/7/17		(a)	67.17	(a)	3,545.54
	9/9/17		(a)	67.53	(a)	3,545.18
	11/13/17		(a)	66.65	(a)	3,546.06
MW-22	3/10/09	3606.04	(a)	57.14	(a)	3,548.90
	10/8/09		(a)	58.25	(a)	3,547.79
	3/22/10		(a)	57.33	(a)	3,548.71
	4/17/11		(a)	57.38	(a)	3,548.66
	12/22/11		(a)	58.65	(a)	3,547.39
	4/17/12		(a)	57.88	(a)	3,548.16
	10/15/12		(a)	58.93	(a)	3,547.11
	1/22/13		(a)	58.60	(a)	3,547.44
	4/15/13		(a)	58.36	(a)	3,547.68
	11/3/13	3606.62 (h)	(a)	58.94	(a)	3,547.68
	4/30/14		(a)	58.49	(a)	3,548.13
	11/19/14		(a)	59.38	(a)	3,547.24
	4/21/15		(a)	58.56	(a)	3,548.06
	11/3/15		(a)	58.42	(a)	3,548.20
	4/28/16		(a)	58.38	(a)	3,548.24
	11/16/16		(a)	59.33	(a)	3,547.29
	5/22/17		(a)	58.47	(a)	3,548.15
	11/13/17		(a)	59.63	(a)	3,546.99

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MW-24 D	3/10/09	3595.95 (c)	(a)	56.62	(a)	3,539.33
	10/8/09		(a)	61.13	(a)	3,534.82
	3/22/10		(a)	56.22	(a)	3,539.73
	4/17/11		(a)	58.73	(a)	3,537.22
	12/22/11		(a)	60.28	(a)	3,535.67
	4/17/12		(a)	61.39	(a)	3,534.56
	10/15/12		(a)	65.33	(a)	3,530.62
	1/22/13		(a)	61.26	(a)	3,534.69
	4/15/13		(a)	62.76	(a)	3,533.19
	11/3/13	3596.80 (h)	(a)	64.42	(a)	3,532.38
	4/30/14		(a)	62.91	(a)	3,533.89
	11/19/14		(a)	61.76	(a)	3,535.04
	4/21/15		(a)	59.61	(a)	3,537.19
	11/3/15		(a)	61.03	(a)	3,535.77
	4/28/16		(a)	59.44	(a)	3,537.36
	11/16/16		(a)	61.59	(a)	3,535.21
	5/22/17		(a)	61.03	(a)	3,535.77
	11/13/17		(a)	62.67	(a)	3,534.13
MW-26	3/10/09	3597.75 (c)	(a)	50.11	(a)	3,547.64
	10/8/09		(a)	52.35	(a)	3,545.40
	3/22/10		(a)	50.52	(a)	3,547.23
	4/17/11		(a)	50.45	(a)	3,547.30
	12/22/11		(a)	51.70	(a)	3,546.05
	4/17/12		(a)	51.24	(a)	3,546.51
	10/15/12		(a)	52.55	(a)	3,545.20
	1/22/13		(a)	51.95	(a)	3,545.80
	4/15/13		(a)	51.70	(a)	3,546.05
	11/3/13	3598.43 (h)	(a)	52.22	(a)	3,546.21
	4/30/14		(a)	51.86	(a)	3,546.57
	11/19/14		(a)	52.21	(a)	3,546.22
	4/21/15		(a)	50.91	(a)	3,547.52
	11/3/15		(a)	50.61	(a)	3,547.82
	4/28/16		(a)	50.73	(a)	3,547.70
	11/16/16		(a)	51.62	(a)	3,546.81
	5/22/17		(a)	51.03	(a)	3,547.40
	11/13/17		(a)	52.42	(a)	3,546.01

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MW-27	3/10/09	3615.11 (d)	67.85	68.18	0.33	3,547.18
	10/8/09		68.38	68.89	0.51	3,546.61
	1/26/10		68.48	68.88	0.40	3,546.53
	3/22/10		68.31	68.73	0.42	3,546.70
	4/17/11		68.10	68.26	0.16	3,546.97
	12/22/11		68.21	68.35	0.14	3,546.87
	4/17/12		67.38	67.52	0.14	3,547.70
	10/15/12		68.31	68.54	0.23	3,546.74
	1/22/13		68.45	68.67	0.22	3,546.61
	4/15/13		65.92	67.07	1.15	3,548.91
	5/16/13		68.47	69.77	1.30	3,546.33
	11/3/13	3615.76 (h)	(a)	68.19	(a)	3,547.57
	11/13/13		68.29	68.30	0.01	3,547.47
	4/30/14		68.61	68.63	0.02	3,547.15
	11/19/14		68.96	68.97	0.01	3,546.80
	4/20/15		68.96	68.97	0.01	3,546.80
	11/3/15		(a)	69.07	(a)	3,546.69
	4/27/16		(a)	69.18	(a)	3,546.58
	11/15/16		(a)	69.23	(a)	3,546.53
	5/22/17		(a)	69.19	(a)	3,546.57
	11/13/17		(a)	69.55	(a)	3,546.21
MW-28	3/10/09	3615.90 (d)	(a)	68.70	(a)	3,547.20
	10/8/09		(a)	68.94	(a)	3,546.96
	3/22/10		(a)	68.71	(a)	3,547.19
	4/17/11		(a)	68.95	(a)	3,546.95
	12/22/11		(a)	69.01	(a)	3,546.89
	4/17/12		(a)	69.20	(a)	3,546.70
	10/15/12		(a)	69.30	(a)	3,546.60
	1/22/13		(a)	69.48	(a)	3,546.42
	4/15/13		(a)	69.57	(a)	3,546.33
	11/3/13	3616.62 (h)	(a)	69.61	(a)	3,547.01
	4/30/14		(a)	69.78	(a)	3,546.84
	11/19/14		(a)	69.82	(a)	3,546.80
	4/20/15		(a)	70.21	(a)	3,546.41
	11/3/15		(a)	70.40	(a)	3,546.22
	4/27/16		(a)	70.42	(a)	3,546.20
	11/15/16		(a)	70.47	(a)	3,546.15
	5/22/17		(a)	70.44	(a)	3,546.18
	11/13/17		(a)	70.45	(a)	3,546.17

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MW-29	3/10/09	3613.54 (d)	(a)	67.86	(a)	3,545.68
	10/8/09		(a)	68.82	(a)	3,544.72
	3/22/10		(a)	68.04	(a)	3,545.50
	4/17/11		(a)	67.78	(a)	3,545.76
	12/22/11		(a)	68.15	(a)	3,545.39
	4/17/12		(a)	68.41	(a)	3,545.13
	10/15/12		(a)	68.10	(a)	3,545.44
	1/22/13		(a)	68.33	(a)	3,545.21
	4/15/13		(a)	68.34	(a)	3,545.20
	11/3/13	3614.22 (h)	(a)	69.47	(a)	3,544.75
	4/30/14		(a)	69.53	(a)	3,544.69
	11/19/14		(a)	69.67	(a)	3,544.55
	4/20/15		(a)	69.65	(a)	3,544.57
	11/3/15		(a)	69.90	(a)	3,544.32
	4/27/16		(a)	69.78	(a)	3,544.44
	11/15/16		(a)	70.13	(a)	3,544.09
	5/22/17		(a)	70.03	(a)	3,544.19
	11/13/17		(a)	70.45	(a)	3,543.77
MW-30	3/10/09	3612.63 (d)	(a)	65.83	(a)	3,546.80
	10/8/09		(a)	65.97	(a)	3,546.66
	3/22/10		(a)	65.81	(a)	3,546.82
	4/17/11		(a)	66.13	(a)	3,546.50
	12/22/11		(a)	66.20	(a)	3,546.43
	4/17/12		(a)	66.30	(a)	3,546.33
	10/15/12		(a)	66.48	(a)	3,546.15
	1/22/13		(a)	66.61	(a)	3,546.02
	4/15/13		(a)	66.57	(a)	3,546.06
	11/3/13	3613.33 (h)	(a)	66.84	(a)	3,546.49
	4/30/14		(a)	66.86	(a)	3,546.47
	11/19/14		(a)	66.97	(a)	3,546.36
	4/20/15		(a)	70.23	(a)	3,543.10
	11/3/15		(a)	67.22	(a)	3,546.11
	4/27/16		(a)	67.21	(a)	3,546.12
	11/15/16		(a)	67.32	(a)	3,546.01
	5/22/17		(a)	67.34	(a)	3,545.99
	11/13/17		(a)	67.59	(a)	3,545.74
MW-32	3/10/09	3608.73 (e)	(a)	65.01	(a)	3,543.72
	10/8/09		(a)	66.29	(a)	3,542.44
	3/22/10		(a)	65.44	(a)	3,543.29
	4/17/11		(a)	65.15	(a)	3,543.58
	12/22/11		(a)	65.42	(a)	3,543.31
	4/17/12		(a)	66.03	(a)	3,542.70
	10/15/12		(a)	65.59	(a)	3,543.14
	1/22/13		(a)	65.94	(a)	3,542.79
	4/15/13		(a)	66.33	(a)	3,542.40
	11/3/13	3609.49 (h)	(a)	66.95	(a)	3,542.54
	4/30/14		(a)	67.41	(a)	3,542.08
	11/19/14		(a)	67.34	(a)	3,542.15
	4/20/15		(a)	67.08	(a)	3,542.41
	11/3/15		(a)	67.51	(a)	3,541.98
	4/27/16		(a)	67.16	(a)	3,542.33
	11/15/16		(a)	67.46	(a)	3,542.03
	5/22/17		(a)	67.50	(a)	3,541.99
	11/13/17		(a)	67.77	(a)	3,541.72

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MW-33	3/10/09	3610.55 (e)	(a)	63.81	(a)	3,546.74
	10/8/09		(a)	63.95	(a)	3,546.60
	3/22/10		(a)	63.94	(a)	3,546.61
	4/17/11		(a)	64.28	(a)	3,546.27
	12/22/11		(a)	64.42	(a)	3,546.13
	4/17/12		(a)	64.57	(a)	3,545.98
	10/15/12		(a)	64.63	(a)	3,545.92
	1/22/13		(a)	64.76	(a)	3,545.79
	4/15/13		(a)	64.82	(a)	3,545.73
	11/3/13	3611.37 (h)	(a)	64.86	(a)	3,546.51
	4/30/14		(a)	65.05	(a)	3,546.32
	11/19/14		(a)	65.08	(a)	3,546.29
	4/20/15		(a)	65.20	(a)	3,546.17
	11/3/15		(a)	65.38	(a)	3,545.99
	4/27/16		(a)	65.45	(a)	3,545.92
	11/15/16		(a)	65.55	(a)	3,545.82
	5/22/17		(a)	65.69	(a)	3,545.68
	11/13/17		(a)	65.88	(a)	3,545.49
MW-34	3/10/09	3605.05 (f)	(a)	61.57	(a)	3,543.48
	10/8/09		(a)	62.61	(a)	3,542.44
	3/22/10		(a)	61.93	(a)	3,543.12
	4/17/11		(a)	61.98	(a)	3,543.07
	12/22/11		(a)	62.49	(a)	3,542.56
	4/17/12		(a)	62.77	(a)	3,542.28
	10/15/12		(a)	62.80	(a)	3,542.25
	1/22/13		(a)	63.14	(a)	3,541.91
	4/15/13		(a)	63.25	(a)	3,541.80
	11/3/13	3605.76 (h)	(a)	63.81	(a)	3,541.95
	4/30/14		(a)	63.99	(a)	3,541.77
	11/19/14		(a)	64.08	(a)	3,541.68
	4/20/15		(a)	63.82	(a)	3,541.94
	11/3/15		(a)	64.20	(a)	3,541.56
	4/27/16		(a)	63.73	(a)	3,542.03
	11/15/16		(a)	64.20	(a)	3,541.56
	5/22/17		(a)	64.09	(a)	3,541.67
	11/13/17		(a)	64.51	(a)	3,541.25
MW-35	3/10/09	3601.87 (f)	(a)	58.40	(a)	3,543.47
	10/8/09		(a)	59.42	(a)	3,542.45
	3/22/10		(a)	58.85	(a)	3,543.02
	4/17/11		(a)	58.89	(a)	3,542.98
	12/22/11		(a)	59.60	(a)	3,542.27
	4/17/12		(a)	59.76	(a)	3,542.11
	10/15/12		(a)	59.91	(a)	3,541.96
	1/22/13		(a)	60.14	(a)	3,541.73
	4/15/13		(a)	60.28	(a)	3,541.59
	11/3/13	3602.61 (h)	(a)	60.81	(a)	3,541.80
	4/30/14		(a)	61.17	(a)	3,541.44
	11/19/14		(a)	61.01	(a)	3,541.60
	4/20/15		(a)	60.80	(a)	3,541.81
	11/3/15		(a)	61.17	(a)	3,541.44
	4/27/16		(a)	60.71	(a)	3,541.90
	11/15/16		(a)	61.17	(a)	3,541.44
	5/22/17		(a)	61.05	(a)	3,541.56
	11/13/17		(a)	61.51	(a)	3,541.10

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MW-37	3/10/09	3599.86 (g)	(a)	56.53	(a)	3,543.33
	10/8/09		(a)	57.46	(a)	3,542.40
	3/22/10		(a)	56.98	(a)	3,542.88
	4/17/11		(a)	57.06	(a)	3,542.80
	12/22/11		(a)	57.58	(a)	3,542.28
	4/17/12		(a)	57.88	(a)	3,541.98
	10/15/12		(a)	58.18	(a)	3,541.68
	1/22/13		(a)	58.43	(a)	3,541.43
	4/15/13		(a)	58.47	(a)	3,541.39
	11/3/13	3600.58 (h)	(a)	58.99	(a)	3,541.59
	11/13/13		(a)	58.96	(a)	3,541.62
	4/30/14		(a)	59.2	(a)	3,541.38
	11/19/14		(a)	59.20	(a)	3,541.38
	4/20/15		(a)	58.95	(a)	3,541.63
	11/3/15		(a)	59.31	(a)	3,541.27
	4/27/16		(a)	58.78	(a)	3,541.80
	11/15/16		(a)	59.31	(a)	3,541.27
	5/22/17		(a)	59.13	(a)	3,541.45
	11/13/17		(a)	59.61	(a)	3,540.97
MW-39	8/16/13	3597.38 (h)	(a)	51.64	(a)	3,545.74
	11/3/13		(a)	51.08	(a)	3,546.30
	4/30/14		(a)	50.74	(a)	3,546.64
	11/19/14		(a)	50.69	(a)	3,546.69
	4/21/15		(a)	49.97	(a)	3,547.41
	11/3/15		(a)	49.81	(a)	3,547.57
	4/28/16		(a)	49.96	(a)	3,547.42
	11/16/16		(a)	50.43	(a)	3,546.95
	5/22/17		(a)	49.99	(a)	3,547.39
	11/13/17		(a)	50.82	(a)	3,546.56
MW-40	8/16/13	3596.48 (h)	(a)	54.25	(a)	3,542.23
	11/3/13		(a)	54.21	(a)	3,542.27
	4/30/14		(a)	53.78	(a)	3,542.70
	11/19/14		(a)	54.23	(a)	3,542.25
	4/21/15		(a)	52.91	(a)	3,543.57
	11/3/15		(a)	53.21	(a)	3,543.27
	4/28/16		(a)	52.56	(a)	3,543.92
	11/16/16		(a)	53.55	(a)	3,542.93
	5/22/17		(a)	52.98	(a)	3,543.50
	11/13/17		(a)	54.11	(a)	3,542.37
MW-41	8/16/13	3601.73 (h)	(a)	56.57	(a)	3,545.16
	11/3/13		(a)	56.63	(a)	3,545.10
	4/30/14		(a)	56.76	(a)	3,544.97
	11/19/14		(a)	56.96	(a)	3,544.77
	4/21/15		(a)	56.58	(a)	3,545.15
	11/3/15		(a)	56.61	(a)	3,545.12
	4/28/16		(a)	56.36	(a)	3,545.37
	11/16/16		(a)	56.72	(a)	3,545.01
	5/22/17		(a)	56.58	(a)	3,545.15
	11/13/17		(a)	57.12	(a)	3,544.61

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MW-42	8/16/13	3595.21 (h)	(a)	56.42	(a)	3,538.79
	11/3/13		(a)	56.28	(a)	3,538.93
	4/30/14		(a)	55.16	(a)	3,540.05
	11/19/14		(a)	55.25	(a)	3,539.96
	4/21/15		(a)	53.18	(a)	3,542.03
	11/3/15		(a)	54.27	(a)	3,540.94
	4/28/16		(a)	52.95	(a)	3,542.26
	11/16/16		(a)	54.71	(a)	3,540.50
	5/22/17		(a)	53.71	(a)	3,541.50
MPE-7	11/13/17		(a)	55.46	(a)	3,539.75
	3/10/09	NA	(a)	67.79	(a)	NA
	10/8/09		(a)	69.75	(a)	NA
	3/22/10		(a)	67.62	(a)	NA
	4/17/11		(a)	67.15	(a)	NA
	12/22/11		(a)	67.07	(a)	NA
	4/17/12		(a)	67.50	(a)	NA
	10/15/12		(a)	67.44	(a)	NA
	4/15/13		(a)	67.63	(a)	NA
	11/3/13	3614.16 (h)	(a)	67.93	(a)	3,546.23
	5/1/14		(a)	68.07	(a)	3,546.09
	11/20/14		(a)	68.21	(a)	3,545.95
	11/3/15		(a)	68.29	(a)	3,545.87
	4/27/16		(a)	68.36	(a)	3,545.80
	11/15/16		(a)	68.46	(a)	3,545.70
	2/2/17		(a)	68.15	(a)	3,546.01
	2/15/17		(a)	67.50	(a)	3,546.66
	2/25/17		(a)	65.67	(a)	3,548.49
	3/20/17		(a)	66.15	(a)	3,548.01
	5/22/17		(a)	68.53	(a)	3,545.63
MPE-8	11/13/17		(a)	68.87	(a)	3,545.29
	3/10/09	NA	(a)	65.06	(a)	NA
	10/8/09		(a)	65.79	(a)	NA
	3/22/10		(a)	65.53	(a)	NA
	4/17/11		(a)	65.30	(a)	NA
	12/22/11		(a)	65.58	(a)	NA
	4/17/12		(a)	65.71	(a)	NA
	10/15/12		(a)	65.62	(a)	NA
	4/15/13		(a)	65.41	(a)	NA
	11/3/13	3612.35 (h)	(a)	66.55	(a)	3,545.80
	5/1/14		(a)	66.47	(a)	3,545.88
	11/20/14		(a)	66.76	(a)	3,545.59
	11/3/15		(a)	66.89	(a)	3,545.46
	4/27/16		(a)	66.65	(a)	3,545.70
	11/15/16		(a)	67.28	(a)	3,545.07
	2/2/17		(a)	66.61	(a)	3,545.74
	2/15/17		(a)	64.57	(a)	3,547.78
	2/25/17		(a)	63.55	(a)	3,548.80
	3/20/17		(a)	64.15	(a)	3,548.20
	5/22/17		(a)	66.87	(a)	3,545.48
	11/13/17		(a)	67.78	(a)	3,544.57

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MPE-9	3/10/09	NA	(a)	67.24	(a)	NA
	10/8/09		(a)	67.79	(a)	NA
	1/26/10		67.92	67.93	0.01	NA
	3/22/10		(a)	67.82	(a)	NA
	4/17/11		(a)	67.49	(a)	NA
	12/22/11		(a)	67.61	(a)	NA
	4/17/12		(a)	67.87	(a)	NA
	10/15/12		(a)	67.70	(a)	NA
	4/15/13		(a)	67.92	(a)	NA
	11/3/13	3615.40 (h)	(a)	67.32	(a)	3,548.08
	5/1/14		(a)	68.11	(a)	3,547.29
	11/20/14		(a)	68.34	(a)	3,547.06
	11/3/15		(a)	68.48	(a)	3,546.92
	4/27/16		(a)	68.61	(a)	3,546.79
	11/15/16		(a)	68.61	(a)	3,546.79
	2/2/17		(a)	68.77	(a)	3,546.63
	2/15/17		(a)	66.90	(a)	3,548.50
	2/25/17		(a)	66.68	(a)	3,548.72
	3/20/17		(a)	66.95	(a)	3,548.45
	5/22/17		(a)	68.60	(a)	3,546.80
	11/13/17		(a)	68.95	(a)	3,546.45
MPE-10	3/10/09	NA	65.58	66.45	0.87	NA
	3/22/10		(a)	66.20	(a)	NA
	4/17/11		65.41	66.85	1.44	NA
	12/22/11		65.74	66.48	0.74	NA
	4/17/12		66.05	66.22	0.17	NA
	10/15/12		66.03	66.88	0.85	NA
	4/15/13		65.96	66.95	0.99	NA
	11/3/13	3613.85 (h)	65.71	67.08	1.37	3,547.81
	5/1/14		66.35	66.36	0.01	3,547.50
	11/20/14		66.64	67.39	0.75	3,547.03
	4/20/15		66.48	67.09	0.61	3,547.22
	11/3/15		66.64	67.21	0.57	3,547.07
	4/27/16		66.73	67.27	0.54	3,546.99
	11/15/16		(a)	66.76	(a)	3,547.09
	2/2/17		66.98	67.95	0.97	3,546.64
	2/15/17		64.48	66.20	1.72	3,548.96
	2/25/17		64.4	66.05	1.65	3,549.05
	3/20/17		64.5	66.65	2.15	3,548.83
	5/22/17		66.73	67.63	0.90	3,546.90
	11/13/17		67.04	68.05	1.01	3,546.57

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MPE-11	3/10/09	NA	(a)	63.02	(a)	NA
	10/8/09		(a)	63.81	(a)	NA
	4/17/11		(a)	62.92	(a)	NA
	12/22/11		(a)	63.21	(a)	NA
	4/17/12		(a)	63.44	(a)	NA
	10/15/12		(a)	63.73	(a)	NA
	4/15/13		(a)	63.63	(a)	NA
	11/3/13	3610.37 (h)	(a)	64.11	(a)	3,546.26
	5/1/14		(a)	64.06	(a)	3,546.31
	11/20/14		(a)	64.35	(a)	3,546.02
	4/20/15		(a)	64.11	(a)	3,546.26
	11/3/15		(a)	64.65	(a)	3,545.72
	4/27/16		(a)	64.51	(a)	3,545.86
	11/15/16		(a)	65.17	(a)	3,545.20
	2/2/17		(a)	64.29	(a)	3,546.08
	2/15/17		(a)	61.40	(a)	3,548.97
	2/25/17		(a)	60.84	(a)	3,549.53
	3/20/17		(a)	61.45	(a)	3,548.92
	5/22/17		(a)	64.54	(a)	3,545.83
	11/13/17		(a)	65.51	(a)	3,544.86
MPE-12	3/10/09	NA	64.30	64.60	0.30	NA
	10/8/09		65.24	65.45	0.21	NA
	1/26/10		64.75	65.12	0.37	NA
	3/22/10		64.55	64.60	0.05	NA
	4/17/11		64.32	64.47	0.15	NA
	12/22/11		(a)	64.61	(a)	NA
	4/17/12		(a)	64.78	(a)	NA
	10/15/12		(a)	65.11	(a)	NA
	4/15/13		64.81	64.83	0.02	NA
	11/3/13	3612.51 (h)	(a)	64.81	(a)	3,547.70
	5/1/14		65.14	65.15	0.01	3,547.36
	11/20/14		67.07	67.27	0.20	3,545.24
	4/20/15		(a)	65.32	(a)	3,547.19
	11/3/15		(a)	65.41	(a)	3,547.10
	4/27/16		65.50	65.80	0.3	3,548.28
	11/15/16		65.69	66.38	0.69	3,547.99
	5/22/17		(a)	65.60	(a)	3,546.91
	7/14/17		63.72	63.90	0.18	3,548.75
	7/28/17		63.58	64.40	0.82	3,548.73
	8/7/17		(a)	65.59	(a)	3,546.92
	9/9/17		62.78	63.83	1.05	3,549.48
	11/13/17		65.83	66.85	1.02	3,546.44

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MPE-13	3/10/09	NA	62.93	63.90	0.97	NA
	10/8/09		63.65	64.00	0.35	NA
	1/26/10		63.44	63.75	0.31	NA
	3/22/10		62.93	63.15	0.22	NA
	4/17/11		63.08	63.27	0.19	NA
	12/22/11		(a)	63.32	(a)	NA
	4/17/12		63.51	63.93	0.42	NA
	10/15/12		63.91	64.27	0.36	NA
	4/15/13		63.93	64.19	0.26	NA
	11/3/13	3610.91 (h)	64.07	64.21	0.14	3,546.81
	5/1/14		64.15	64.45	0.30	3,546.69
	11/20/14		64.55	64.66	0.11	3,546.33
	4/20/15		64.81	65.20	0.39	3,546.01
	11/3/15		(a)	64.95	(a)	3,545.96
	4/27/16		(a)	64.73	(a)	3,546.18
	8/28/16		(a)	NA	(a)	NA
	11/15/16		(a)	65.61	(a)	3,545.30
	5/22/17		(a)	64.83	(a)	3,546.08
	7/14/17		(a)	63.95	(a)	3,546.96
	7/28/17		(a)	64.25	(a)	3,546.66
	8/7/17		(a)	66.04	(a)	3,544.87
	9/9/17		(a)	64.57	(a)	3,546.34
	11/13/17		(a)	66.42	(a)	3,544.49
MPE-14	3/10/09	NA	63.70	63.83	0.13	NA
	10/8/09		(a)	64.27	(a)	NA
	1/26/10		(a)	64.08	(a)	NA
	3/22/10		(a)	63.57	(a)	NA
	4/17/11		(a)	63.70	(a)	NA
	12/22/11		(a)	64.05	(a)	NA
	4/17/12		(a)	64.12	(a)	NA
	10/15/12		(a)	64.75	(a)	NA
	4/15/13		64.40	64.94	0.54	NA
	11/3/13	3611.31 (h)	64.40	65.87	1.47	3,546.56
	5/1/14		64.54	65.49	0.95	3,546.54
	11/21/14		65.20	65.48	0.28	3,546.04
	4/20/15		64.21	64.26	0.05	3,547.09
	11/3/15		(a)	65.37	(a)	3,545.94
	4/27/16		65.34	65.65	0.31	3,545.90
	8/28/16		(a)	NA	(a)	NA
	11/15/16		66.35	66.38	0.03	3,544.95
	5/22/17		65.28	65.67	0.39	3,545.94
	7/14/17		(a)	71.40	(a)	3,539.91
	7/28/17		(a)	70.45	(a)	3,540.86
	8/7/17		(a)	71.75	(a)	3,539.56
	9/9/17		(a)	72.80	(a)	3,538.51
	11/13/17		(a)	66.45	(a)	3,544.86

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MPE-15	3/10/09	NA	(a)	62.40	(a)	NA
	10/8/09		(a)	62.59	(a)	NA
	3/22/10		(a)	62.36	(a)	NA
	4/17/11		(a)	62.20	(a)	NA
	12/22/11		(a)	62.75	(a)	NA
	4/17/12		(a)	63.05	(a)	NA
	10/15/12		(a)	63.05	(a)	NA
	4/15/13		(a)	63.19	(a)	NA
	11/3/13	3612.40 (h)	(a)	63.45	(a)	3,548.95
	5/1/14		(a)	63.70	(a)	3,548.70
	11/21/14		(a)	63.73	(a)	3,548.67
	4/20/15		(a)	63.74	(a)	3,548.66
	11/3/15		(a)	63.96	(a)	3,548.44
	4/27/16		(a)	64.14	(a)	3,548.26
	11/15/16		(a)	64.26	(a)	3,548.14
	5/22/17		(a)	64.28	(a)	3,548.12
	7/14/17		(a)	62.12	(a)	3,550.28
	7/28/17		(a)	62.03	(a)	3,550.37
	8/7/17		(a)	64.17	(a)	3,548.23
	9/9/17		(a)	64.58	(a)	3,547.82
	11/13/17		(a)	64.83	(a)	3,547.57
MPE-16	3/10/09	NA	64.32	65.75	1.43	NA
	10/8/09		65.63	Tagged pump	NA	NA
	1/26/10		64.64	66.30	1.66	NA
	3/22/10		64.27	66.21	1.94	NA
	4/17/11		64.25	65.18	0.93	NA
	12/22/11		64.61	65.79	1.18	NA
	4/17/12		64.74	67.17	2.43	NA
	10/15/12		64.89	67.41	2.52	NA
	4/15/13		64.80	66.55	1.75	NA
	11/3/13	3613.14 (h)	64.65	67.06	2.41	3,547.91
	5/1/14		65.27	67.19	1.92	3,547.41
	11/20/14		65.96	67.84	1.88	3,546.73
	4/20/15		65.23	66.56	1.33	3,547.59
	11/3/15		(a)	66.59	(a)	3,546.55
	4/27/16		66.28	67.03	0.75	3,546.68
	8/28/16		67.24	67.66	0.42	3,545.80
	11/15/16		67.17	67.90	0.73	3,545.79
	5/22/17		66.21	67.10	0.89	3,546.72
	7/14/17		71.94	71.95	0.01	3,541.20
	7/28/17		70.60	70.61	0.01	3,542.54
	8/7/17		(a)	71.85	(a)	3,541.29
	9/9/17		(a)	71.92	(a)	3,541.22
	11/13/17		67.80	67.90	0.10	3,545.32

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MPE-17	3/10/09	NA	64.80	65.07	0.27	NA
	10/8/09		65.48	65.55	0.07	NA
	1/26/10		65.19	65.22	0.03	NA
	3/22/10		(a)	64.77	(a)	(a)
	4/17/11		(a)	64.93	(a)	(a)
	12/22/11		(a)	65.37	(a)	(a)
	4/17/12		65.22	65.37	0.15	(a)
	10/15/12		65.95	66.81	0.86	(a)
	4/15/13		65.62	66.06	0.44	(a)
	11/3/13	3612.75 (h)	65.63	67.49	1.86	3,546.67
	5/1/14		65.75	66.45	0.70	3,546.83
	11/21/14		66.15	66.64	0.49	3,546.48
	4/20/15		66.08	67.38	1.30	3,546.36
	11/3/15		(a)	66.88	(a)	3,545.87
	4/27/16		66.71	66.72	0.01	3,546.04
	8/28/16		(a)	67.81	(a)	3,544.94
	11/16/16		67.84	67.90	0.06	3,544.90
	5/22/17		66.60	66.95	0.35	3,546.07
	7/14/17		(a)	71.15	(a)	3,541.60
	7/28/17		(a)	71.11	(a)	3,541.64
	8/7/17		(a)	71.12	(a)	3,541.63
	9/9/17		(a)	71.15	(a)	3,541.60
	11/13/17		68.20	68.35	0.15	3,544.51
MPE-18	3/10/09	NA	(a)	61.65	(a)	NA
	10/8/09		(a)	61.93	(a)	NA
	3/22/10		(a)	61.44	(a)	NA
	4/17/11		(a)	61.70	(a)	NA
	12/22/11		(a)	62.19	(a)	NA
	4/17/12		(a)	62.39	(a)	NA
	10/15/12		(a)	62.78	(a)	NA
	4/15/13		(a)	62.64	(a)	NA
	11/3/13	3611.12 (h)	(a)	62.93	(a)	3,548.19
	5/1/14		(a)	63.07	(a)	3,548.05
	11/21/14		(a)	63.04	(a)	3,548.08
	4/20/15		(a)	62.97	(a)	3,548.15
	11/3/15		(a)	63.28	(a)	3,547.84
	4/27/16		(a)	63.45	(a)	3,547.67
	11/16/16		(a)	63.61	(a)	3,547.51
	5/22/17		(a)	63.43	(a)	3,547.69
	7/14/17		(a)	62.28	(a)	3,548.84
	7/28/17		(a)	62.43	(a)	3,548.69
	8/7/17		(a)	64.21	(a)	3,546.91
	9/9/17		(a)	64.53	(a)	3,546.59
	11/13/17		(a)	64.32	(a)	3,546.80

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MPE-19	3/10/09	NA	(a)	65.02	(a)	NA
	10/8/09		(a)	65.54	(a)	NA
	3/22/10		(a)	65.14	(a)	NA
	4/17/11		(a)	65.11	(a)	NA
	12/22/11		(a)	65.54	(a)	NA
	4/17/12		(a)	65.53	(a)	NA
	10/15/12		(a)	65.91	(a)	NA
	4/15/13		(a)	66.03	(a)	NA
	11/3/13	3614.46 (h)	(a)	66.05	(a)	3,548.41
	5/1/14		(a)	66.08	(a)	3,548.38
	11/21/14		(a)	66.62	(a)	3,547.84
	4/20/15		(a)	66.16	(a)	3,548.30
	11/3/15		(a)	66.50	(a)	3,547.96
	4/27/16		(a)	66.31	(a)	3,548.15
	11/16/16		(a)	66.77	(a)	3,547.69
	5/22/17		(a)	66.40	(a)	3,548.06
	7/14/17		(a)	63.95	(a)	3,550.51
	7/28/17		(a)	64.17	(a)	3,550.29
	8/7/17		(a)	62.26	(a)	3,552.20
	9/9/17		(a)	63.82	(a)	3,550.64
	11/13/17		(a)	67.37	(a)	3,547.09
MPE-20	3/10/09	NA	62.58	64.52	1.94	NA
	10/8/09		62.45	65.34	2.89	NA
	1/26/10		62.28	65.10	2.82	NA
	3/22/10		61.58	64.81	3.23	NA
	4/17/11		62.10	64.45	2.35	NA
	12/22/11		62.70	64.58	1.88	NA
	4/17/12		63.09	64.86	1.77	NA
	10/15/12		64.41	65.23	0.82	NA
	4/15/13		63.52	64.98	1.46	NA
	11/3/13	3611.40 (h)	63.37	64.28	0.91	3,547.81
	5/1/14		63.64	65.23	1.59	3,547.38
	11/21/14		65.59	66.47	0.88	3,545.60
	4/21/15		63.75	64.77	1.02	3,547.41
	11/3/15		64.81	66.00	1.19	3,546.30
	4/27/16		64.73	65.91	1.18	3,546.39
	8/28/16		66.07	66.09	0.02	3,545.33
	11/16/16		65.75	67.05	1.30	3,545.34
	5/22/17		64.57	65.60	1.03	3,546.58
	7/14/17		(a)	70.20	(a)	3,541.20
	7/28/17		(a)	71.99	(a)	3,539.41
	8/7/17		(a)	70.27	(a)	3,541.13
	9/9/17		(a)	70.35	(a)	3,541.05
	11/13/17		66.13	67.27	1.14	3,545.00

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MPE-21	3/10/09	NA	(a)	56.57	(a)	NA
	10/8/09		(a)	57.13	(a)	NA
	1/26/10		(a)	57.71	(a)	NA
	3/22/10		(a)	57.68	(a)	NA
	4/17/11		(a)	57.30	(a)	NA
	12/22/11		(a)	57.82	(a)	NA
	4/17/12		58.20	58.31	0.11	NA
	10/15/12		58.02	58.07	0.05	NA
	4/15/13		57.73	59.11	1.38	NA
	11/3/13	3607.52 (h)	56.94	57.82	0.88	3,550.37
	5/1/14		58.32	58.75	0.43	3,549.10
	11/21/14		58.71	59.97	1.26	3,548.51
	4/21/15		56.73	57.95	1.22	3,550.50
	11/3/15		(a)	59.13	(a)	3,548.39
	4/27/16		(a)	59.50	(a)	3,548.02
	8/28/16		(a)	59.24	(a)	3,548.28
	11/16/16		(a)	59.38	(a)	3,548.14
	5/22/17		(a)	59.45	(a)	3,548.07
	7/14/17		(a)	65.99	(a)	3,541.53
	7/28/17		(a)	65.95	(a)	3,541.57
	8/7/17		(a)	66.08	(a)	3,541.44
	9/9/17		(a)	66.95	(a)	3,540.57
	11/13/17		(a)	60.90	(a)	3,546.62
MPE-22	3/10/09	NA	(a)	67.17	(a)	NA
	10/8/09		(a)	67.68	(a)	NA
	1/26/10		(a)	67.33	(a)	NA
	3/22/10		(a)	66.99	(a)	NA
	4/17/11		(a)	67.25	(a)	NA
	12/22/11		(a)	67.61	(a)	NA
	4/17/12		(a)	67.44	(a)	NA
	10/18/12		(a)	68.20	(a)	NA
	4/15/13		(a)	67.87	(a)	NA
	11/3/13	3616.80 (h)	(a)	68.28	(a)	3,548.52
	5/1/14		(a)	68.12	(a)	3,548.68
	11/21/14		(a)	68.59	(a)	3,548.21
	4/21/15		(a)	68.23	(a)	3,548.57
	11/3/15		(a)	68.24	(a)	3,548.56
	4/29/16		(a)	68.14	(a)	3,548.66
	11/16/16		(a)	69.13	(a)	3,547.67
	5/22/17		(a)	68.50	(a)	3,548.30
	11/6/17		(a)	68.68	(a)	3,548.12
	11/13/17		(a)	68.78	(a)	3,548.02

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MPE-23	3/10/09	NA	62.85	64.00	1.15	NA
	10/8/09		62.58	64.90	2.32	NA
	1/26/10		62.84	63.98	1.14	NA
	3/22/10		61.94	62.58	0.64	NA
	4/17/11		62.31	62.78	0.47	NA
	12/22/11		62.45	64.70	2.25	NA
	4/17/12		62.57	64.58	2.01	NA
	10/18/12		63.35	65.36	2.01	NA
	4/15/13		62.78	65.30	2.52	NA
	11/3/13	3612.44 (h)	63.45	65.52	2.07	3,548.49
	5/1/14		63.41	64.65	1.24	3,548.73
	11/21/14		63.97	65.57	1.6	3,548.09
	4/21/15		63.29	65.43	2.14	3,548.64
	11/3/15		(a)	64.07	(a)	3,548.37
	4/29/16		63.97	64.00	0.03	3,548.46
	8/28/16		63.74	66.05	2.31	3,548.15
	11/16/16		63.97	66.00	2.03	3,547.98
	5/22/17		63.62	65.03	1.41	3,548.48
	11/6/17		(a)	72.45	(a)	3,539.99
	11/13/17		(a)	72.45	(a)	3,539.99
MPE-24	3/10/09	NA	57.55	58.93	1.38	NA
	10/8/09		57.20	59.52	2.32	NA
	1/26/10		57.65	59.92	2.27	NA
	3/22/10		57.41	59.75	2.34	NA
	4/17/11		57.57	59.57	2.00	NA
	12/22/11		58.27	60.95	2.68	NA
	4/17/12		58.43	61.11	2.68	NA
	10/15/12		58.10	64.85	6.75	NA
	4/15/13		58.08	63.22	5.14	NA
	11/3/13	3608.45 (h)	58.33	62.96	4.63	3,549.01
	5/1/14		58.61	63.91	5.30	3,548.57
	11/21/14		58.58	65.93	7.35	3,548.11
	4/21/15		58.49	63.30	4.81	3,548.81
	11/3/15		60.03	60.10	0.07	3,548.40
	4/29/16		60.12	60.20	0.08	3,548.31
	11/16/16		59.46	63.22	3.76	3,548.09
	5/22/17		59.80	61.40	1.60	3,548.27
	11/6/17		(a)	71.71	(a)	3,536.74
	11/13/17		61.21	61.23	0.02	3,547.24

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MPE-25	3/10/09	NA	(a)	67.13	(a)	NA
	10/8/09		(a)	67.79	(a)	NA
	1/26/10		(a)	67.40	(a)	NA
	3/22/10		(a)	67.07	(a)	NA
	4/17/11		(a)	67.32	(a)	NA
	12/22/11		(a)	67.79	(a)	NA
	4/17/12		(a)	67.50	(a)	NA
	10/18/12		(a)	68.32	(a)	NA
	4/15/13		(a)	68.03	(a)	NA
	11/3/13	3616.99 (h)	(a)	68.46	(a)	3,548.53
	5/1/14		(a)	68.20	(a)	3,548.79
	11/21/14		(a)	68.74	(a)	3,548.25
	4/21/15		(a)	68.35	(a)	3,548.64
	11/3/15		(a)	68.27	(a)	3,548.72
	4/29/16		(a)	68.20	(a)	3,548.79
	11/16/16		(a)	69.15	(a)	3,547.84
	5/22/17		(a)	68.27	(a)	3,548.72
	11/6/17		(a)	65.10	(a)	3,551.89
	11/13/17		(a)	69.10	(a)	3,547.89
MPE-26	3/10/09	NA	64.54	64.86	0.32	NA
	10/8/09		65.30	65.70	0.40	NA
	1/26/10		64.84	65.32	0.48	NA
	3/22/10		64.46	65.04	0.58	NA
	4/17/11		(a)	64.70	(a)	NA
	12/22/11		65.19	65.63	0.44	NA
	4/17/12		64.92	65.48	0.56	NA
	10/15/12		65.60	66.10	0.50	NA
	4/15/13		65.54	66.05	0.51	NA
	11/3/13	3614.30 (h)	65.78	65.82	0.04	3,548.51
	5/1/14		65.71	65.96	0.25	3,548.53
	11/21/14		66.28	66.63	0.35	3,547.94
	4/21/15		65.75	66.04	0.29	3,548.48
	11/3/15		65.66	66.02	0.36	3,548.55
	4/29/16		65.62	65.98	0.36	3,548.59
	11/16/16		66.63	67.05	0.42	3,547.57
	5/22/17		65.98	66.30	0.32	3,548.24
	11/6/17		(a)	62.57	(a)	3,551.73
	11/13/17		66.64	66.67	0.03	3,547.65

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MPE-27	3/10/09	NA	62.65	64.96	2.31	NA
	10/8/09		63.05	69.05	6.00	NA
	1/26/10		(a)	62.92	(a)	NA
	3/22/10		62.60	64.38	1.78	NA
	4/17/11		62.54	tag top of pump	NA	NA
	12/22/11		(a)	62.81	(a)	NA
	4/17/12		63.34	63.63	0.29	NA
	10/15/12		64.62	65.38	0.76	NA
	4/15/13		(a)	tag top of pump	NA	NA
	11/3/13	3612.96 (h)	62.92	65.70	2.78	3,549.37
	5/1/14		63.75	67.31	3.56	3,548.36
	11/21/14		(a)	65.48	(a)	3,547.48
	4/21/15		63.85	65.70	1.85	3,548.67
	11/3/15		64.37	64.40	0.03	3,548.58
	4/29/16		64.35	64.37	0.02	3,548.61
	8/28/16		(a)	65.45	(a)	3,547.51
	11/16/16		(a)	65.41	(a)	3,547.55
	5/22/17		64.58	64.70	0.12	3,548.35
	11/6/17		(a)	75.10	(a)	3,537.86
	11/13/17		67.95	68.27	0.32	3,544.93
MPE-28	3/10/09	NA	55.01	59.20	4.19	NA
	10/8/09		56.72	60.21	3.49	NA
	1/26/10		56.12	59.78	3.66	NA
	3/22/10		55.50	59.20	3.70	NA
	4/17/11		(a)	56.78	(a)	NA
	12/22/11		(a)	58.61	(a)	NA
	4/17/12		(a)	57.45	(a)	NA
	10/15/12		(a)	58.30	(a)	NA
	4/15/13		57.85	57.88	0.03	NA
	11/3/13	3607.49 (h)	(a)	58.39	(a)	3,549.10
	5/1/14		58.32	58.40	0.08	3,554.62
	11/21/14		(a)	60.74	(a)	3,546.75
	4/21/15		(a)	57.72	(a)	3,549.77
	11/3/15		57.60	57.61	0.01	3,555.36
	4/28/16		57.38	57.44	0.06	3,555.57
	11/16/16		NA	NA	NA	NA
	5/22/17		57.65	57.80	0.15	3555.27
	11/6/17		(a)	56.80	(a)	3550.69
	11/13/17		(a)	58.33	(a)	3,549.16

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MPE-29	3/10/09	NA	(a)	67.35	(a)	NA
	10/8/09		(a)	68.38	(a)	NA
	3/22/10		(a)	67.58	(a)	NA
	4/17/11		(a)	67.73	(a)	NA
	12/22/11		(a)	68.38	(a)	NA
	4/17/12		(a)	67.98	(a)	NA
	10/18/12		(a)	68.95	(a)	NA
	4/15/13		(a)	68.44	(a)	NA
	11/3/13	3617.10 (h)	(a)	69.00	(a)	3,548.10
	5/1/14		(a)	68.68	(a)	3,548.42
	11/21/14		(a)	69.41	(a)	3,547.69
	4/21/15		(a)	68.75	(a)	3,548.35
	11/3/15		(a)	68.65	(a)	3,548.45
	4/29/16		(a)	68.57	(a)	3,548.53
	11/16/16		(a)	69.62	(a)	3,547.48
	5/22/17		(a)	68.65	(a)	3,548.45
	11/6/17		(a)	69.75	(a)	3,547.35
	11/13/17		(a)	69.77	(a)	3,547.33
MPE-30	3/10/09	NA	(a)	64.92	(a)	NA
	10/8/09		(a)	66.20	(a)	NA
	3/22/10		(a)	65.41	(a)	NA
	4/17/11		(a)	65.25	(a)	NA
	12/22/11		(a)	65.91	(a)	NA
	4/17/12		(a)	65.78	(a)	NA
	10/18/12		(a)	66.46	(a)	NA
	4/15/13		(a)	66.35	(a)	NA
	11/3/13	3616.01 (h)	(a)	66.93	(a)	3,549.08
	5/1/14		(a)	66.97	(a)	3,549.04
	11/21/14		(a)	67.36	(a)	3,548.65
	4/21/15		(a)	66.56	(a)	3,549.45
	11/3/15		(a)	66.26	(a)	3,549.75
	4/28/16		(a)	66.08	(a)	3,549.93
	11/16/16		(a)	67.38	(a)	3,548.63
MPE-31	5/22/17		NA	NA	NA	NA
	11/13/17		(a)	67.95	(a)	3,548.06
	3/10/09	NA	63.22	63.24	0.02	NA
	10/8/09		(a)	65.28	(a)	NA
	1/26/10		(a)	63.99	(a)	NA
	3/22/10		63.46	63.47	0.01	NA
	4/17/11		(a)	63.41	(a)	NA
	12/22/11		64.22	64.69	0.47	NA
	4/17/12		64.04	64.45	0.41	NA
	10/18/12		65.28	65.82	0.54	NA
	4/15/13		64.16	65.16	1.00	NA
	11/3/13	3613.18 (h)	64.64	65.11	0.47	3,548.43
	5/1/14		64.62	65.64	1.02	3,548.32
	11/21/14		65.79	66.39	0.60	3,547.25
	4/21/15		64.36	64.98	0.62	3,548.67
	11/3/15		64.14	64.68	0.54	3,548.91
	4/28/16		64.98	65.46	0.48	3,548.08
	8/28/16		(a)	65.89	(a)	3,547.29
	11/16/16		(a)	65.75	(a)	3,547.43
	5/22/17		(a)	64.81	(a)	3,548.37
	11/13/17		(a)	66.45	(a)	3,546.73

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MPE-32	3/10/09	NA	57.01	59.81	2.80	NA
	10/8/09		(a)	62.21	(a)	NA
	1/26/10		57.90	61.23	3.33	NA
	3/22/10		(a)	57.30	(a)	NA
	4/17/11		(a)	57.32	(a)	NA
	12/22/11		(a)	56.62	(a)	NA
	4/17/12		58.55	61.08	2.53	NA
	10/15/12		NA	Tag top of pump	NA	NA
	4/15/13		59.16	59.35	0.19	NA
	11/3/13	3607.41 (h)	(a)	60.03	(a)	3,547.38
	5/1/14		59.65	60.53	0.88	3,547.55
	11/21/14		(a)	62.50	(a)	3,544.91
	4/21/15		58.27	61.3	3.03	3,548.41
	11/3/15		58.66	59.08	0.42	3,548.65
	4/28/16		59.11	59.65	0.54	3,548.17
	8/28/16		(a)	61.96	(a)	3,545.45
	11/16/16		61.22	61.39	0.17	3,546.15
	5/22/17		58.62	60.75	2.13	3,548.28
	11/13/17		(a)	62.93	(a)	3,544.48
MPE-33	3/10/09	NA	(a)	53.82	(a)	NA
	10/8/09		(a)	56.63	(a)	NA
	3/22/10		(a)	54.56	(a)	NA
	4/17/11		(a)	54.73	(a)	NA
	12/22/11		(a)	56.65	(a)	NA
	4/17/12		(a)	55.85	(a)	NA
	10/15/12		(a)	58.43	(a)	NA
	4/15/13		(a)	56.43	(a)	NA
	11/3/13	3603.22 (h)	(a)	57.14	(a)	3,546.08
	5/1/14		(a)	56.65	(a)	3,546.57
	11/21/14		(a)	58.46	(a)	3,544.76
	4/21/15		(a)	54.22	(a)	3,549.00
	11/3/15		(a)	54.31	(a)	3,548.91
	4/28/16		(a)	54.47	(a)	3,548.75
	11/16/16		(a)	57.72	(a)	3,545.50
	5/22/17		(a)	55.02	(a)	3,548.20
	11/13/17		(a)	57.40	(a)	3,545.82
MPE-34	3/10/09	NA	(a)	65.24	(a)	NA
	10/8/09		(a)	65.78	(a)	NA
	3/22/10		(a)	65.56	(a)	NA
	4/17/11		(a)	65.40	(a)	NA
	12/22/11		(a)	65.76	(a)	NA
	4/17/12		(a)	65.79	(a)	NA
	10/18/12		(a)	66.15	(a)	NA
	4/15/13		(a)	66.20	(a)	NA
	11/3/13	3616.24 (h)	(a)	66.28	(a)	3,549.96
	5/1/14		(a)	66.23	(a)	3,550.01
	11/21/14		(a)	65.89	(a)	3,550.35
	4/21/15		(a)	65.57	(a)	3,550.67
	11/3/15		(a)	65.27	(a)	3,550.97
	4/28/16		(a)	65.10	(a)	3,551.14
	11/16/16		(a)	65.68	(a)	3,550.56
	5/22/17		(a)	65.38	(a)	3,550.86
	11/13/17		(a)	65.70	(a)	3,550.54

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MPE-35	3/10/09	NA	(a)	59.29	(a)	NA
	10/8/09		(a)	59.96	(a)	NA
	3/22/10		(a)	59.36	(a)	NA
	4/17/11		(a)	59.16	(a)	NA
	12/22/11		(a)	59.67	(a)	NA
	4/17/12		(a)	59.80	(a)	NA
	10/15/12		(a)	60.00	(a)	NA
	4/15/13		(a)	60.08	(a)	NA
	11/3/13	3609.95 (h)	59.96	60.32	0.36	3,549.90
	11/13/13		60.04	60.35	0.31	3,549.84
	5/1/14		60.08	60.30	0.22	3,549.82
	11/21/14		59.51	60.04	0.53	3,550.31
	4/21/15		59.22	60.07	0.85	3,550.53
	11/3/15		58.45	59.91	1.46	3,551.15
	4/28/16		58.45	60.85	2.40	3,550.92
	11/16/16		58.58	61.38	2.80	3,550.70
	5/22/17		58.70	61.45	2.75	3,550.59
	11/13/17		59.19	62.05	2.86	3,550.07
MPE-36	3/10/09	NA	(a)	54.45	(a)	NA
	10/8/09		(a)	57.35	(a)	NA
	3/22/10		(a)	55.09	(a)	NA
	4/17/11		(a)	54.78	(a)	NA
	12/22/11		(a)	56.05	(a)	NA
	4/17/12		(a)	55.99	(a)	NA
	10/15/12		(a)	57.20	(a)	NA
	4/15/13		(a)	56.35	(a)	NA
	11/3/13	3604.60 (h)	(a)	56.58	(a)	3,548.02
	5/1/14		(a)	56.78	(a)	3,547.82
	11/21/14		(a)	53.13	(a)	3,551.47
	4/21/15		(a)	55.71	(a)	3,548.89
	11/3/15		(a)	50.73	(a)	3,553.87
	4/28/16		(a)	55.56	(a)	3,549.04
	11/16/16		(a)	56.90	(a)	3,547.70
	5/22/17		(a)	56.13	(a)	3,548.47
	11/13/17		(a)	58.35	(a)	3,546.25
MPE-37	3/10/09	NA	(a)	51.90	(a)	NA
	10/8/09		(a)	56.51	(a)	NA
	3/22/10		(a)	52.40	(a)	NA
	4/17/11		(a)	52.22	(a)	NA
	12/22/11		(a)	53.48	(a)	NA
	4/17/12		(a)	53.26	(a)	NA
	10/15/12		(a)	54.68	(a)	NA
	4/15/13		(a)	53.63	(a)	NA
	11/3/13	3601.20 (h)	(a)	54.05	(a)	3,547.15
	5/1/14		(a)	54.03	(a)	3,547.17
	11/21/14		(a)	56.17	(a)	3,545.03
	4/21/15		(a)	53.00	(a)	3,548.20
	11/3/15		(a)	52.02	(a)	3,549.18
	4/28/16		(a)	52.61	(a)	3,548.59
	11/16/16		(a)	54.17	(a)	3,547.03
	5/22/17		(a)	53.26	(a)	3,547.94
	11/13/17		(a)	55.83	(a)	3,545.37

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
MPE-38	8/16/13	3613.81 (h)	63.85	68.88	5.03	3,548.75
	11/3/13		65.89	68.62	2.73	3,547.26
	5/1/14		66.14	69.00	2.86	3,546.98
	11/21/14		67.31	69.85	2.54	3,545.89
	4/21/15		66.44	68.75	2.31	3,546.82
	11/3/15		67.25	69.96	2.71	3,545.91
	4/27/16		66.98	69.80	2.82	3,546.15
	8/28/16		67.93	70.05	2.12	3,545.37
	11/16/16		67.87	70.47	2.6	3,545.32
	5/22/17		67.05	70.05	3.0	3,546.04
	7/14/17		71.19	71.20	0.01	3,542.62
	7/28/17		(a)	71.22	(a)	3,542.59
	8/7/17		(a)	71.1	(a)	3,542.71
	9/9/17		71.03	71.05	0.02	3,542.78
	11/13/17		68.90	71.45	2.55	3,544.30
MPE-39	8/16/13	3608.26 (h)	(a)	60.45	(a)	3,547.81
	11/3/13		(a)	60.21	(a)	3,548.05
	5/1/14		60.35	60.48	0.13	3,547.78
	11/21/14		61	61.26	0.26	3,547.20
	4/21/15		59.99	62.39	2.40	3,547.69
	11/3/15		61.17	61.18	0.01	3,547.09
	4/27/16		61.20	61.21	0.01	3,547.06
	8/28/16		61.90	62.02	0.12	3,546.33
	11/16/16		61.77	61.85	0.08	3,546.47
	5/22/17		61.0	62.30	1.30	3,546.95
	11/13/17		(a)	62.50	(a)	3,545.76
MPE-40	8/16/13	3610.84 (h)	61.52	61.95	0.43	3,549.22
	11/3/13		61.95	62.25	0.30	3,548.82
	5/1/14		61.80	62.15	0.35	3,548.96
	11/21/14		62.81	63.21	0.40	3,547.93
	4/21/15		61.35	64.74	3.39	3,548.68
	11/3/15		61.52	66.91	5.39	3,548.03
	4/29/16		61.48	66.68	5.20	3,548.11
	11/16/16		61.85	69.95	8.10	3,547.05
	5/22/17		61.87	67.35	5.48	3,547.65
	11/6/17		63.72	70.58	6.86	3,545.47
	11/13/17		63.72	70.58	6.86	3,545.47
MPE-41	8/16/13	3605.49 (h)	60.40	60.90	0.50	3,544.97
	11/3/13		56.19	62.74	6.55	3,547.73
	11/13/13		56.58	62.72	6.14	3,547.44
	5/1/14		56.35	62.85	6.50	3,547.58
	11/21/14		60.87	61.23	0.36	3,544.53
	4/21/15		56.03	61.1	5.07	3,548.24
	11/3/15		55.78	59.07	3.29	3,548.92
	4/28/16		56.51	60.44	3.93	3,548.04
	8/28/16		58.98	61.17	2.19	3,545.98
	11/16/16		58.21	61.02	2.81	3,546.61
	5/22/17		56.48	61.47	4.99	3,547.81
	11/6/17		(a)	71.05	(a)	3,534.44
	11/13/17		(a)	61.20	(a)	3,544.29

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
SVE-22	3/10/09	NA	33.00	33.20	0.20	NA
	10/8/09		32.92	33.10	0.18	NA
	1/26/10		33.05	33.05 (TD)	0.00	NA
	3/22/10		33.02	33.02 (TD)	0.00	NA
	4/17/11		32.90	33.00 (TD)	0.10	NA
	12/22/11		(a)	33.04	(a)	NA
	4/17/12		(a)	33.00 (TD)	(a)	NA
	10/18/12		(a)	33.00 (TD)	(a)	NA
	4/15/13		(a)	32.98	(a)	NA
	11/3/13	3616.76 (h)	(a)	33.08	(a)	3,583.68
	5/1/14		(a)	dry	(a)	NA
	11/21/14		(a)	dry	(a)	NA
	4/21/15		(a)	dry	(a)	NA
	11/3/15		33.00	33.11	0.11	3,583.73
	4/29/16		32.94	33.09	0.15	3,583.78
	11/16/16		32.78	32.95	0.17	3,583.94
	5/22/17		33.00	33.10	0.10	3,583.74
	11/13/17		33.14	33.19	0.05	3,583.61
SVE-23	3/10/09	NA	32.78	36.75	3.97	NA
	10/8/09		33.01	33.79	0.78	NA
	1/26/10		33.12	36.98 (TD)	3.86	NA
	3/22/10		32.09	33.65	1.56	NA
	4/17/11		33.00	33.30	0.30	NA
	12/22/11		33.60	34.05	0.45	NA
	4/17/12		33.62	34.10	0.48	NA
	10/18/12		34.11	34.68	0.57	NA
	4/15/13		33.65	33.92	0.27	NA
	11/3/13	3612.45 (h)	33.73	36.52	2.79	3,578.05
	5/1/14		33.78	36.80	3.02	3,577.95
	11/21/14		32.15	32.84	0.69	3,580.13
	4/21/15		32.75	33.4	0.65	3,579.54
	11/3/15		32.74	33.07	0.33	3,579.63
	4/29/16		33.01	33.33	0.32	3,579.36
	11/16/16		33.37	33.82	0.45	3,578.97
	5/22/17		33.60	34.15	0.55	3,578.72
	11/13/17		32.64	33.28	0.64	3,579.66
SVE-24	3/10/09	NA	(a)	dry	(a)	NA
	10/8/09		(a)	dry	(a)	NA
	1/26/10		(a)	dry	(a)	NA
	3/22/10		(a)	dry	(a)	NA
	4/17/11		(a)	dry	(a)	NA
	12/22/11		(a)	dry	(a)	NA
	4/17/12		(a)	dry	(a)	NA
	10/18/12		(a)	dry	(a)	NA
	4/15/13		(a)	dry	(a)	NA
	11/3/13	3608.97 (h)	(a)	dry	(a)	NA
	5/1/14		(a)	dry	(a)	NA
	11/21/14		(a)	dry	(a)	NA
	4/21/15		(a)	28.61	(a)	3,580.36
	11/3/15		(a)	dry	(a)	NA
	4/27/16		(a)	dry	(a)	NA
	11/16/16		(a)	dry	(a)	NA
	5/22/17		(a)	dry	(a)	NA
	11/13/17		(a)	dry	(a)	NA

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
SVE-25	3/10/09	NA	(a)	32.70	(a)	NA
	10/8/09		(a)	31.40	(a)	NA
	1/26/10		(a)	dry	(a)	NA
	3/22/10		(a)	32.80	(a)	NA
	4/17/11		(a)	32.23	(a)	NA
	12/22/11		(a)	32.65	(a)	NA
	4/17/12		(a)	dry	(a)	NA
	10/18/12		(a)	32.70	(a)	NA
	4/15/13		(a)	dry	(a)	NA
	11/3/13	3617.02 (h)	(a)	32.72	(a)	3,584.30
	5/1/14		(a)	32.70	(a)	3,584.32
	11/21/14		(a)	dry	(a)	NA
	4/21/15		(a)	32.73	(a)	3,584.29
	11/3/15		(a)	dry	(a)	NA
	4/29/16		(a)	dry	(a)	NA
	11/16/16		(a)	dry	(a)	NA
	5/22/17		(a)	dry	(a)	NA
	11/13/17		(a)	31.88	(a)	3,585.14
SVE-26	3/10/09	NA	(a)	dry	(a)	NA
	10/8/09		(a)	dry	(a)	NA
	1/26/10		(a)	dry	(a)	NA
	3/22/10		(a)	dry	(a)	NA
	4/17/11		(a)	dry	(a)	NA
	12/22/11		(a)	dry	(a)	NA
	4/17/12		(a)	dry	(a)	NA
	10/18/12		(a)	dry	(a)	NA
	4/15/13		(a)	dry	(a)	NA
	11/3/13	3614.43 (h)	(a)	dry	(a)	NA
	5/1/14		(a)	dry	(a)	NA
	11/21/14		(a)	dry	(a)	NA
	4/21/15		(a)	32.6	(a)	3,581.83
	11/3/15		(a)	dry	(a)	NA
	4/29/16		(a)	dry	(a)	NA
	11/16/16		(a)	dry	(a)	NA
	5/22/17		(a)	dry	(a)	NA
	11/13/17		(a)	dry	(a)	NA
SVE-27	3/10/09	NA	(a)	32.92	(a)	NA
	10/8/09		(a)	33.63	(a)	NA
	1/26/10		(a)	dry	(a)	NA
	3/22/10		(a)	33.70	(a)	NA
	4/17/11		(a)	33.70	(a)	NA
	12/22/11		(a)	33.83	(a)	NA
	4/17/12		(a)	dry	(a)	NA
	10/18/12		(a)	dry	(a)	NA
	4/15/13		(a)	33.82	(a)	NA
	11/3/13	3613.19 (h)	(a)	dry	(a)	NA
	5/1/14		(a)	dry	(a)	NA
	11/21/14		(a)	33.01	(a)	3,580.18
	4/21/15		(a)	33.58	(a)	3,579.61
	11/3/15		(a)	33.54	(a)	3,579.65
	4/29/16		(a)	33.82	(a)	3,579.37
	11/16/16		(a)	34.15	(a)	3,579.04
	5/22/17		(a)	dry	(a)	NA
	11/13/17		(a)	33.48	(a)	3,579.71

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
SVE-28	3/10/09	NA	(a)	28.60	(a)	NA
	10/8/09		(a)	28.95	(a)	NA
	1/26/10		(a)	dry	(a)	NA
	3/22/10		(a)	29.07	(a)	NA
	4/17/11		(a)	29.17	(a)	NA
	12/22/11		(a)	29.65	(a)	NA
	4/17/12		(a)	dry	(a)	NA
	10/18/12		(a)	dry	(a)	NA
	4/15/13		(a)	33.58	(a)	NA
	11/3/13	3607.84 (h)	(a)	dry	(a)	NA
	5/1/14		(a)	dry	(a)	NA
	11/21/14		(a)	28.59	(a)	3,579.25
	4/21/15		(a)	28.86	(a)	3,578.98
	11/3/15		(a)	28.75	(a)	3,579.09
	4/27/16		(a)	28.97	(a)	3,578.87
	11/16/16		(a)	29.18	(a)	3,578.66
	5/22/17		(a)	29.44	(a)	3,578.40
	11/13/17		(a)	28.76	(a)	3,579.08
SVE-30	3/10/09	NA	(a)	39.32	(a)	NA
	10/8/09		(a)	39.29	(a)	NA
	3/22/10		(a)	40.28	(a)	NA
	4/17/11		(a)	40.11	(a)	NA
	12/22/11		(a)	41.11	(a)	NA
	4/17/12		(a)	41.65	(a)	NA
	10/18/12		(a)	41.42	(a)	NA
	4/15/13		(a)	41.67	(a)	NA
	11/3/13	3616.00 (h)	(a)	43.02	(a)	3,572.98
	5/1/14		(a)	43.35	(a)	3,572.65
	11/21/14		(a)	43.30	(a)	3,572.70
	4/21/15		(a)	41.80	(a)	3,574.20
	11/3/15		(a)	41.60	(a)	3,574.40
	4/28/16		(a)	41.56	(a)	3,574.44
	11/16/16		(a)	41.23	(a)	3,574.77
	5/22/17		NA	NA	NA	NA
	11/13/17		(a)	42.00	(a)	3,574.00
SVE-31	3/10/09	NA	(a)	30.45	(a)	NA
	10/8/09		(a)	30.43	(a)	NA
	1/26/10		(a)	30.55	(a)	NA
	3/22/10		(a)	31.49	(a)	NA
	4/17/11		(a)	dry	(a)	NA
	12/22/11		(a)	28.50	(a)	NA
	4/17/12		(a)	dry	(a)	NA
	10/18/12		(a)	dry	(a)	NA
	4/15/13		(a)	dry	(a)	NA
	11/3/13	3612.67 (h)	(a)	dry	(a)	NA
	5/1/14		(a)	dry	(a)	NA
	11/21/14		(a)	30.27	(a)	3,582.40
	4/21/15		(a)	30.97	(a)	3,581.70
	11/3/15		(a)	30.200	(a)	3,582.47
	4/28/16		(a)	30.35	(a)	3,582.32
	11/16/16		(a)	30.73	(a)	3,581.94
	5/22/17		(a)	dry	(a)	NA
	11/13/17		(a)	30.48	(a)	3,582.19

**Table 3-2. Summary of Groundwater Surface Elevations
Transwestern Compressor Station No. 9 - Roswell, NM**

Well ID	Sampling Date	Top of Casing (ft)	Depth to PSH (ft)	Depth to Groundwater (ft)	PSH (ft)	Groundwater Surface Elevation (ft)
RW-1	3/10/09	NA	(a)	33.17	(a)	NA
	10/8/09		(a)	33.48	(a)	NA
	3/22/10		(a)	33.62	(a)	NA
	4/17/11		(a)	33.80	(a)	NA
	12/22/11		(a)	34.26	(a)	NA
	4/17/12		(a)	34.57	(a)	NA
	10/18/12		(a)	35.16	(a)	NA
	4/15/13		(a)	35.77	(a)	NA
	11/3/13	3612.72 (h)	(a)	34.95	(a)	3,577.77
	4/30/14		(a)	35.48	(a)	3,577.24
	11/19/14		(a)	32.46	(a)	3,580.26
	4/21/15		(a)	33.08	(a)	3,579.64
	11/3/15		(a)	33.00	(a)	3,579.72
	4/28/16		(a)	33.32	(a)	3,579.40
	11/16/16		(a)	33.70	(a)	3,579.02
	5/22/17		(a)	34.03	(a)	3,578.69
	11/13/17		(a)	32.96	(a)	3,579.76

Notes:

PSH - Phase separated hydrocarbon

ft - feet

Corrections to ground water surface elevation for PSH is calculated assuming a specific gravity of 0.76

(NA) Information not available

(a) Not applicable since no measurable thickness of PSH is present

(b) Elevation based on survey by Wagener Engineering dated 5/6/98

(c) Elevation based on survey by Wagener Engineering dated 9/17/98

(d) Elevation based on survey by Wagener Engineering dated 11/29/00

(e) Elevation based on survey by Wagener Engineering dated 10/03/01

(f) Elevation based on survey by Cypress Engineering dated 03/14/03

(g) Elevation based on survey by Cypress Engineering dated 06/23/07

(h) Elevation based on survey by PR Patton & Associates dated 10/01/13

Historical data before 2009 is presented in previous reports

Historical data for wells that were plugged and abandoned is not shown.

Monitoring wells MW-1B and MW-12 were sampled during the the May/June 2017 sampling event; however, these wells are not currently included in the sampling and analysis plan (SAP).

Prepared by: RLA 1/24/18

Checked by: SSD 2/9/18

**Table 3-3. Summary of Groundwater Analytical Results
Transwestern Compressor Station No. 9 - Roswell, NM**

Well	Sampling Date	Benzene	Toluene	Ethylbenzene	Xylenes (total)	1,1-Dichloroethane	1,1-Dichloroethene	Vinyl Chloride
NMWQCC Standard:		10	750	750	620	25	5	2
USEPA MCL:		5	1,000	700	10,000	--	7	2
MW-1B	05/24/17	380	< 20	< 20	1600	NA	NA	NA
MW-12	05/24/17	1100	1400	150	2300	NA	NA	NA
MW-13	03/11/09	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	10/07/09	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	09/24/10	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	01/02/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	10/19/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	11/18/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	12/01/14	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	11/05/15	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	11/17/16	< 1.0	< 1.0	< 1.0	< 1.5	NA	NA	NA
MW-14	11/16/17	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	10/07/09	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	09/23/10	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	01/02/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	10/19/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	11/18/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	12/01/14	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	11/05/15	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	11/16/16	< 1.0	< 1.0	< 1.0	< 1.5	NA	NA	NA
MW-16	11/15/17	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	10/21/12	1,000	< 50	270	2,300	NA	NA	NA
	04/17/13	650	< 50	210	2,400	NA	NA	NA
	11/18/13	320	50	210	1,900	NA	NA	NA
	05/04/14	400	< 10	310	2,300	NA	NA	NA
	12/02/14	610	16	180	2,100	NA	NA	NA
	04/24/15	260	11	230	2,500	NA	NA	NA
	11/05/15	Not Sampled - PSH in well						
	05/05/16*	94	< 10	120	2,300	NA	NA	NA
	11/16/16*	90	< 20	46	1,700	NA	NA	NA
MW-20	5/23/17*	110	< 10	66	1,500	NA	NA	NA
	11/15/17*	87	12	95	1,500	NA	NA	NA
	03/12/09	< 1.0	< 1.0	< 1.0	< 1.5	14	35	< 1.0
	10/07/09	2.8	< 1.0	< 1.0	< 1.5	7.2	13	< 1.0
	03/30/10	< 1.0	< 1.0	< 1.0	< 1.5	13	28	< 1.0
	09/24/10	< 1.0	< 1.0	< 1.0	< 1.5	4.6	9.7	< 1.0
	04/19/11	< 1.0	< 1.0	< 1.0	< 1.5	14	22	< 1.0
	01/03/12	< 1.0	< 1.0	< 1.0	< 1.5	5.1	6.4	< 1.0
	04/18/12	< 1.0	< 1.0	< 1.0	< 1.5	6.4	8.6	--
	10/19/12	< 1.0	< 1.0	< 1.0	< 1.5	2.9	8.1	--
	04/17/13	< 1.0	< 1.0	< 1.0	< 1.5	3.2	4.5	< 1.0
	11/18/13	< 1.0	< 1.0	< 1.0	< 1.5	1.8	1.6	< 1.0
	05/02/14	< 1.0	< 1.0	< 1.0	< 3.0	4.8	3.9	< 1.0
	12/01/14	< 1.0	< 1.0	< 1.0	< 3.0	8.0	6.7	< 1.0
	04/24/15	< 1.0	< 1.0	< 1.0	< 3.0	12.0	8.0	< 1.0
	11/05/15	< 1.0	< 1.0	< 1.0	< 3.0	16.0	8.6	< 1.0
	05/03/16	< 1.0	< 1.0	< 1.0	< 3.0	15.0	5.6	< 1.0
	11/16/16	< 1.0	< 1.0	< 1.0	< 1.5	12.0	6.0	< 1.0
	05/24/17	< 1.0	< 1.0	< 1.0	< 1.5	9.5	4.6	< 1.0
	11/15/17	< 1.0	< 1.0	< 1.0	< 1.5	5.5	7.3	< 1.0

**Table 3-3. Summary of Groundwater Analytical Results
Transwestern Compressor Station No. 9 - Roswell, NM**

Well	Sampling Date	Benzene	Toluene	Ethylbenzene	Xylenes (total)	1,1-Dichloroethane	1,1-Dichloroethene	Vinyl Chloride
NMWQCC Standard:		10	750	750	620	25	5	2
USEPA MCL:		5	1,000	700	10,000	--	7	2
MW-21	03/11/09	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	10/07/09	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	09/23/10	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	01/03/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	10/25/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	11/18/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	12/01/14	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	11/05/15	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
MW-22	11/16/16	< 1.0	< 1.0	< 1.0	< 1.5	NA	NA	NA
	11/14/17	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	03/12/09	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	1.2	< 1.0
	10/07/09	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0	< 1.0
	03/30/10	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	1.1	< 1.0
	09/23/10	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0	< 1.0
	04/19/11	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	1.6	< 1.0
	01/03/12	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0	< 1.0
	04/18/12	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	1.1	--
	10/21/12	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0	--
	04/17/13	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	2.2	< 1.0
	11/18/13	< 2.0	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0
	05/02/14	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	2.5	< 1.0
	12/02/14	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	1.5	< 1.0
	04/24/15	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	2.5	< 1.0
	11/05/15	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	2.2	< 1.0
	05/03/16	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	2.3	< 1.0
	11/16/16	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	2.6	< 1.0
	05/24/17	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	3.0	< 1.0
	11/15/17	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	2.6	< 1.0
MW-23D	10/07/09	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	09/26/10	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	01/03/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	10/21/12	1.6	8.1	2.8	10	NA	NA	NA
	12/14/12	< 1.0	1.4	< 1.0	< 2.0	NA	NA	NA
	01/21/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	04/16/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
MW-24D	10/07/09	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	09/26/10	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	01/03/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	10/21/12	< 1.0	2.1	1.0	3.5	NA	NA	NA
	12/14/12	9.6	17	4.9	14	NA	NA	NA
	01/21/13	< 1.0	< 1.0	3.3	6.0	NA	NA	NA
	04/16/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	11/18/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	11/26/14	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	11/06/15	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	11/17/16	< 1.0	< 1.0	< 1.0	< 1.5	NA	NA	NA
	11/16/17	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA

**Table 3-3. Summary of Groundwater Analytical Results
Transwestern Compressor Station No. 9 - Roswell, NM**

Well	Sampling Date	Benzene	Toluene	Ethylbenzene	Xylenes (total)	1,1-Dichloroethane	1,1-Dichloroethene	Vinyl Chloride
NMWQCC Standard:		10	750	750	620	25	5	2
USEPA MCL:		5	1,000	700	10,000	--	7	2
MW-25D	10/07/09	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	09/26/10	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	01/03/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	10/21/12	< 1.0	1.2	< 1.0	2.2	NA	NA	NA
	12/14/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	01/21/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
MW-26	04/17/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	03/11/09	< 1.0	< 1.0	< 1.0	< 3.0	4.2	43	< 1.0
	10/07/09	< 1.0	< 1.0	< 1.0	< 1.5	5.5	42	< 1.0
	03/30/10	< 1.0	< 1.0	< 1.0	< 1.5	5.5	60	< 1.0
	09/24/10	< 1.0	< 1.0	< 1.0	< 1.5	6.2	50	< 1.0
	04/19/11	< 1.0	< 1.0	< 1.0	< 1.5	5.9	60	< 1.0
	01/03/12	< 1.0	< 1.0	< 1.0	< 1.5	7.8	57	< 1.0
	04/18/12	< 1.0	< 1.0	< 1.0	< 1.5	6.7	53	--
	10/19/12	< 1.0	< 1.0	< 1.0	< 1.5	5.6	54	--
	04/17/13	< 1.0	< 1.0	< 1.0	< 1.5	6.2	53	< 1.0
	11/15/13	< 1.0	< 1.0	< 1.0	< 1.5	6.0	45	< 1.0
	05/04/14	< 1.0	< 1.0	< 1.0	< 3.0	10.0	65	< 1.0
	12/01/14	< 1.0	< 1.0	< 1.0	< 3.0	7.6	52	< 1.0
	04/24/15	< 1.0	< 1.0	< 1.0	< 3.0	6.9	50	< 1.0
	11/05/15	< 1.0	< 1.0	< 1.0	< 3.0	11.0	71	< 1.0
	05/03/16	< 1.0	< 1.0	< 1.0	< 3.0	11.0	63	< 1.0
	11/16/16	< 1.0	< 1.0	< 1.0	< 1.5	11.0	58	< 1.0
MW-27	05/24/17	< 1.0	< 1.0	< 1.0	< 1.5	9.1	58	< 1.0
	11/15/17	< 1.0	< 1.0	< 1.0	< 1.5	8.3	44	< 1.0
	05/14/14	< 20.0	< 20.0	36	72	NA	NA	NA
	12/29/14	< 100	< 100	< 100	< 300	NA	NA	NA
	04/24/15*	< 10	< 10	< 10	< 30	NA	NA	NA
	11/05/15	< 10	< 10	19	54	NA	NA	NA
	05/02/16	< 10	< 10	< 10	< 30	NA	NA	NA
MW-29	11/15/16	< 5.0	< 5.0	< 5.0	< 7.5	NA	NA	NA
	05/23/17	< 5.0	< 5.0	< 5.0	< 7.5	NA	NA	NA
	11/14/17	82	< 25	< 25	91	NA	NA	NA
	03/11/09	4.1	< 1.0	< 1.0	< 3.0	NA	NA	NA
	10/07/09	8.4	< 1.0	< 1.0	< 3.0	NA	NA	NA
	03/30/10	1.4	< 1.0	< 1.0	< 2.0	NA	NA	NA
	09/23/10	1.3	< 1.0	< 1.0	< 3.0	NA	NA	NA
	04/19/11	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	01/02/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	04/18/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	10/21/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	04/16/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	11/14/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	05/02/14	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	12/01/14	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	04/24/15	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	11/05/15	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	05/02/16	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	11/15/16	< 1.0	< 1.0	< 1.0	< 1.5	NA	NA	NA
	05/23/17	1.1	< 1.0	< 1.0	< 1.5	NA	NA	NA
	11/14/17	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA

**Table 3-3. Summary of Groundwater Analytical Results
Transwestern Compressor Station No. 9 - Roswell, NM**

Well	Sampling Date	Benzene	Toluene	Ethylbenzene	Xylenes (total)	1,1-Dichloroethane	1,1-Dichloroethene	Vinyl Chloride
NMWQCC Standard:		10	750	750	620	25	5	2
USEPA MCL:		5	1,000	700	10,000	--	7	2
MW-32	03/11/09	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	10/07/09	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	03/30/10	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	09/23/10	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	04/19/11	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	01/02/12	1.8	< 1.0	< 1.0	< 2.0	NA	NA	NA
	04/18/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	10/19/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	04/16/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	11/14/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	05/02/14	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	11/25/14	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	04/24/15	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	11/05/15	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	04/29/16	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	11/15/16	< 1.0	< 1.0	< 1.0	< 1.5	NA	NA	NA
MW-34	05/23/17	< 1.0	< 1.0	< 1.0	< 1.5	NA	NA	NA
	11/14/17	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	03/11/09	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	10/07/09	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	03/30/10	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	09/23/10	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	04/19/11	20	< 1.0	< 1.0	< 2.0	NA	NA	NA
	01/02/12	210	< 1.0	< 1.0	< 2.0	NA	NA	NA
	04/18/12	210	< 1.0	< 1.0	< 2.0	NA	NA	NA
	10/19/12	140	< 1.0	< 1.0	< 2.0	NA	NA	NA
	04/16/13	60	< 1.0	< 1.0	< 2.0	NA	NA	NA
	11/14/13	7.2	< 1.0	< 1.0	< 2.0	NA	NA	NA
	05/02/14	5.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	12/01/14	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	04/24/15	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	11/05/15	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	04/27/16	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	11/15/16	< 1.0	< 1.0	< 1.0	< 1.5	NA	NA	NA
	05/23/17	< 1.0	< 1.0	< 1.0	< 1.5	NA	NA	NA
	11/14/17	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA

**Table 3-3. Summary of Groundwater Analytical Results
Transwestern Compressor Station No. 9 - Roswell, NM**

Well	Sampling Date	Benzene	Toluene	Ethylbenzene	Xylenes (total)	1,1-Dichloroethane	1,1-Dichloroethene	Vinyl Chloride
NMWQCC Standard:		10	750	750	620	25	5	2
USEPA MCL:		5	1,000	700	10,000	--	7	2
MW-35	03/11/09	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	10/07/09	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	03/30/10	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	09/23/10	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	04/19/11	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	01/02/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	04/18/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	10/21/12	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	04/16/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	11/14/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	05/02/14	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	11/25/14	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	04/24/15	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	11/05/15	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	04/29/16	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	11/15/16	< 1.0	< 1.0	< 1.0	< 1.5	NA	NA	NA
MW-37	05/23/17	< 1.0	< 1.0	< 1.0	< 1.5	NA	NA	NA
	11/14/17	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	03/11/09	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	11/14/13	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	05/02/14	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	11/25/14	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	04/24/15	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	11/05/15	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
MW-39	04/27/16	< 1.0	< 1.0	< 1.0	< 3.0	NA	NA	NA
	11/15/16	< 1.0	< 1.0	< 1.0	< 1.5	NA	NA	NA
	05/23/17	< 1.0	< 1.0	< 1.0	< 1.5	NA	NA	NA
	11/14/17	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA	NA
	08/16/13	2.8	< 1.0	< 1.0	< 1.5	2.0	19	--
	11/15/13	< 1.0	< 1.0	< 1.0	< 1.5	1.6	15	< 1.0
	12/01/14	< 1.0	< 1.0	< 1.0	< 3.0	3.0	26	< 1.0
	04/24/15	< 1.0	< 1.0	< 1.0	< 3.0	2.5	22	< 1.0
MW-40	11/06/15	< 1.0	< 1.0	< 1.0	< 3.0	3.1	27	< 1.0
	05/03/16	< 1.0	< 1.0	< 1.0	< 3.0	2.9	24	< 1.0
	11/17/16	< 1.0	< 1.0	< 1.0	< 1.5	3.1	22	< 1.0
	06/16/17	< 1.0	< 1.0	< 1.0	< 1.5	3.3	29	< 1.0
	11/16/17	< 1.0	< 1.0	< 1.0	< 1.5	3.8	31	< 1.0
	08/16/13	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0	--
	11/15/13	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0	< 1.0
	11/25/14	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 1.0	< 1.0
MW-40	04/24/15	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 1.0	< 1.0
	11/06/15	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 1.0	< 1.0
	05/03/16	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 1.0	< 1.0
	11/17/16	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0	< 1.0
	06/16/17	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0	< 1.0
	11/16/17	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0	< 1.0
	08/16/13	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0	--
	11/15/13	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0	< 1.0

**Table 3-3. Summary of Groundwater Analytical Results
Transwestern Compressor Station No. 9 - Roswell, NM**

Well	Sampling Date	Benzene	Toluene	Ethylbenzene	Xylenes (total)	1,1-Dichloroethane	1,1-Dichloroethene	Vinyl Chloride
NMWQCC Standard:		10	750	750	620	25	5	2
USEPA MCL:		5	1,000	700	10,000	--	7	2
MW-41	08/16/13	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	1.1	
	11/15/13	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0	< 1.0
	11/24/14	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	1.1	< 1.0
	05/19/15	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 1.0	< 1.0
	11/06/15	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	1.4	< 1.0
	05/03/16	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	1.4	< 1.0
	11/17/16	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	1.2	< 1.0
	06/16/17	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	1.2	< 1.0
	11/16/17	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	1.3	< 1.0
MW-42	08/16/13	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0	--
	11/15/13	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0	< 1.0
	11/25/14	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 1.0	< 1.0
	05/19/15	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 1.0	< 1.0
	11/06/15	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 1.0	< 1.0
	05/03/16	< 1.0	< 1.0	< 1.0	< 3.0	< 1.0	< 1.0	< 1.0
	11/17/16	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0	< 1.0
	06/16/17	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0	< 1.0
	11/16/17	< 1.0	< 1.0	< 1.0	< 1.5	< 1.0	1.1	< 1.0
MPE-13	05/14/14*	5.2	< 2.0	10	35	NA	NA	NA
	05/05/16	770	240	70	740	NA	NA	NA
	11/17/16	1.3	< 2.0	< 2.0	< 3.0	NA	NA	NA
	05/24/17	< 5.0	< 5.0	< 5.0	< 7.5	NA	NA	NA
MPE-27	11/16/16	760	650	60	460	NA	NA	NA
	11/16/17*	3900	7400	390	3400	NA	NA	NA
MPE-31	05/14/14*	130	< 20.0	370	460	NA	NA	NA
	12/29/14	< 100	150	< 100	< 300	NA	NA	NA
	04/24/15*	260	46	200	440	NA	NA	NA
	11/06/15	120	15	230	340	NA	NA	NA
	05/05/16*	140	16	250	400	NA	NA	NA
	11/16/16	7.8	11	< 2.0	28	NA	NA	NA

**Table 3-3. Summary of Groundwater Analytical Results
Transwestern Compressor Station No. 9 - Roswell, NM**

Well	Sampling Date	Benzene	Toluene	Ethylbenzene	Xylenes (total)	1,1-Dichloroethane	1,1-Dichloroethene	Vinyl Chloride
NMWQCC Standard:		10	750	750	620	25	5	2
USEPA MCL:		5	1,000	700	10,000	--	7	2
MPE-39	12/29/14	4700	1400	240	1900	NA	NA	NA
	04/24/15	3300	3300	430	2700	NA	NA	NA
	11/06/15	1800	4500	280	2900	NA	NA	NA
	05/05/16	620	570	70	1500	NA	NA	NA
	11/17/16*	160	130	< 20	160	NA	NA	NA
	6/16/17*	2600	1500	120	1100	NA	NA	NA

Notes:

* - Phase separated hydrocarbons (PSH) present in well. Sample collected below PSH.

-- Data not available.

Only constituents detected in one or more groundwater samples are shown in this table

All results reported above the applicable standard are shown in bold type

Historical data before 2009 is presented in previous reports

Results reported in micrograms per liter (µg/L)

NA - Not analyzed; constituent is not part of the sampling plan

NMWQCC - New Mexico Water Quality Control Commission Standard

USEPA MCL - United States Environmental Protection Agency's Maximum Concentration Limit

Prepared by: RLA 1/29/18

Checked by: SSD 2/9/18

**Table 3-4. Summary of Well Completion Details
Transwestern Compressor Station No. 9 - Roswell, NM**

Well	Date of Completion	Total Depth of Boring (ft bgs)	Measured Depth of Well (ft from TOC)	Surface Completion Type	Casing Diameter (in.)	Screen Interval (ft bgs)	Top of Sand Pack (ft bgs)
MW-1B	04/21/93	65.5	64.65	Flush Mount	2	55-65	53
MW-2	04/21/93	65	61.61	Flush Mount	2	55-65	53
MW-3	04/26/93	72.5	na	Flush Mount	2	60-70	58
MW-5	04/28/93	70	69.35	Flush Mount	2	60-70	58
MW-6	12/01/94	79	na	Flush Mount	2	59.9-74.9	57.1
MW-7	08/22/95	70.5	na	Flush Mount	2	50-70	48.1
MW-8	08/16/95	76.8	73.80	Flush Mount	2	59-74	57.2
MW-9	08/18/95	70	69.75	Flush Mount	2	50-70	47.9
MW-10	09/10/96	74.5	72.15	Flush Mount	2	57-72	55.3
MW-11	09/16/96	72	68.30	Flush Mount	2	54-69	51.5
MW-12	09/11/96	64	na	Flush Mount	2	44-64	42
MW-13	09/13/96	72	na	Flush Mount	2	57-72	55
MW-14	09/10/96	64.5	na	Flush Mount	2	49.5-64.5	48
MW-15	09/20/96	68.5	na	Flush Mount	2	38.5-68.5	37
MW-16	09/19/96	71.4	71.46	Flush Mount	2	46.4-71.4	45.5
MW-17	09/21/96	70	na	Flush Mount	2	53-68	50.9
MW-18	09/25/96	71	na	Flush Mount	2	54-69	51.6
MW-19	09/26/96	69.5	na	Flush Mount	2	54.5-69.5	51
MW-20	08/04/97	64	na	Flush Mount	2	46.8-61.8	43.9
MW-21	08/06/97	75	na	Flush Mount	2	54-74	51.7
MW-22	08/04/97	68	na	Flush Mount	2	50-65	49
MW-26	09/01/98	65	na	Flush Mount	2	43-63	41
MW-27	09/02/98	75	na	Flush Mount	2	55-75	53
MW-28	11/14/00	75	74.81	Flush Mount	2	60-75	58
MW-29	11/18/00	75	74.45	Flush Mount	2	60-75	58
MW-30	11/16/00	75	74.70	Flush Mount	2	60-75	58
MW-31	09/21/01	75	74.55	Flush Mount	2	60-75	58
MW-32	09/23/01	75	74.20	Flush Mount	2	60-75	58
MW-33	09/22/01	75	74.60	Flush Mount	2	60-75	58
MW-34	01/06/03	79	75.75	Flush Mount	2	49-79	46
MW-35	01/07/03	79	76.71	Flush Mount	2	49-79	46
MW-36	09/29/03	75	74.35	Flush Mount	2	55-75	53
MW-37	09/29/03	70	69.61	Flush Mount	2	50-70	48
MW-38	09/30/03	68	67.76	Flush Mount	2	48-68	46
MW-39	08/06/13	70	70.00	Flush Mount	2	50-70	48
MW-40	08/05/13	70	70.25	Flush Mount	2	50-70	48
MW-41	08/05/13	70	70.20	Flush Mount	2	50-70	48
MW-42	08/06/13	75	75.93	Flush Mount	2	55-75	51
MW-23D	07/29/97	194	na	Flush Mount	4	167-187	164
MW-24D	09/10/98	180	na	Flush Mount	4	146-176	143
MW-25D	09/09/98	150	na	Flush Mount	4	119-149	117

Table 3-4. Summary of Well Completion Details
Transwestern Compressor Station No. 9 - Roswell, NM

Well	Date of Completion	Total Depth of Boring (ft bgs)	Measured Depth of Well (ft from TOC)	Surface Completion Type	Casing Diameter (in.)	Screen Interval (ft bgs)	Top of Sand Pack (ft bgs)
SVE-1A	09/21/96	30	29.65	Flush Mount	2	20-30	19
SVE-2A	09/20/96	30	29.83	Flush Mount	2	20-30	17.5
SVE-3	09/16/96	62.3	61.90	Flush Mount	2	32.0-62.3	29.5
SVE-22	11/07/02	35	33.20	Flush Mount	2	25-35	23
SVE-23	11/07/02	39	36.70	Flush Mount	2	25-35	22
SVE-24	11/13/02	30	28.85	Flush Mount	2	20-30	18
SVE-25	11/04/02	34	53.30	Flush Mount	2	24-34	21.6
SVE-26	11/05/02	35	32.45	Flush Mount	2	24-34	22
SVE-27	11/01/02	35	33.90	Flush Mount	2	20-35	18
SVE-28	10/29/02	35	36.00	Flush Mount	2	25-35	23
SVE-30	10/25/02	45	44.00	Flush Mount	2	20-45	18
SVE-31	10/28/02	35	33.95	Flush Mount	2	25-35	23
MPE-1	12/06/02	79	75.60	Flush Mount	4	54-74	49
MPE-2	12/24/02	79	71.75	Flush Mount	4	54-79	51
MPE-3	12/21/02	79	75.95	Flush Mount	4	54-79	51
MPE-4	12/19/12	79	78.30	Flush Mount	4	54-79	51
MPE-5	12/16/02	79	77.70	Flush Mount	4	59-79	56
MPE-6	12/17/02	79	75.00	Flush Mount	4	54-79	51
MPE-7	12/13/02	79	78.41	Flush Mount	4	54-74	51
MPE-8	12/14/02	79	77.55	Flush Mount	4	59-79	50
MPE-9	12/18/02	79	73.60	Flush Mount	4	54-74	51
MPE-10	12/09/02	79	75.30	Flush Mount	4	54-74	50
MPE-11	12/07/02	79	79.05	Flush Mount	4	54-74	50
MPE-12	12/06/02	79	75.40	Flush Mount	4	54-74	51
MPE-13	12/03/02	79	77.60	Flush Mount	4	54-74	50.7
MPE-14	11/25/02	79	76.80	Flush Mount	4	54-74	51
MPE-15	11/22/02	79	79.25	Flush Mount	4	59-74	54
MPE-16	11/27/02	79	78.20	Flush Mount	4	54-74	49
MPE-17	11/20/02	75	76.10	Flush Mount	4	55-70	49
MPE-18	11/21/02	79	78.68	Flush Mount	4	58-73	55
MPE-19	11/26/02	79	74.12	Flush Mount	4	49-74	46
MPE-20	11/20/02	78	77.60	Flush Mount	4	48-73	42
MPE-21	11/19/02	69	68.90	Flush Mount	4	44-64	41.9
MPE-22	11/07/02	80	77.52	Flush Mount	4	55-80	52
MPE-23	11/06/02	80	78.41	Flush Mount	4	55-80	52
MPE-24	11/13/02	74	73.77	Flush Mount	4	49-74	46
MPE-25	11/04/02	80	77.45	Flush Mount	4	54-79	51
MPE-26	11/06/02	84	77.35	Flush Mount	4	54-84	49
MPE-27	10/31/02	79	79.40	Flush Mount	4	54-79	48
MPE-28	10/31/02	82	77.67	Flush Mount	4	46-76	43
MPE-29	11/02/02	79	78.35	Flush Mount	4	54-79	51

**Table 3-4. Summary of Well Completion Details
Transwestern Compressor Station No. 9 - Roswell, NM**

Well	Date of Completion	Total Depth of Boring (ft bgs)	Measured Depth of Well (ft from TOC)	Surface Completion Type	Casing Diameter (in.)	Screen Interval (ft bgs)	Top of Sand Pack (ft bgs)
MPE-30	10/25/02	80	77.96	Flush Mount	4	59-79	56
MPE-31	10/28/02	80	78.80	Flush Mount	4	59-79	58
MPE-32	11/19/02	79	78.30	Flush Mount	4	44-74	39.2
MPE-33	11/18/02	79	78.00	Flush Mount	4	44-79	41.6
MPE-34	10/24/02	80	77.52	Flush Mount	4	59-79	56
MPE-35	11/15/02	79	79.21	Flush Mount	4	54-74	51
MPE-36	11/14/02	74	71.31	Flush Mount	4	44-74	41
MPE-37	11/15/02	74	73.60	Flush Mount	4	44-74	41
MPE-38	08/07/13	75	75.00	Flush Mount	4	55-75	53
MPE-39	08/08/13	75	74.30	Flush Mount	4	55-75	53
MPE-40	08/08/13	75	72.60	Flush Mount	4	55-75	53
MPE-41	08/07/13	75	74.95	Flush Mount	4	55-75	53

Note:

Light blue denote well plugged and abandoned (P&A) in August 2013

ft bgs - feet below ground surface

TOC - top of casing

in. - inches

na - not applicable

Prepared by: RLA 1/24/18

Checked by: SSD 2/9/18

**Table 3-5. Summary of Groundwater Analytical Results Below PSH
Transwestern Compressor Station No. 9 - Roswell, NM**

Well	Sampling Date	Benzene	Toluene	Ethylbenzene	Xylenes (total)
NMWQCC Standard:		10	750	750	620
USEPA MCL:		5	1,000	700	10,000
MW-16	05/23/17	110	< 10	66	1,500
	11/15/17	87	< 12	95	1,500
MPE-27	11/16/17	3,900	7,400	390	3,400
MPE-39	06/16/17	2,600	1,500	120	1,100

Notes:

- 1) Results reported above the applicable regulatory standard are shown in bold type
- 2) Results reported in micrograms per liter (µg/L)
- 3) NMWQCC - New Mexico Water Quality Control Commission Standard
- 4) USEPA MCL - United States Environmental Protection Agency Maximum Concentration Limit
- 5) PSH - Phase separated hydrocarbons
- 6) PSH was not present in MPE-27 and MPE-39 during the May and November 2017 sampling events, respectively.
The results from those sampling events are presented on Table 4-4.

Prepared by: RLA 1/29/18

Checked by: SSD 2/9/18

**Table 4-1. SVE System Mass Removal Calculations for
Total Volatile Organic Compounds
Transwestern Compressor Station No. 9 - Roswell, NM**

Date	West Thermal Oxidizer Unit				East Thermal Oxidizer Unit				Total				
	Total VOC (ug/m ³)	Flow Rate Q(scfm)	Mass Removal Rate M(lb/hr)	Mass Removal Rate M(tons/yr)	Total VOC Conc (ug/m ³)	Flow Rate Q(scfm)	Mass Removal Rate M(lb/hr)	Mass Removal Rate M(tons/yr)	Flow Rate Q(scfm)	Mass Removal Rate M(lb/hr)	Mass Removal Rate M(tons/yr)	Approximate 2017 Mass Removed (gal)	Approximate 2017 Mass Removed (lbs)
03/27/17	NA	NA	NA	NA	24,397	160	0.01	0.064	160	0.0	0.06	20	128
06/13/17	297,585	160	0.18	0.781	167,307	160	0.10	0.439	320	0.3	1.22	385	2,441
08/10/17	792,243	160	0.47	2.080	579,910	160	0.35	1.522	320	0.8	3.60	1137	7,205
10/23/17	801,378	160	0.48	2.104	563,791	160	0.34	1.480	320	0.8	3.58	1131	7,168
General Average:											2.12	668	4,235
Total Potential Criteria Pollutant Emissions*											1.74	481	3,052

*Actual Average at 72% Runtime

Notes:

- 1) Specific gravity of VOC is 0.76 based on Fingerprinting Analytical performed by Core Laboratories in October 2012.
- 2) The West Thermal Oxidizer Unit was out of operation for repairs at the time the 1st quarter SVE system samples were collected.

VOC = Volatile Organic Compounds
 TPY = Tons per year
 ug/m³ = micrograms per cubic meter
 scfm = standard cubic feet per minute
 lb/hr = pound per hour
 gal/yr = gallons per year

Prepared by: RLA 1/22/18
 Checked by: SSD 2/9/18

**Table 4-2. Summary of Treated Water Irrigation Rates
Transwestern Compressor Station No. 9 - Roswell, NM**

Date	Time	Inspector	Meter Reading (gallons)	Irrigated Volume (gallons)	Cummulative Irrigated Volume (gallons)	Elapsed Time (days)	Cummulative Elapsed Time (days)	Average Recovery Rate (GPD)	Average Recovery Rate (GPM)	Year Total (gallons)
12/31/03										2003-2008 1,241,140
11/18/08					1,241,140					
05/01/09	1200	CB	964,480	15,180	15,180	164.0	164	93	0.06	2009 274,180
06/04/09	1200	CB	1,030,720	66,240	81,420	34.0	198	1,948	1.35	
07/04/09	1200	CB	1,074,550	43,830	125,250	30.0	228	1,461	1.01	
08/04/09	1200	CB	1,112,060	37,510	162,760	31.0	259	1,210	0.84	
09/01/09	1200	CB	1,158,960	46,900	209,660	28.0	287	1,675	1.16	
10/06/09	1200	CB	1,176,620	17,660	227,320	35.0	322	505	0.35	
11/05/09	1200	CB	1,196,570	19,950	247,270	30.0	352	665	0.46	
11/23/09	1200	CB	1,223,480	26,910	274,180	18.0	370	1,495	1.04	
06/20/10	1200	CB	1,223,490	10	274,190	209.0	579	0	0.00	2010 68,900
07/07/10	1200	CB	1,232,290	8,800	282,990	17.0	596	518	0.36	
08/05/10	1200	CB	1,248,520	16,230	299,220	29.0	625	560	0.39	
09/06/10	1200	CB	1,274,270	25,750	324,970	32.0	657	805	0.56	
09/14/10	1200	CB	1,279,310	5,040	330,010	8.0	665	630	0.44	
09/28/10	1200	CB	1,288,380	9,070	339,080	14.0	679	648	0.45	
11/05/10	1200	CB	1,288,390	10	339,090	38.0	717	0	0.00	
11/10/10	1200	CB	1,292,380	3,990	343,080	5.0	722	798	0.55	
06/28/11	1200	CB	1,292,590	210	343,290	230.0	952	1	0.00	2011 98,550
07/13/11	1200	CB	1,297,670	5,080	348,370	15.0	967	339	0.24	
08/01/11	1200	CB	1,304,610	6,940	355,310	19.0	986	365	0.25	
09/03/11	1200	CB	1,317,270	12,660	367,970	33.0	1,019	384	0.27	
10/04/11	1200	CB	1,336,700	19,430	387,400	31.0	1,050	627	0.44	
11/01/11	1200	CB	1,357,820	21,120	408,520	28.0	1,078	754	0.52	
11/30/11	1200	CB	1,390,930	33,110	441,630	29.0	1,107	1,142	0.79	

**Table 4-2. Summary of Treated Water Irrigation Rates
Transwestern Compressor Station No. 9 - Roswell, NM**

Date	Time	Inspector	Meter Reading (gallons)	Irrigated Volume (gallons)	Cummulative Irrigated Volume (gallons)	Elapsed Time (days)	Cummulative Elapsed Time (days)	Average Recovery Rate (GPD)	Average Recovery Rate (GPM)	Year Total (gallons)
04/20/12	1200	CB	1,390,930	0	441,630	142.0	1,249	0	0.00	2012 150,240
05/04/12	1200	CB	1,416,840	25,910	467,540	14.0	1,263	1,851	1.29	
06/06/12	1200	CB	1,450,860	34,020	501,560	33.0	1,296	1,031	0.72	
07/04/12	1200	CB	1,464,990	14,130	515,690	28.0	1,324	505	0.35	
08/06/12	1200	CB	1,482,850	17,860	533,550	33.0	1,357	541	0.38	
09/05/12	1200	CB	1,502,280	19,430	552,980	30.0	1,387	648	0.45	
10/03/12	1200	CB	1,520,950	18,670	571,650	28.0	1,415	667	0.46	
11/05/12	1200	CB	1,537,050	16,100	587,750	33.0	1,448	488	0.34	
11/30/12	1200	CB	1,541,170	4,120	591,870	25.0	1,473	165	0.11	
04/19/13	1200	CB	1,541,170	0	591,870	140.0	1,613	0	0.00	2013 100,370
04/30/13	1200	CB	1,553,090	11,920	603,790	11.0	1,624	1,084	0.75	
05/31/13	1200	CB	1,577,610	24,520	628,310	31.0	1,655	791	0.55	
06/30/13	1200	CB	1,614,920	37,310	665,620	30.0	1,685	1,244	0.86	
07/24/13	1200	CB	1,641,540	26,620	692,240	24.0	1,709	1,109	0.77	
07/24/14	800	MB	1,641,550	10	692,250	364.8	2,074	0	0.00	2014 111,840
08/01/14	830	MB	1,646,660	5,110	697,360	8.0	2,082	1,143	0.79	
09/01/14	915	MB	1,673,410	26,750	724,110	31.0	2,113	821	0.57	
10/01/14	835	MB	1,693,890	20,480	744,590	30.0	2,143	1,887	1.31	
11/01/14	830	MB	1,744,480	50,590	795,180	31.0	2,174	1,632	0.99	
11/07/14	830	MB	1,753,390	8,910	804,090	6.0	2,180	1,473	1.02	
06/25/15	630	CB	1,753,390	0	804,090	229.9	2,410	0	0.00	*New Meter 2015 64,140
06/26/15	900	CB	40,570	0	804,090	1.1	2,411	0	0.00	
07/01/15	-	CB	46,250	5,680	809,770	5.0	2,416	1,136	0.79	
08/06/15	-	CB	70,570	24,320	834,090	36.0	2,452	676	0.47	
10/03/15	745	CB	83,130	12,560	846,650	58.0	2,510	217	0.15	
11/04/15	-	CB	92,780	9,650	856,300	32.0	2,542	302	0.21	
11/30/15	-	CB	104,710	11,930	868,230	26.0	2,568	459	0.32	

**Table 4-2. Summary of Treated Water Irrigation Rates
Transwestern Compressor Station No. 9 - Roswell, NM**

Date	Time	Inspector	Meter Reading (gallons)	Irrigated Volume (gallons)	Cummulative Irrigated Volume (gallons)	Elapsed Time (days)	Cummulative Elapsed Time (days)	Average Recovery Rate (GPD)	Average Recovery Rate (GPM)	Year Total (gallons)
02/20/16	645	MB/CB	104,710	0	868,230	82.0	2,650	0	0.00	2016 137,650
03/14/16	830	MB/CB	109,930	5,220	873,450	23.1	2,591	226	0.16	
05/24/16	1120	MB/CB	127,415	22,705	890,935	71.1	2,721	319	0.22	
06/01/16	830	MB/CB	130,750	3,335	894,270	7.9	2,729	423	0.29	
07/01/16	600	MB/CB	150,680	19,930	914,200	29.9	2,759	666	0.46	
08/01/16	800	MB/CB	175,520	24,840	939,040	31.1	2,790	799	0.55	
09/01/16	700	MB/CB	192,820	17,300	956,340	31.0	2,821	559	0.39	
10/01/16	630	MB/CB	210,420	17,600	973,940	30.0	2,851	587	0.41	
11/01/16	700	MB/CB	232,570	22,150	996,090	31.0	2,882	714	0.50	
11/28/16	700	MB/CB	242,360	9,790	1,005,880	27.0	2,909	363	0.25	
07/05/17	730	MB/CB	242,360	0	1,005,880	219.0	3,128	0	0.00	2017 90,550
07/06/17	630	MB/CB	242,940	580	1,006,460	0.96	3,129	605	0.42	
08/08/17	830	MB/CB	269,770	26,830	1,033,290	33.1	3,162	811	0.56	
08/21/17	715	MB/CB	269,770	0	1,033,290	13.0	3,175	0	0.00	
08/23/17	1100	MB/CB	270,910	1,140	1,034,430	2.2	3,177	528	0.37	
09/30/17	700	MB/CB	298,720	27,810	1,062,240	37.8	3,215	735	0.51	
10/31/17	700	MB/CB	320,550	21,830	1,084,070	31.0	3,246	704	0.49	
11/10/17	630	MB/CB	327,480	6,930	1,091,000	10.0	3,256	695	0.48	
11/16/17	700	MB/CB	327,480	0	1,091,000	6.0	3,262	0	0.00	
11/30/17	830	MB/CB	332,720	5,240	1,096,240	14.1	3,276	373	0.26	
12/01/17	1300	MB/CB	332,910	190	1,096,430	1.2	3,277	159	0.11	

NOTES:

Irrigated Volume (gallons) = Difference between prior meter reading and current meter reading (gallons)

Cummulative Irrigated Volume (gallons) = Cummulative sum of Irrigated Volume (gallons)

Elapsed Time (days) = Calculated number of days from the prior date and time

Cummulative Elapsed Time (days) = Cummulative sum of Elapsed Time (days)

Average Recovery Rate (GPD) = Irrigated Volume (gallons) / Elapsed Time (days)

Average Recovery Rate (GPM) = Average Recovery Rate (GPD) / 24 (hours/day) / 60 (minutes/hour)

Historical data before 2009 is presented in previous reports

Prepared by: RLA 1/26/18

Checked by: SSD 2/9/18

**Table 4-3. Groundwater Treatment System
Mass Removal Calculations for Total BTEX
Transwestern Compressor Station No. 9 - Roswell, NM**

Date	Water Totalizer Meter Reading (gals)	Water Volume (gals)	Elapsed Time (days)	Flow Rate (gals/day)	Total BTEX (ug/L)	Mass Removal Rate (lbs/day)	Mass Removed (lbs)	Mass Removed (equivalent gals)
05/01/09	964,480	NA	NA	NA	NA	NA	NA	NA
05/25/09	1,003,890	39,410	24	1,642	4,339	0.0595	1.4	0.230
06/22/09	1,064,810	60,920	28	2,176	9,810	0.1782	5.0	0.805
07/21/09	1,107,950	43,140	29	1,488	9,910	0.1231	3.6	0.576
08/24/09	1,145,780	37,830	34	1,113	9,400	0.0873	3.0	0.479
09/28/09	1,165,680	19,900	35	569	6,230	0.0296	1.0	0.167
10/29/09	1,180,920	15,240	31	492	10,080	0.0414	1.3	0.207
11/18/09	1,214,350	33,430	20	1,672	6,840	0.0955	1.9	0.308
06/20/10	1,223,490	NA	NA	NA	NA	NA	NA	NA
06/30/10	1,227,190	3,700	10	370	7,120	0.0220	0.2	0.035
07/31/10	1,248,140	20,950	31	676	5,340	0.0301	0.9	0.151
08/30/10	1,265,630	17,490	30	583	6,350	0.0309	0.9	0.150
11/10/10	1,292,380	26,750	72	372	8,260	0.0256	1.8	0.298
08/01/11	1,304,610	NA	NA	NA	NA	NA	NA	NA
08/10/11	1,312,240	7,630	9	848	4,400	0.0311	0.3	0.045
10/09/11	1,344,310	32,070	60	535	10,540	0.0470	2.8	0.455
11/03/11	1,357,820	13,510	25	540	10,540	0.0476	1.2	0.192
04/20/12	1,390,930	NA	NA	NA	NA	NA	NA	NA
04/30/12	1,413,930	23,000	10	2,300	8,800	0.1690	1.7	0.273
06/05/12	1,450,860	36,930	36	1,026	8,920	0.0764	2.8	0.444
06/28/12	1,459,530	8,670	23	377	10,050	0.0316	0.7	0.117
07/25/12	1,479,740	20,210	27	749	10,460	0.0654	1.8	0.285
08/15/12	1,486,280	6,540	21	311	8,970	0.0233	0.5	0.079
09/23/12	1,513,290	27,010	39	693	8,870	0.0513	2.0	0.323
10/25/12	1,524,400	11,110	32	347	10,480	0.0304	1.0	0.157
11/28/12	1,541,110	16,710	34	491	8,530	0.0350	1.2	0.192
04/30/13	1,553,090	NA	NA	NA	NA	NA	NA	NA
05/16/13	1,576,010	22,920	16	1,433	10,560	0.1263	2.0	0.326
06/17/13	1,614,920	38,910	32	1,216	9,760	0.0991	3.2	0.511
07/17/13	1,641,540	26,620	30	887	11,170	0.0828	2.5	0.400
07/24/14	1,641,550	NA	NA	NA	NA	NA	NA	NA
07/31/14	1,645,550	4,000	7	571	4,270	0.0204	0.1	0.023
08/25/14	1,667,720	22,170	25	887	4,410	0.0327	0.8	0.132
09/17/14	1,683,180	15,460	23	672	7,280	0.0409	0.9	0.152
10/15/14	1,714,440	31,260	28	1,116	8,500	0.0792	2.2	0.358
07/01/15	46,250	NA	NA	NA	NA	NA	NA	NA
07/15/15	56,930	10,680	14	763	7,360	0.0469	0.7	0.106
10/27/15	91,500	34,570	104	332	4,600	0.0128	1.3	0.214
11/20/15	104,710	13,210	24	550	8,660	0.0398	1.0	0.154
03/23/16	114,640	NA	NA	NA	NA	NA	NA	NA
05/19/16	127,415	12,775	57	224	4,160	0.0078	0.4	0.072
06/28/16	148,810	21,395	40	535	3,720	0.0166	0.7	0.107
07/07/16	155,900	7,090	9	788	6,360	0.0418	0.4	0.061
08/24/16	190,170	34,270	48	714	6,370	0.0380	1.8	0.294
09/21/16	204,940	14,770	28	528	6,690	0.0295	0.8	0.133
10/24/16	225,540	20,600	33	624	4,040	0.0211	0.7	0.112
11/03/16	234,090	8,550	10	855	7,280	0.0520	0.5	0.084

**Table 4-3. Groundwater Treatment System
Mass Removal Calculations for Total BTEX
Transwestern Compressor Station No. 9 - Roswell, NM**

Date	Water Totalizer Meter Reading (gals)	Water Volume (gals)	Elapsed Time (days)	Flow Rate (gals/day)	Total BTEX (ug/L)	Mass Removal Rate (lbs/day)	Mass Removed (lbs)	Mass Removed (equivalent gals)
07/05/17	242,360	NA	NA	NA	NA	NA	NA	NA
07/11/17	248,050	5,690	6	948	15,194	0.1203	0.7	0.116
08/24/17	272,050	24,000	44	545	9,100	0.0414	1.8	0.294
09/25/17	296,160	24,110	32	753	12,450	0.0783	2.5	0.404
10/23/17	316,010	19,850	28	709	12,100	0.0716	2.0	0.324
11/27/17	331,400	15,390	35	440	12,100	0.0444	1.6	0.251
Total							66	10.594

Notes:

BTEX - benzene, toluene, ethylbenzene, xylenes

gals - gallons

ug/L - micrograms per liter

lbs - pounds

NA - not applicable, system deactivated during winter months

Total BTEX concentrations are reported from analytical results of monthly influent samples.

Prepared by: RLA 1/26/18

Checked by: 2/9/18

**Table 4-4 Summary of Water Treatment System Analyses
Transwestern Compressor Station No. 9 - Roswell, NM**

Sample Point	Sampling Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (total) (ug/L)	GRO (Gasoline Range)	Acetone (ug/L)	2-Butanone (ug/L)	Remaining VOCs	Phosphorus (As P) (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (NO3 as N) (mg/L)	Fluoride (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium mg/L	Sodium (mg/L)
NMWQCC Standard:		10	750	750	620	none	none	none	NA	none	250	600	10.0	1.6	none	none	none	none
Post-Treatment	05/25/09	< 1.0	< 1.0	< 1.0	< 1.5	< 0.05	49	< 10	ND	< 0.5	430	1,600	< 1.0	1.3	490	130	2.7	200
	06/22/09	< 1.0	< 1.0	< 1.0	< 1.5	--	70	< 10	ND	< 0.5	440	1,200	< 5.0	1.5	430	130	2.6	200
	07/21/09	< 1.0	< 1.0	< 1.0	< 1.5	--	13	< 10	ND	< 0.5	480	1,500	< 2.0	1.7	470	140	3.1	210
	08/24/09	< 1.0	< 1.0	< 1.0	< 1.5	--	13	16	ND	< 0.5	74	110	< 2.0	2.1	510	140	3.1	210
	09/28/09	< 1.0	< 1.0	< 1.0	< 1.5	--	19	14	ND	< 0.5	430	1,200	< 1.0	1.6	370	120	2.8	210
	10/29/09	< 1.0	< 1.0	< 1.0	< 1.5	--	20	15	ND	< 0.5	440	1,500	< 0.5	1.8	440	130	3.1	200
	11/18/09	4.8	1.3	< 1.0	< 1.5	--	24	18	ND	< 0.5	430	1,600	< 2.0	2.1	490	140	3.4	200
	06/30/10	5.6	< 1.0	< 1.0	< 1.5	--	110	17	ND	< 0.5	420	910	< 1.0	1.7	330	120	2.8	210
	07/31/10	< 1.0	< 1.0	< 1.0	< 1.5	--	< 10	< 10	ND	< 0.5	410	1,100	< 1.0	1.1	420	130	5.3	200
	08/30/10	< 1.0	< 1.0	< 1.0	< 1.5	--	60	< 10	ND	< 0.5	460	1,600	< 2.0	1.2	500	150	2.8	210
	11/10/10	< 1.0	< 1.0	< 1.0	< 1.5	--	< 10	< 10	ND	1.1	480	1,300	< 2.0	1.0	430	130	3.1	220
	08/10/11	< 1.0	< 1.0	< 1.0	< 1.5	--	< 10	< 10	ND	< 10	490	1,600	< 0.1	1.1	500	150	3.7	230
	10/09/11	< 1.0	< 1.0	< 1.0	< 1.5	--	< 10	< 10	ND	< 0.5	430	1,400	1.4	1.5	490	160	2.8	220
	11/03/11	< 1.0	< 1.0	< 1.0	< 1.5	--	41	< 10	ND	< 0.5	400	1,500	< 0.1	1.4	520	140	2.6	210
	04/30/12	< 1.0	< 1.0	< 1.0	< 1.5	--	70	20	ND	< 10 (H)	390	1,300	< 1.0	11 *	490	140	2.8	210
	06/05/12	1.2	< 1.0	< 1.0	< 1.5	--	43	24	ND	< 10	370	1,300	< 1.0	5.5 *	490	130	3.0	200
	06/28/12	1.7	< 1.0	< 1.0	< 1.5	--	62	31	ND	< 10	440	1,500	< 0.2	12 *	500	150	2.8	220
	07/25/12	< 1.0	< 1.0	< 1.0	< 1.5	--	28	< 10	ND	< 10	430	1,200	< 0.2	14 *	460	140	3.0	200
	08/15/12	< 1.0	< 1.0	< 1.0	< 1.5	--	37	< 10	ND	< 0.5	370	700	0.20	1.4	350	120	2.7	210
	09/23/12	< 1.0	< 1.0	< 1.0	< 1.5	--	71	< 10	ND	< 0.5	420	660	< 0.1	1.4	330	120	3.3	210
	10/25/12	< 1.0	< 1.0	< 1.0	< 1.5	--	55	< 10	ND	< 2.5	420	1,200	< 0.5	< 0.5	410	140	2.5	210
	11/28/12	< 1.0	< 1.0	< 1.0	< 1.5	--	44	< 10	ND	< 0.5	440	1,200	< 1.0	< 0.5	360	130	3.2	200
	05/16/13	< 1.0	< 1.0	< 1.0	< 1.5	--	59	< 10	ND	< 0.5	380	1,300	< 0.1	7.8 *	490	140	3.2	210
	06/17/13	< 1.0	< 1.0	< 1.0	< 1.5	--	66	< 10	ND	< 10	340	1,000	< 0.1	5.4 *	460	130	5.6	230
	07/17/13	< 1.0	< 1.0	< 1.0	< 1.5	--	74	17	ND	< 2.5 (H)	380	1,100	< 1.0	1.2	480	130	2.8	200
	07/31/14	< 1.0	< 1.0	< 1.0	< 3.0	--	6.2	< 2	ND	< 0.0 (H)	430	1,320	< 0.1	4.64	503	126	2.8	211
	08/25/14	< 1.0	< 1.0	< 1.0	< 3.0	--	14	< 2	ND	< 0	372	983	< 0.1	1.17	397	126	2.4	182
	09/17/14	< 1.0	< 1.0	< 1.0	< 3.0	--	< 2	< 2	ND	1.8	359	939	< 0.1	2.55	281	109	382	249
	10/15/14	< 1.0	< 1.0	< 1.0	< 3.0	--	10	< 2	ND	< 0	315	1,730	0.46	1.38	489	152	5.00	302
	07/15/15	< 1.0	< 1.0	< 1.0	< 3.0	--	25	< 2	ND	< 0.025	395	617	< 0.1	1.44	227	95.1	2.12	201
	10/27/15	< 1.0	< 1.0	< 1.0	< 3.0	--	11	0.22	ND	0.041	382	483	< 0.1	1.66	242	107	1.77	190
	11/20/15	< 1.0	< 1.0	< 1.0	< 3.0	--	< 2	< 2	ND	0.111	397	429	0.242	5.53	244	88.4	1.48	189
	03/21/16	< 1.0	< 1.0	< 1.0	< 3.0	--	32	< 2	ND	0.195	387	411	< 0.1	1.48	232	101	1.45	204
	04/20/16	< 1.0	< 1.0	< 1.0	< 3.0	--	19	< 2	ND	0.195	388	358	< 0.1	1.37	197	97.1	1.42	215
	05/19/16	< 1.0	< 1.0	< 1.0	< 3.0	--	< 2	< 2	ND	< 0.025	458	415	< 0.1	2.06	258	104	1.69	227
	06/28/16	< 1.0	< 1.0	< 1.0	< 1.5	--	< 10	< 10	ND	< 0.5	400	840	< 0.1	2.60	280	110	2.6	200
	07/07/16	< 1.0	< 1.0	< 1.0	< 1.5	--	< 10	< 10	ND	< 0.5	360	780	< 0.1	< 0.1	290	120	2.1	210
	08/24/16	< 1.0	< 1.0	< 1.0	< 1.5	--	< 10	< 10	ND	< 10	350	850	< 0.1	1.9	290	120	1.7	210
	09/21/16	< 1.0	< 1.0	< 1.0	< 1.5	--	< 10	< 10	ND	< 0.5	370	890	< 0.1	1.9	320	120	2.1	230
	10/24/16	< 1.0	< 1.0	< 1.0	< 1.5	--	< 10	< 10	ND	< 0.5	360	900	< 0.1	1.5	340	130	2.3	220
	11/03/16	< 1.0	< 1.0	< 1.0	< 1.5	--	< 10	< 10	ND	< 0.5	330	910	< 0.1	1.9	330	120	1.9	200
	07/11/17	< 1.0	< 1.0	< 1.0	< 1.5	--	< 10	< 10	ND	< 2.5	420	560	< 0.1	< 0.5	220	92	1.7	170
	08/24/17	< 1.0	< 1.0	< 1.0	< 1.5	--	< 10	< 10	ND	< 0.5	370	520	< 0.1	1.5	220	110	1.7	210
	09/25/17	3.1	2.1	< 1.0	< 1.5	--	< 10	< 10	ND	< 2.5	410	610	< 0.5	< 0.5	260	110	2.2	120
	10/23/17	1.0	< 1.0	< 1.0	< 1.5	--	< 10	< 10	ND	< 0.5	400	740	< 0.1	1.2	270	100	1.8	190
	11/27/17	1.7	< 1.0	< 1.0	< 1.5	--	< 10	< 10	ND	< 0.5	400	810	< 0.1	1.2	310	100	1.8	200

**Table 4-4 Summary of Water Treatment System Analyses
Transwestern Compressor Station No. 9 - Roswell, NM**

Sample Point	Sampling Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (total) (ug/L)	GRO (Gasoline Range)	Acetone (ug/L)	2-Butanone (ug/L)	Remaining VOCs	Phosphorus (As P) (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (NO3 as N) (mg/L)	Fluoride (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium mg/L	Sodium (mg/L)
NMWQCC Standard:		10	750	750	620	none	none	none	NA	none	250	600	10.0	1.6	none	none	none	none
Between GACs	06/22/09	350	570	16	210	--	---	---	---	---	---	---	---	---	---	---	---	---
	07/21/09	< 1.0	< 1.0	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	08/24/09	< 1.0	< 1.0	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	09/28/09	< 1.0	< 1.0	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	10/29/09	< 1.0	< 1.0	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	11/18/09	9.3	3.3	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	06/30/10	2.1	< 1.0	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	07/31/10	200	200	12	150	--	---	---	---	---	---	---	---	---	---	---	---	---
	08/30/10	300	440	22	280	--	---	---	---	---	---	---	---	---	---	---	---	---
	11/10/10	< 1.0	< 1.0	< 1.0	< 3.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	08/10/11	< 1.0	< 1.0	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	10/09/11	3.2	1.6	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	11/03/11	2.8	1.6	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	04/30/12	3.6	< 1.0	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	06/05/12	3.9	< 1.0	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	06/28/12	4.7	< 1.0	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	07/25/12	1.8	< 1.0	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	08/15/12	1.7	< 1.0	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	09/23/12	1.7	< 1.0	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	10/25/12	1.5	< 1.0	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	11/28/12	1.5	< 1.0	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	05/16/13	3.3	< 1.0	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	06/17/13	4.0	< 1.0	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	07/17/13	3.2	1.8	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	07/31/14	5.5	3.4	< 1.0	4	--	---	---	---	---	---	---	---	---	---	---	---	---
	08/25/14	6.4	< 1.0	< 1.0	< 3.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	09/17/14	< 1.0	< 1.0	< 1.0	< 3.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	10/15/14	< 1.0	< 1.0	< 1.0	< 3.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	07/15/15	< 1.0	< 1.0	< 1.0	< 3.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	10/27/15	< 1.0	< 1.0	< 1.0	< 3.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	11/20/15	12	10.0	< 1.0	7.5	--	---	---	---	---	---	---	---	---	---	---	---	---
	03/21/16	6.7	9.9	< 1.0	20	--	---	---	---	---	---	---	---	---	---	---	---	---
	04/20/16	< 1.0	< 1.0	< 1.0	< 3.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	05/19/16	< 1.0	< 1.0	< 1.0	< 3.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	06/28/16	< 1.0	< 1.0	< 1.0	< 3.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	07/07/16	< 1.0	< 1.0	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	08/24/16	< 1.0	< 1.0	< 1.0	< 1.5	--	---	---	---	---	---	---	---	---	---	---	---	---
	09/21/16	< 1.0	< 1.0	< 1.0	< 1.5	--	---	---	---	---	---	---	---	---	---	---	---	---
	10/24/16	4.5	5	< 1.0	4.4	--	---	---	---	---	---	---	---	---	---	---	---	---
	11/03/16	< 1.0	< 1.0	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	07/11/17	< 1.0	< 1.0	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	08/24/17	4	3.6	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	09/25/17	600	650	25	220	--	---	---	---	---	---	---	---	---	---	---	---	---
	10/24/17	16	14	<1.0	7.7	--	---	---	---	---	---	---	---	---	---	---	---	---
	11/27/17	21	19	< 1.0	8.7	--	---	---	---	---	---	---	---	---	---	---	---	---

**Table 4-4 Summary of Water Treatment System Analyses
Transwestern Compressor Station No. 9 - Roswell, NM**

Sample Point	Sampling Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (total) (ug/L)	GRO (Gasoline Range)	Acetone (ug/L)	2-Butanone (ug/L)	Remaining VOCs	Phosphorus (As P) (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (NO3 as N) (mg/L)	Fluoride (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium mg/L	Sodium (mg/L)
NMWQCC Standard:		10	750	750	620	none	none	none	NA	none	250	600	10.0	1.6	none	none	none	none
Post-Air Stripper	05/25/09	260	680	33	790	5.3	---	---	---	---	---	---	---	---	---	---	---	---
	06/22/09	960	1,600	63	830	--	---	---	---	---	---	---	---	---	---	---	---	---
	07/21/09	280	500	< 20	280	--	---	---	---	---	---	---	---	---	---	---	---	---
	08/24/09	230	350	13	220	--	---	---	---	---	---	---	---	---	---	---	---	---
	09/28/09	290	72	19	240	--	---	---	---	---	---	---	---	---	---	---	---	---
	10/29/09	450	670	42	430	--	---	---	---	---	---	---	---	---	---	---	---	---
	11/18/09	200	470	18	300	--	---	---	---	---	---	---	---	---	---	---	---	---
	06/30/10	450	460	13	250	--	---	---	---	---	---	---	---	---	---	---	---	---
	07/31/10	190	200	11	140	--	---	---	---	---	---	---	---	---	---	---	---	---
	08/30/10	450	660	31	450	--	---	---	---	---	---	---	---	---	---	---	---	---
	11/10/10	59	97	< 10	65	--	---	---	---	---	---	---	---	---	---	---	---	---
	08/10/11	1.4	2.7	< 1	3.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	10/09/11	21	37	2.0	22	--	---	---	---	---	---	---	---	---	---	---	---	---
	11/03/11	30	66	3.4	47	--	---	---	---	---	---	---	---	---	---	---	---	---
	04/30/12	< 1	1.3	< 1	2.2	--	---	---	---	---	---	---	---	---	---	---	---	---
	06/05/12	< 1	1.0	< 1	< 2	--	---	---	---	---	---	---	---	---	---	---	---	---
	06/28/12	< 1	< 1	< 1	< 2	--	---	---	---	---	---	---	---	---	---	---	---	---
	07/25/12	170	270	12	130	--	---	---	---	---	---	---	---	---	---	---	---	---
	08/15/12	13	16	< 5	10	--	---	---	---	---	---	---	---	---	---	---	---	---
	09/23/12	< 5	< 5	< 5	< 10	--	---	---	---	---	---	---	---	---	---	---	---	---
	10/25/12	< 5	< 5	< 5	< 10	--	---	---	---	---	---	---	---	---	---	---	---	---
	11/28/12	5.1	8.4	< 5	< 10	--	---	---	---	---	---	---	---	---	---	---	---	---
	05/16/13	< 5	< 5	< 5	< 10	--	---	---	---	---	---	---	---	---	---	---	---	---
	06/17/13	< 5	< 5	< 5	< 10	--	---	---	---	---	---	---	---	---	---	---	---	---
	07/17/13	< 5	< 5	< 5	< 10	--	---	---	---	---	---	---	---	---	---	---	---	---
	07/31/14	< 1	< 1	< 1	< 3	--	---	---	---	---	---	---	---	---	---	---	---	---
	08/25/14	< 1	< 1	< 1	< 3	--	---	---	---	---	---	---	---	---	---	---	---	---
	09/17/14	< 1	< 1	< 1	< 3	--	---	---	---	---	---	---	---	---	---	---	---	---
	10/15/14	5	11	< 1	10	--	---	---	---	---	---	---	---	---	---	---	---	---
	07/15/15	< 1.0	< 1.0	< 1.0	< 3.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	10/27/15	12	14	1.5	11	--	---	---	---	---	---	---	---	---	---	---	---	---
	11/20/15	110	160	9.3	140	--	---	---	---	---	---	---	---	---	---	---	---	---
	03/21/16	22	77	14	200	--	---	---	---	---	---	---	---	---	---	---	---	---
	04/20/16	< 1.0	< 1.0	< 1.0	< 3.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	05/19/16	< 1.0	< 1.0	< 1.0	< 3.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	06/28/16	< 2.5	< 5.0	< 5.0	< 10	--	---	---	---	---	---	---	---	---	---	---	---	---
	07/07/16	< 1.0	< 1.0	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	08/24/16	< 1.0	< 1.0	< 1.0	< 1.5	--	---	---	---	---	---	---	---	---	---	---	---	---
	09/21/16	< 1.0	< 1.0	< 1.0	< 1.5	--	---	---	---	---	---	---	---	---	---	---	---	---
	10/24/16	20	26	1.5	25	--	---	---	---	---	---	---	---	---	---	---	---	---
	11/03/16	< 1.0	< 1.0	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	07/11/17	< 1.0	< 1.0	< 1.0	< 2.0	--	---	---	---	---	---	---	---	---	---	---	---	---
	08/24/17	5.6	6.7	< 1.0	3.5	--	---	---	---	---	---	---	---	---	---	---	---	---
	09/25/17	380	470	19	190	--	---	---	---	---	---	---	---	---	---	---	---	---
	10/23/17	9.6	13	< 1.0	8	--	---	---	---	---	---	---	---	---	---	---	---	---
	11/27/17	29	38	2	20	---	---	---	---	---	---	---	---	---	---	---	---	---

**Table 4-4 Summary of Water Treatment System Analyses
Transwestern Compressor Station No. 9 - Roswell, NM**

Sample Point	Sampling Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (total) (ug/L)	GRO (Gasoline Range)	Acetone (ug/L)	2-Butanone (ug/L)	Remaining VOCs	Phosphorus (As P) (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (NO3 as N) (mg/L)	Fluoride (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium mg/L	Sodium (mg/L)
NMWQCC Standard:		10	750	750	620	none	none	none	NA	none	250	600	10.0	1.6	none	none	none	none
Pre-Treatment	05/25/09	640	1,700	99	1,900	15	---	---	---	---	---	---	---	---	---	---	---	---
	06/22/09	2,700	4,500	210	2,400	--	---	---	---	---	---	---	---	---	---	---	---	---
	07/21/09	2,500	4,600	210	2,600	--	---	---	---	---	---	---	---	---	---	---	---	---
	08/24/09	2,700	4,000	200	2,500	--	---	---	---	---	---	---	---	---	---	---	---	---
	09/28/09	2,900	910	220	2,200	--	---	---	---	---	---	---	---	---	---	---	---	---
	10/29/09	3,000	4,100	280	2,700	--	---	---	---	---	---	---	---	---	---	---	---	---
	11/18/09	1,400	3,300	140	2,000	--	---	---	---	---	---	---	---	---	---	---	---	---
	06/30/10	2,700	2,800	120	1,500	--	---	---	---	---	---	---	---	---	---	---	---	---
	07/31/10	1,900	2,000	140	1,300	--	---	---	---	---	---	---	---	---	---	---	---	---
	08/30/10	1,800	2,600	150	1,800	--	---	---	---	---	---	---	---	---	---	---	---	---
	11/10/10	2,400	3,900	220	2,100	--	---	---	---	---	---	---	---	---	---	---	---	---
	08/10/11	970	1,900	130	1,400	--	---	---	---	---	---	---	---	---	---	---	---	---
	10/09/11	3,000	4,800	240	2,500	--	---	---	---	---	---	---	---	---	---	---	---	---
	11/03/11	2,400	4,900	260	2,800	--	---	---	---	---	---	---	---	---	---	---	---	---
	04/30/12	3,100	3,400	200	2,100	--	---	---	---	---	---	---	---	---	---	---	---	---
	06/05/12	2,600	3,900	220	2,200	--	---	---	---	---	---	---	---	---	---	---	---	---
	06/28/12	3,000	4,500	250	2,300	--	---	---	---	---	---	---	---	---	---	---	---	---
	07/25/12	2,900	4,600	260	2,700	--	---	---	---	---	---	---	---	---	---	---	---	---
	08/15/12	2,900	3,500	270	2,300	--	---	---	---	---	---	---	---	---	---	---	---	---
	09/23/12	2,600	3,600	270	2,400	--	---	---	---	---	---	---	---	---	---	---	---	---
	10/25/12	3,200	4,400	280	2,600	--	---	---	---	---	---	---	---	---	---	---	---	---
	11/28/12	2,300	3,700	230	2,300	--	---	---	---	---	---	---	---	---	---	---	---	---
	05/16/13	2,800	4,900	260	2,600	--	---	---	---	---	---	---	---	---	---	---	---	---
	06/17/13	2,500	4,500	260	2,500	--	---	---	---	---	---	---	---	---	---	---	---	---
	07/17/13	3,000	5,300	270	2,600	--	---	---	---	---	---	---	---	---	---	---	---	---
	07/31/14	570	1,500	< 100	2,100	--	---	---	---	---	---	---	---	---	---	---	---	---
	08/25/14	1,200	1,600	110	1,500	--	---	---	---	---	---	---	---	---	---	---	---	---
	09/17/14	2,100	3,100	180	1,900	--	---	---	---	---	---	---	---	---	---	---	---	---
	10/15/14	2,200	3,900	200	2,200	--	---	---	---	---	---	---	---	---	---	---	---	---
	07/15/15	2,700	2,600	160	1,900	--	---	---	---	---	---	---	---	---	---	---	---	---
	10/27/15	1,700	1,700	< 100	1,200	--	---	---	---	---	---	---	---	---	---	---	---	---
	11/20/15	2,700	3,500	160	2,300	--	---	---	---	---	---	---	---	---	---	---	---	---
	03/21/16	1,500	2,200	140	2,300	--	---	---	---	---	---	---	---	---	---	---	---	---
	04/20/16	1,100	1,600	100	2,100	--	---	---	---	---	---	---	---	---	---	---	---	---
	05/19/16	960	1,100	100	2,000	--	---	---	---	---	---	---	---	---	---	---	---	---
	06/28/16	2,100	520	130	970	--	---	---	---	---	---	---	---	---	---	---	---	---
	07/07/16	2,000	2,400	160	1,800	--	---	---	---	---	---	---	---	---	---	---	---	---
	08/24/16	1,500	2,500	170	2,200	--	---	---	---	---	---	---	---	---	---	---	---	---
	09/21/16	1,900	2,400	190	2,200	--	---	---	---	---	---	---	---	---	---	---	---	---
	10/24/16	1,100	1,200	140	1,600	--	---	---	---	---	---	---	---	---	---	---	---	---
	11/03/16	1,700	3,000	180	2,400	--	---	---	---	---	---	---	---	---	---	---	---	---
	07/11/17	5,200	7,000	160	2,700	--	---	---	---	---	---	---	---	---	---	---	---	---
	08/24/17	3,600	3,800	200	1,500	--	---	---	---	---	---	---	---	---	---	---	---	---
	09/25/17	4,300	5,700	250	2,200	--	---	---	---	---	---	---	---	---	---	---	---	---
	10/23/17	4,400	5,200	200	2,300	--	---	---	---	---	---	---	---	---	---	---	---	---
	11/27/18	4,400	5,300	200	2,200	--	---	---	---	---	---	---	---	---	---	---	---	---

Notes:

ug/L = micrograms per liter

Concentrations are reported in ug/L except as noted.

Bold - Concentrations exceed the NMWQCC standard

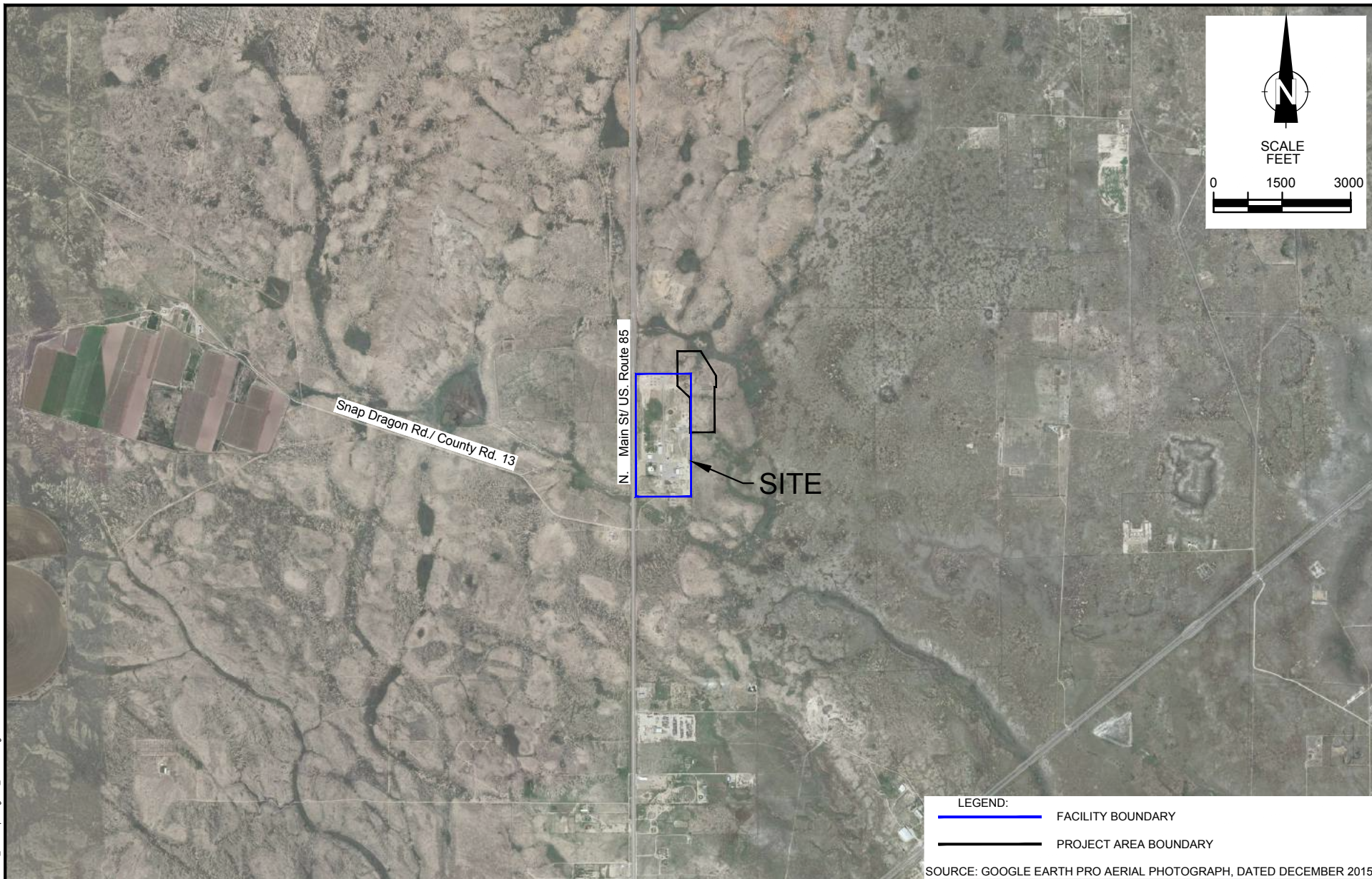
Historical data before 2009 is presented in previous reports.

Prepared by: RLA 1/26/18

Checked by: SSD 2/9/18

FIGURES

FILENAME: transwestern energy transfer - roswell_2017 report figures_recover.dwg



REPORT OF 2017 GROUNDWATER REMEDIATION ACTIVITIES
TRANSWESTERN PIPELINE COMPANY, LLC
TRANSWESTERN COMPRESSOR STATION No. 9
(ROSWELL COMPRESSOR STATION)
ROSWELL, CHAVES COUNTY, NEW MEXICO

PROJECT NO. 02.20180005.00



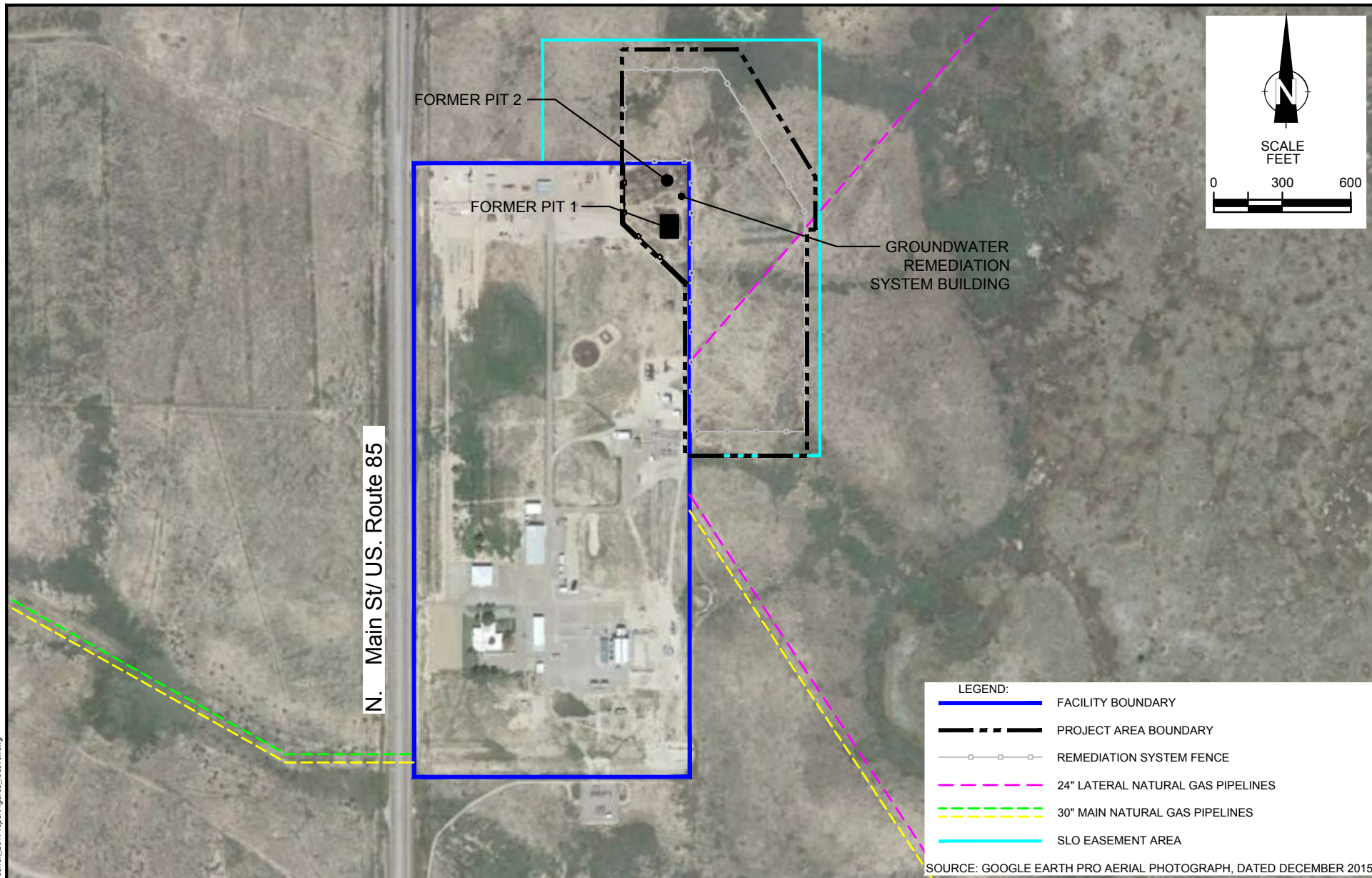
EarthCon Consultants, Inc.

1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062

SITE LOCATION MAP

DRAWN:	HVP	CHECKED:	RLA	DATE:	02/06/2018	FIGURE:	1-1
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FILENAME: transwestern energy transfer - roswell_2017 report figures_revised.dwg



REPORT OF 2017 GROUNDWATER REMEDIATION ACTIVITIES
TRANSWESTERN PIPELINE COMPANY, LLC
TRANSWESTERN COMPRESSOR STATION No. 9
(ROSWELL COMPRESSOR STATION)
ROSWELL, CHAVES COUNTY, NEW MEXICO

PROJECT NO. 02.20180005.00



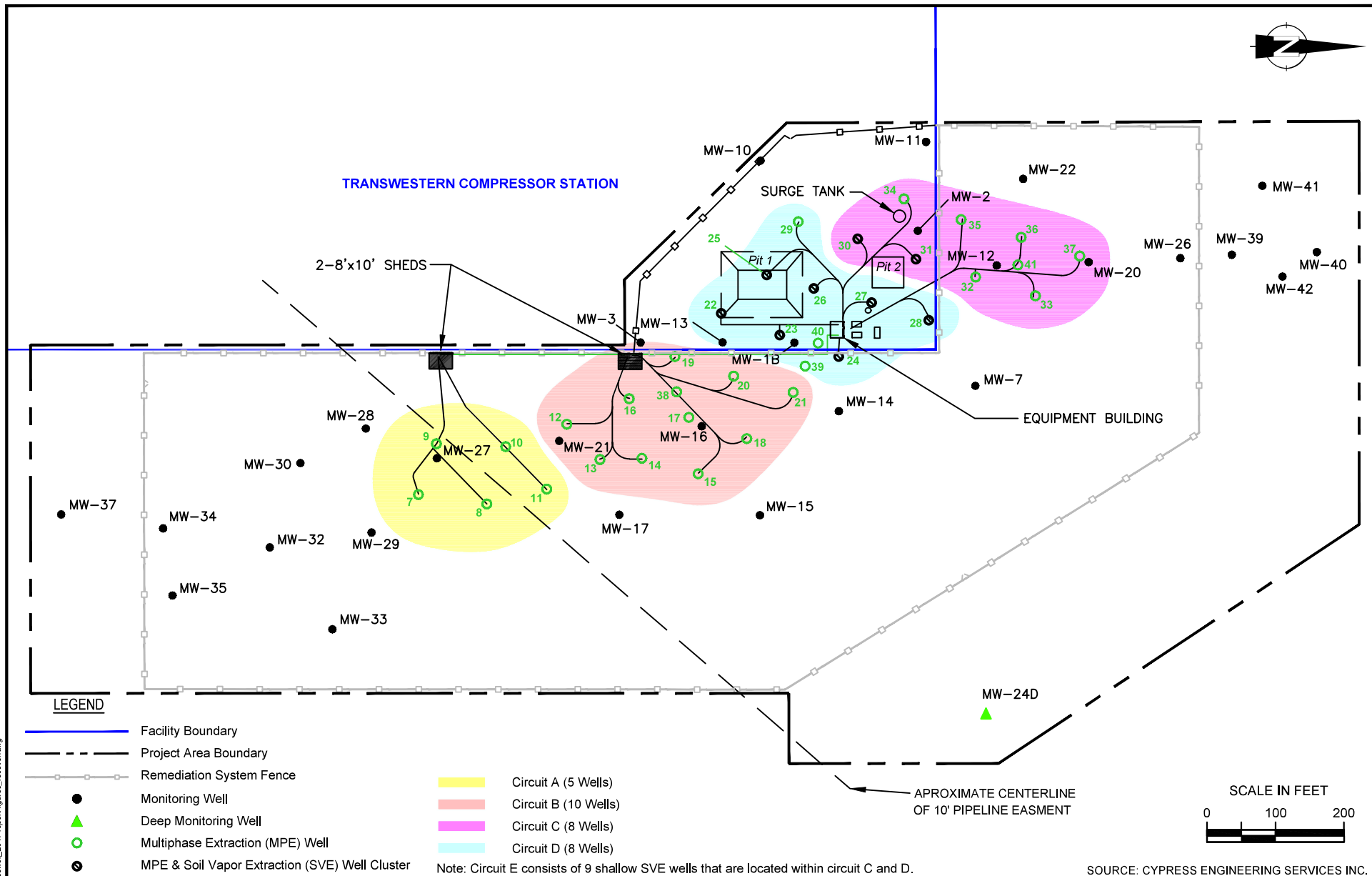
EarthCon Consultants, Inc.

1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062

SITE FEATURES

DRAWN:	HVP	CHECKED:	RLA	DATE:	02/06/2018	FIGURE:	1-2
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FILENAME: transwestern_energy_transwest_roswell_2017 report figures_recover.dwg



REPORT OF 2017 GROUNDWATER REMEDIATION ACTIVITIES
TRANSWESTERN PIPELINE COMPANY, LLC
TRANSWESTERN COMPRESSOR STATION No. 9
(ROSWELL COMPRESSOR STATION)
ROSWELL, CHAVES COUNTY, NEW MEXICO

PROJECT NO. 02.20180005.00



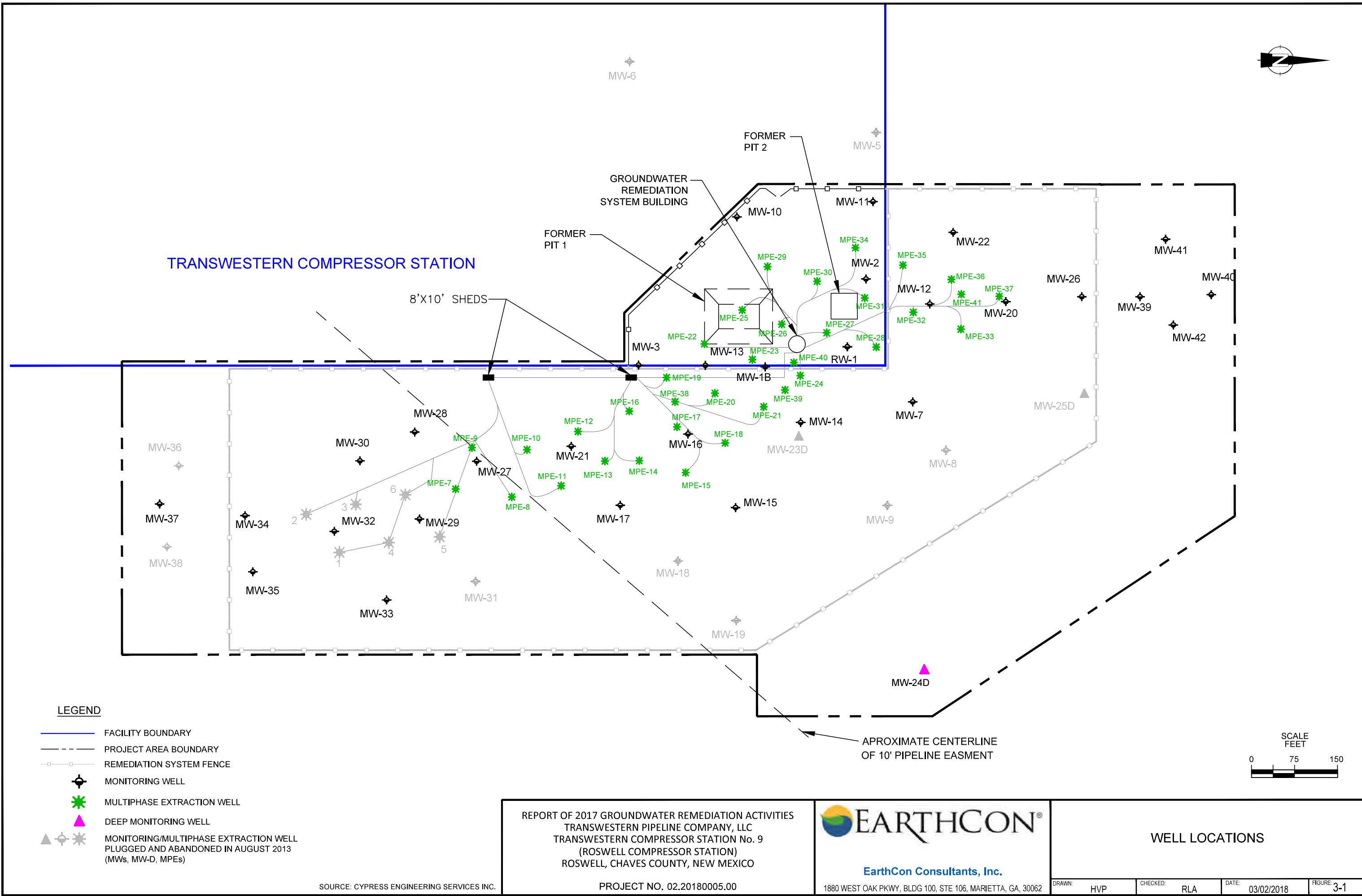
EarthCon Consultants, Inc.

1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062

REMEDIATION SYSTEM LAYOUT

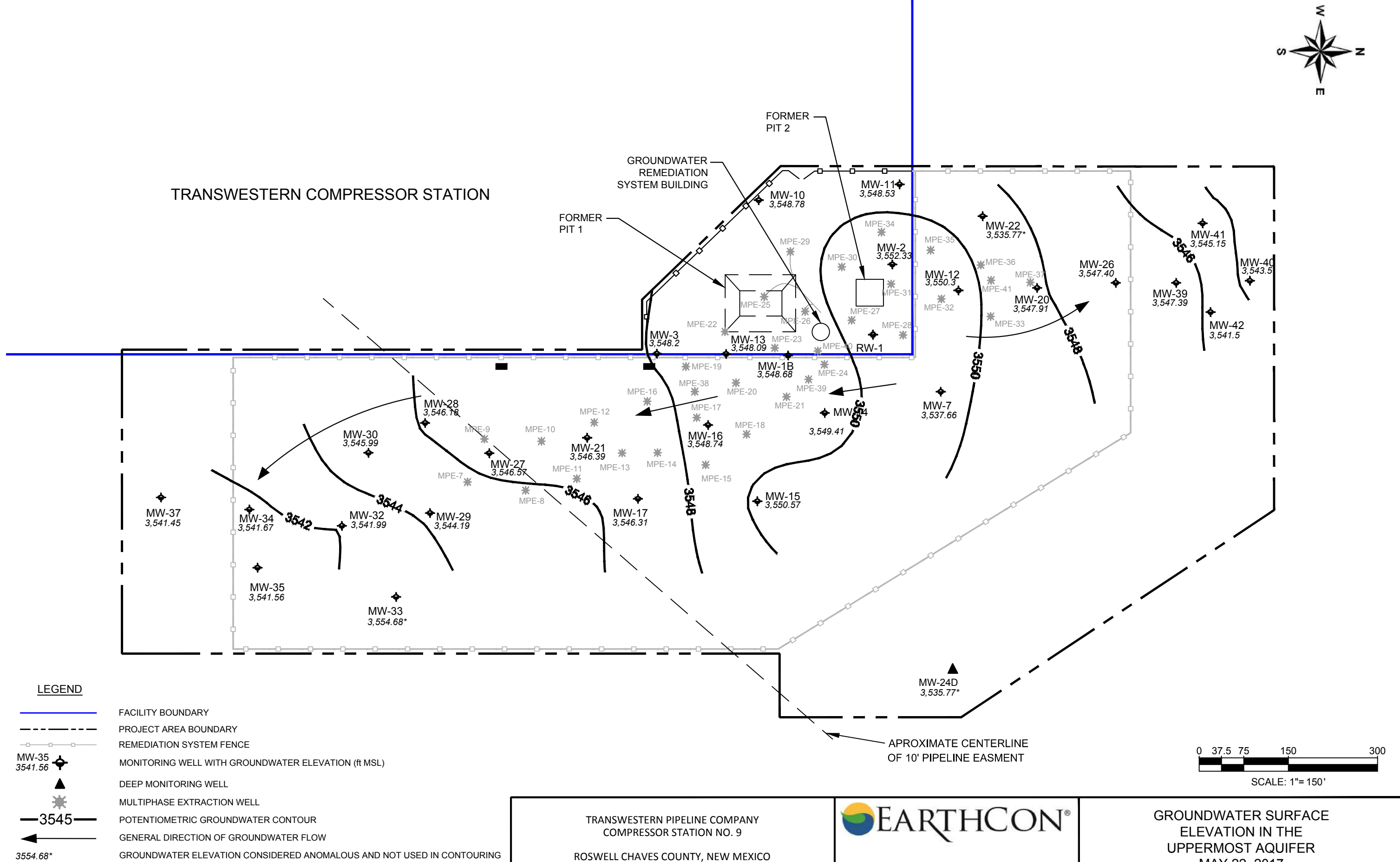
DRAWN: HVP	CHECKED: SD	DATE: 03/02/2018	FIGURE: 1-3
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SOURCE: CYPRESS ENGINEERING SERVICES INC.

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LEGEND

- FACILITY BOUNDARY
- PROJECT AREA BOUNDARY
- REMEDATION SYSTEM FENCE
- MONITORING WELL WITH GROUNDWATER ELEVATION (ft MSL)
- DEEP MONITORING WELL
- MULTIPHASE EXTRACTION WELL
- POTENTIOMETRIC GROUNDWATER CONTOUR
- GENERAL DIRECTION OF GROUNDWATER FLOW
- GROUNDWATER ELEVATION CONSIDERED ANOMALOUS AND NOT USED IN CONTOURING

SOURCE: CYPRESS ENGINEERING SERVICES INC.

TRANSWESTERN PIPELINE COMPANY
COMPRESSOR STATION NO. 9
ROSWELL CHAVES COUNTY, NEW MEXICO

PROJECT NO. 02.20180005.00



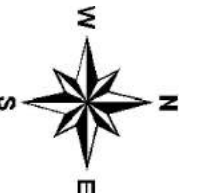
EarthCon Consultants, Inc.

1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062

GROUNDWATER SURFACE
ELEVATION IN THE
UPPERMOST AQUIFER
MAY 22, 2017

DRAWN: HVP CHECKED: RLA DATE: 03/02/2018 FIGURE: 3-2

FILE NAME: S:\Premier\Projects\Energy Transfer\Transwestern\Roswell\2017 Report Files\Figures\CADD\Transwestern Energy Transfer_Roswell_Nov2017_FOT.dwg (3-3 POTMAP) 03/02/18 15:41 - hpham

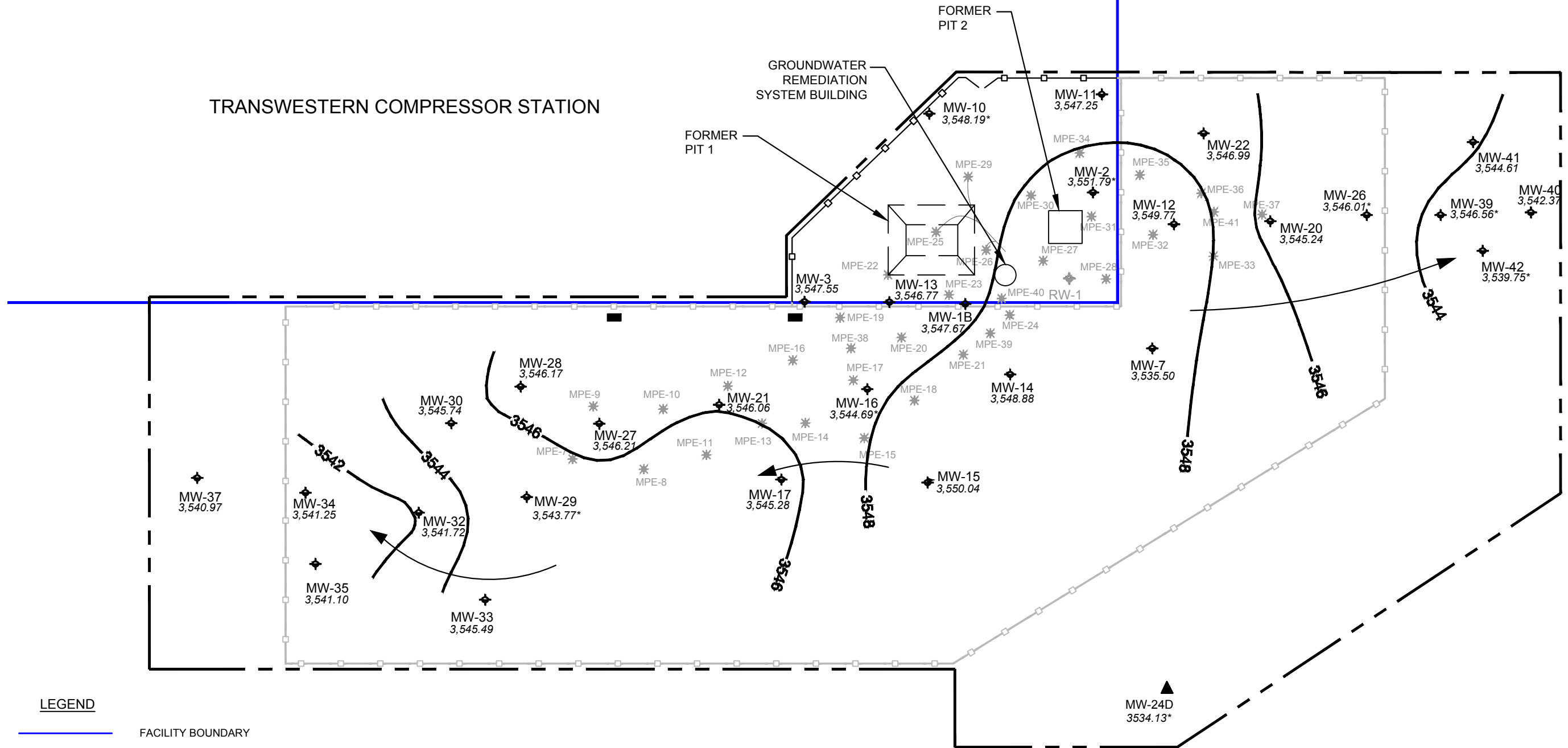


TRANSWESTERN COMPRESSOR STATION

GROUNDWATER
REMEDIALTION
SYSTEM BUILDING

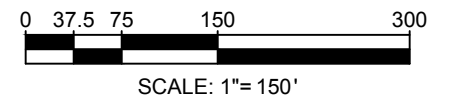
FORMER
PIT 1

FORMER
PIT 2



LEGEND

- FACILITY BOUNDARY
- PROJECT AREA BOUNDARY
- REMEDIALTION SYSTEM FENCE
- MONITORING WELL WITH GROUNDWATER ELEVATION (ft MSL)
- MULTIPHASE EXTRACTION WELL
- DEEP MONITORING WELL
- POTENTIOMETRIC GROUNDWATER CONTOUR
- GENERAL DIRECTION OF GROUNDWATER FLOW
- GROUNDWATER ELEVATION CONSIDERED ANOMALOUS AND NOT USED IN CONTOURING.



TRANSWESTERN PIPELINE COMPANY
COMPRESSOR STATION NO. 9

ROSWELL CHAVES COUNTY, NEW MEXICO

PROJECT NO. 02.2018005.00



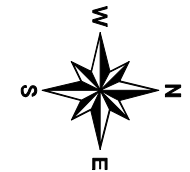
1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062

GROUNDWATER SURFACE
ELEVATION IN THE
UPPERMOST AQUIFER
NOVEMBER 13, 2017

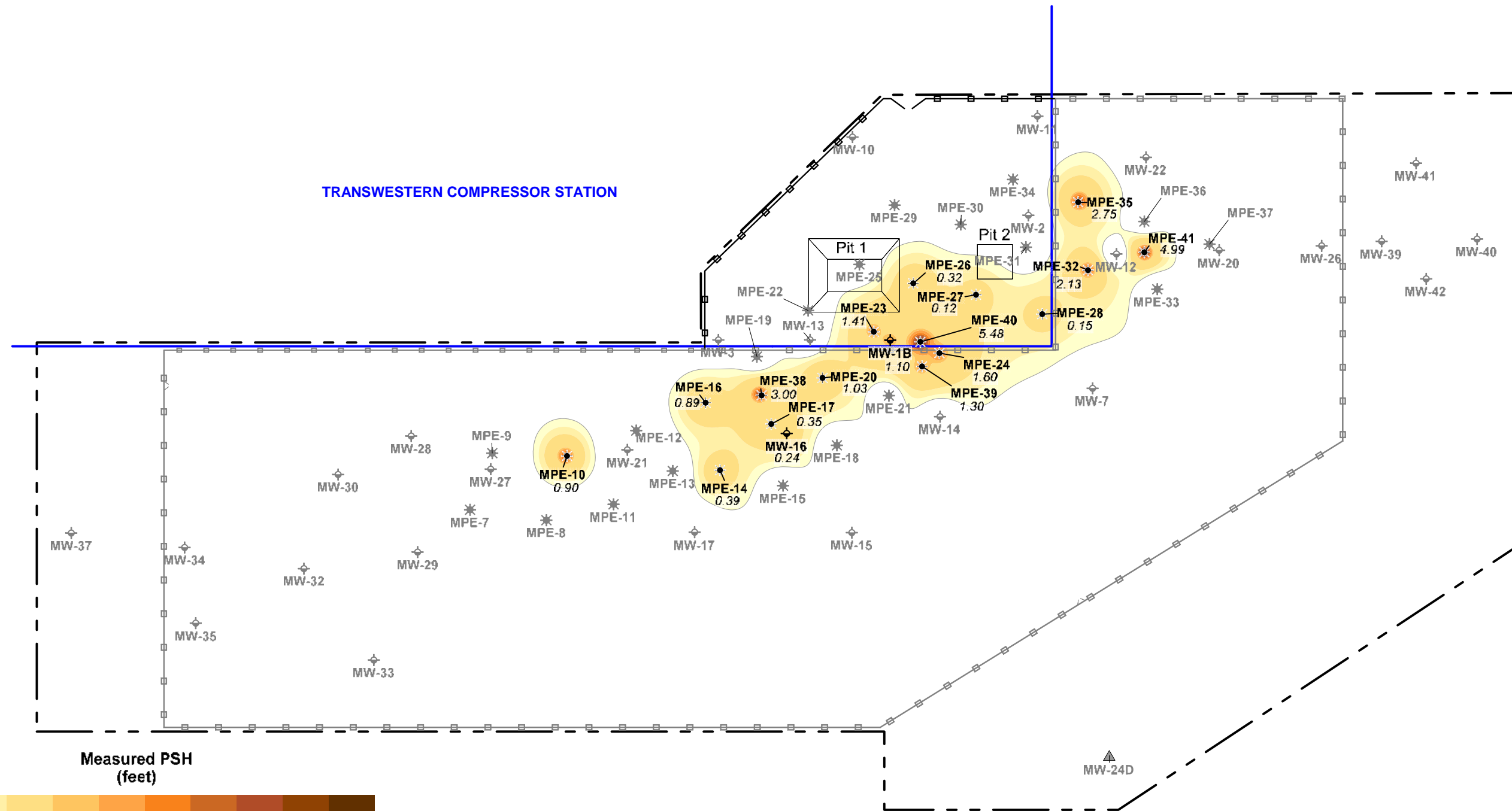
DRAWN: HVP CHECKED: RLA DATE: 03/02/2018 FIGURE: 3-3

SOURCE: CYPRESS ENGINEERING SERVICES INC.

FILENAME: PSH thickness May-June 2017_KV1.sft



TRANSWESTERN COMPRESSOR STATION



Notes:

PSH - Phase Separated Hydrocarbons.
Plugged and abandoned monitoring/multi-phase extraction wells not shown.

SCALE

0 FT 75 FT 150 FT

LEGEND

- Facility Boundary
- Project Area Boundary
- Remediation System Fence

- MW-1B Monitoring Well 1.03 PSH Thickness (feet)
- MPE-20 Multi-Phase Extraction Well
- MW-37 Monitoring Well (No PSH Measured)
- MPE-31 Multi-Phase Extraction Well (No PSH Measured)

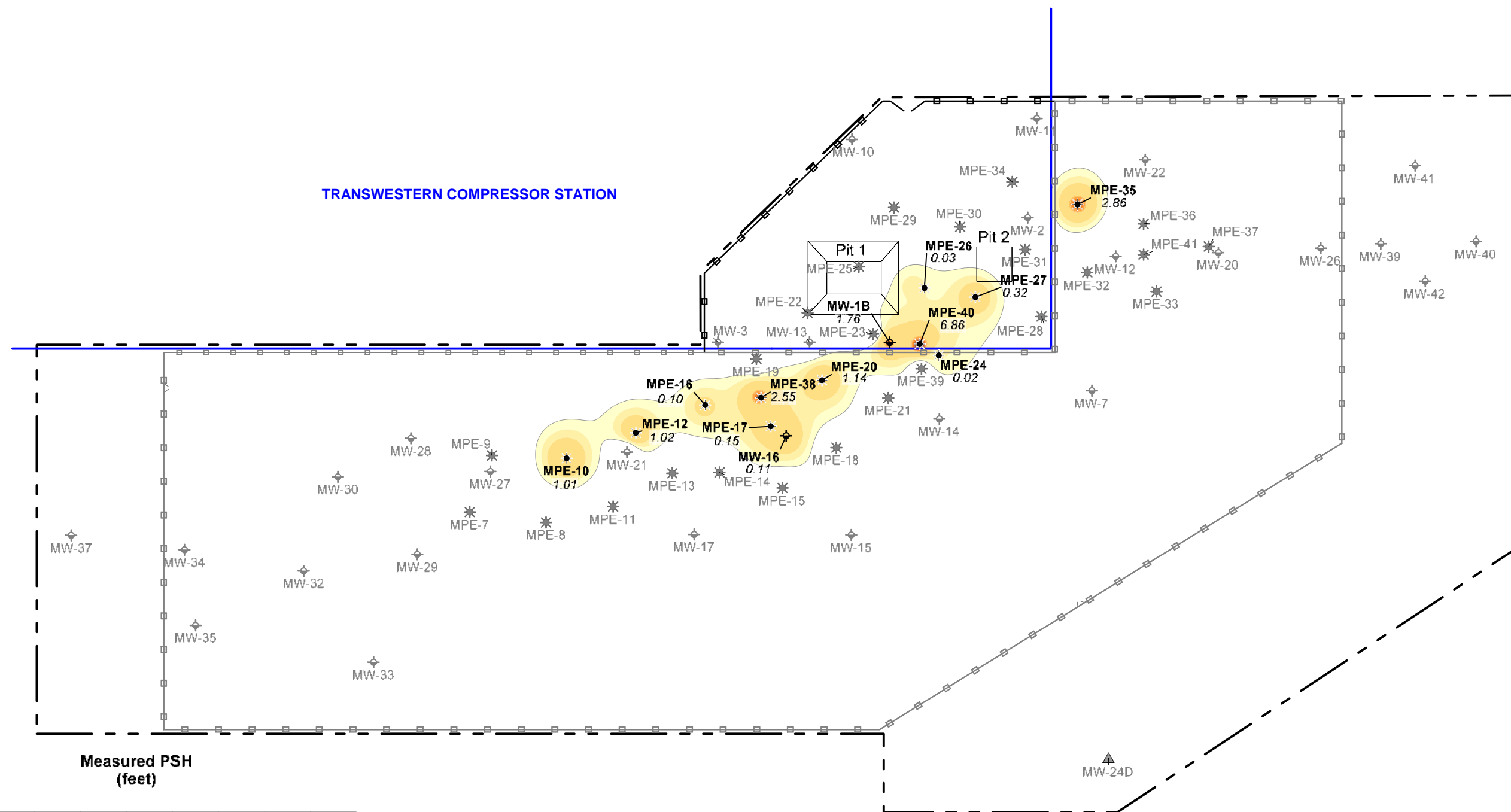
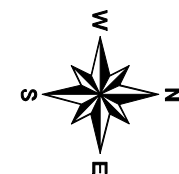
TRANSWESTERN PIPELINE COMPANY
COMPRESSOR STATION NO. 9
ROSWELL, CHAVES COUNTY, NEW MEXICO

PROJ. NO: 02.20180005.00

EARTHCON
EarthCon Consultants Inc.
1880 West Oak Parkway
Building 100, Suite 106
Marietta, Georgia 30062

DISTRIBUTION OF PSH
IN THE UPPERMOST AQUIFER
MAY 2017

DRAWN: HVP CHECKED: RLA DATE: 03/18 FIGURE: 3-4



Measured PSH
(feet)



0.01 0.02 0.05 0.75 1 1.5 2 2.5 3.5 5

LEGEND

- Facility Boundary
- Project Area Boundary
- Remediation System Fence

- MW-1B Monitoring Well
- MPE-20 Multi-Phase Extraction Well
- MW-37 Monitoring Well (No PSH Measured)
- MPE-31 Multi-Phase Extraction Well (No PSH Measured)

1.03 PSH Thickness (feet)

Notes:

PSH - Phase Separated Hydrocarbons.
Plugged and abandoned monitoring/multi-phase extraction wells not shown.

SCALE

0 FT 75 FT 150 FT

TRANSWESTERN PIPELINE COMPANY
COMPRESSOR STATION NO. 9

ROSWELL, CHAVES COUNTY, NEW MEXICO

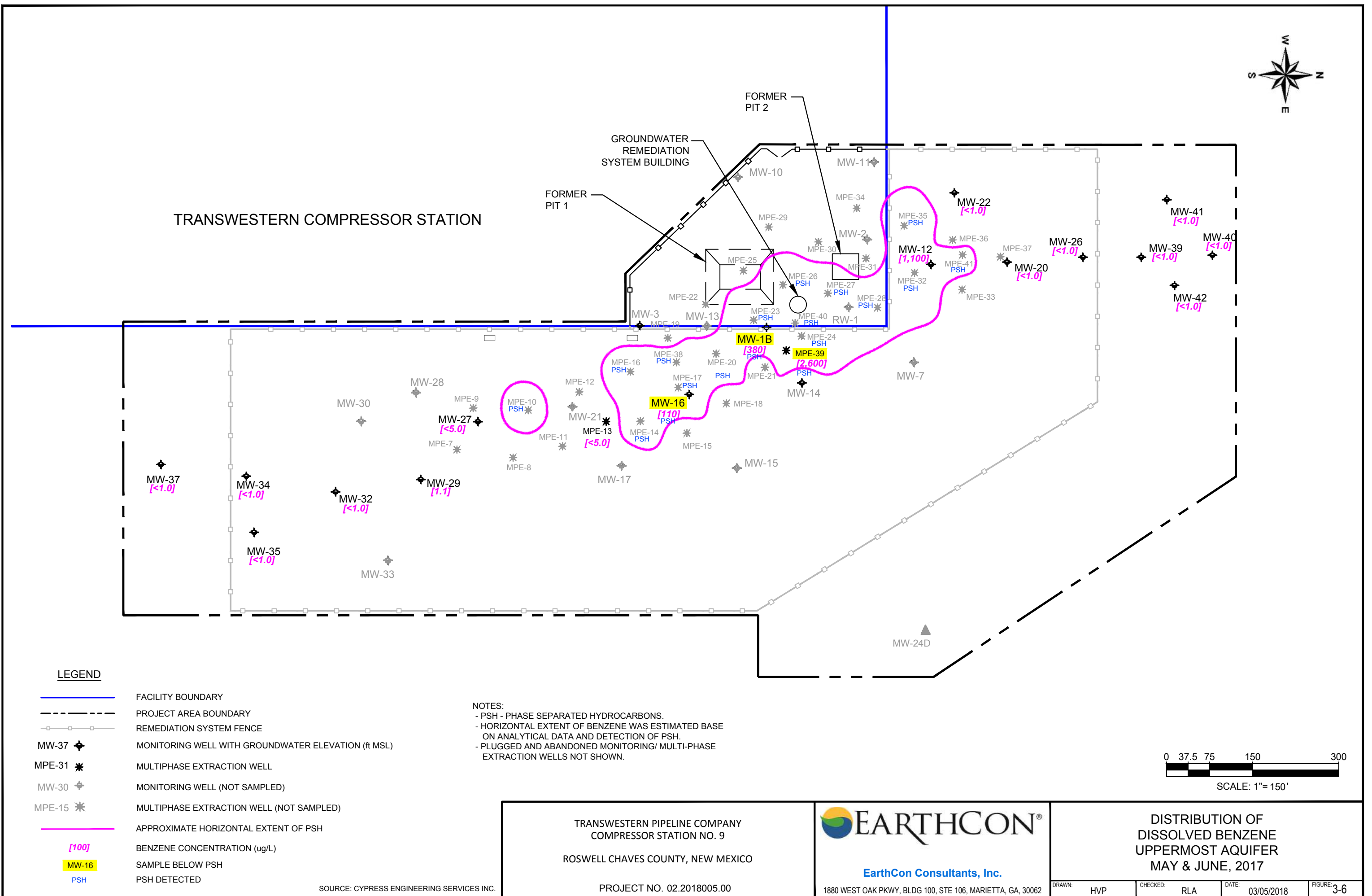
PROJ. NO: 02.2018005.00

EARTHCON
EarthCon Consultants Inc.
1880 West Oak Parkway
Building 100, Suite 106
Marietta, Georgia 30062

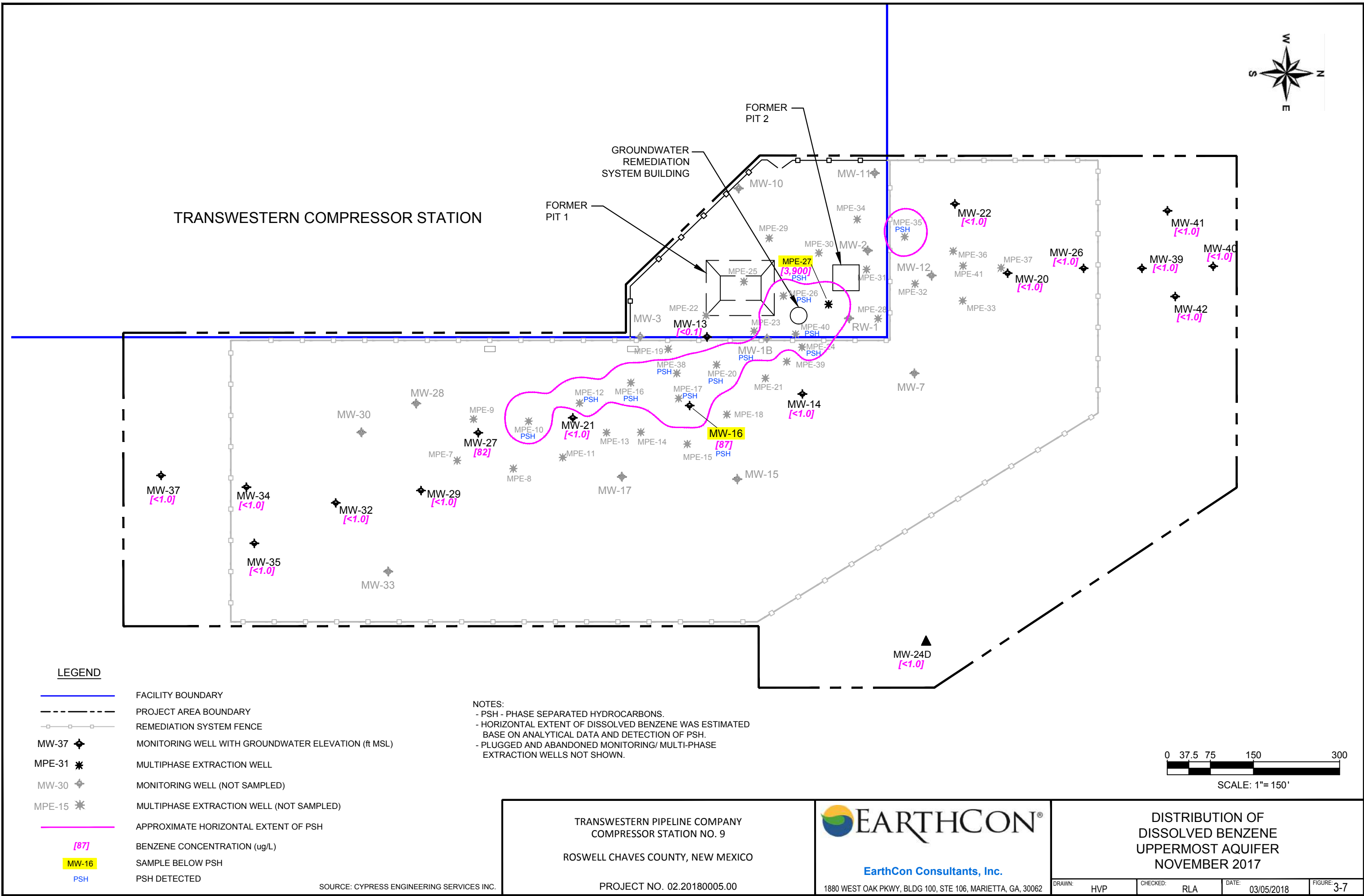
DISTRIBUTION OF PSH
IN THE UPPERMOST AQUIFER
NOVEMBER 2017

DRAWN: HVP CHECKED: RLA DATE: 03/18 FIGURE: 3-5

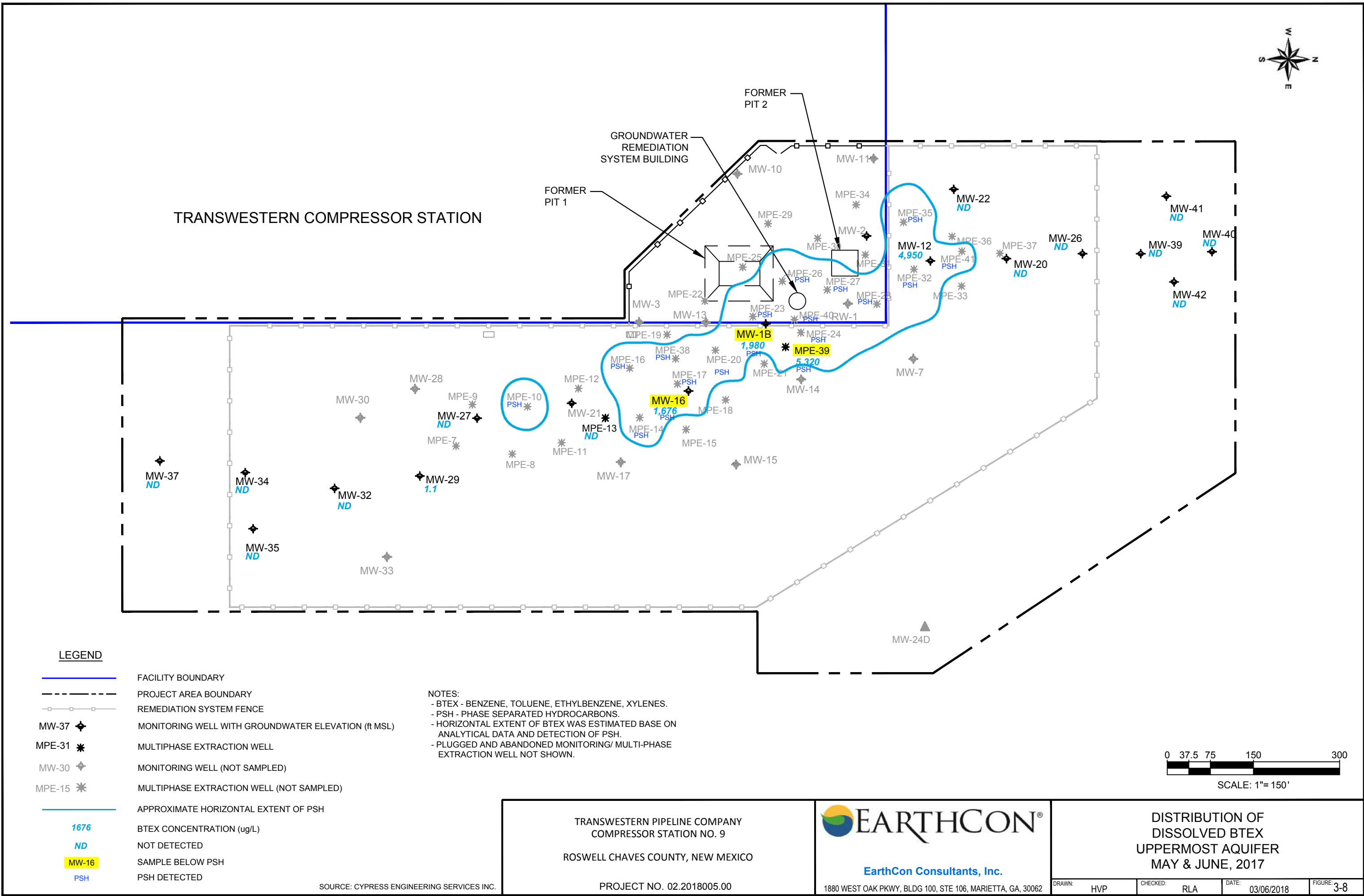
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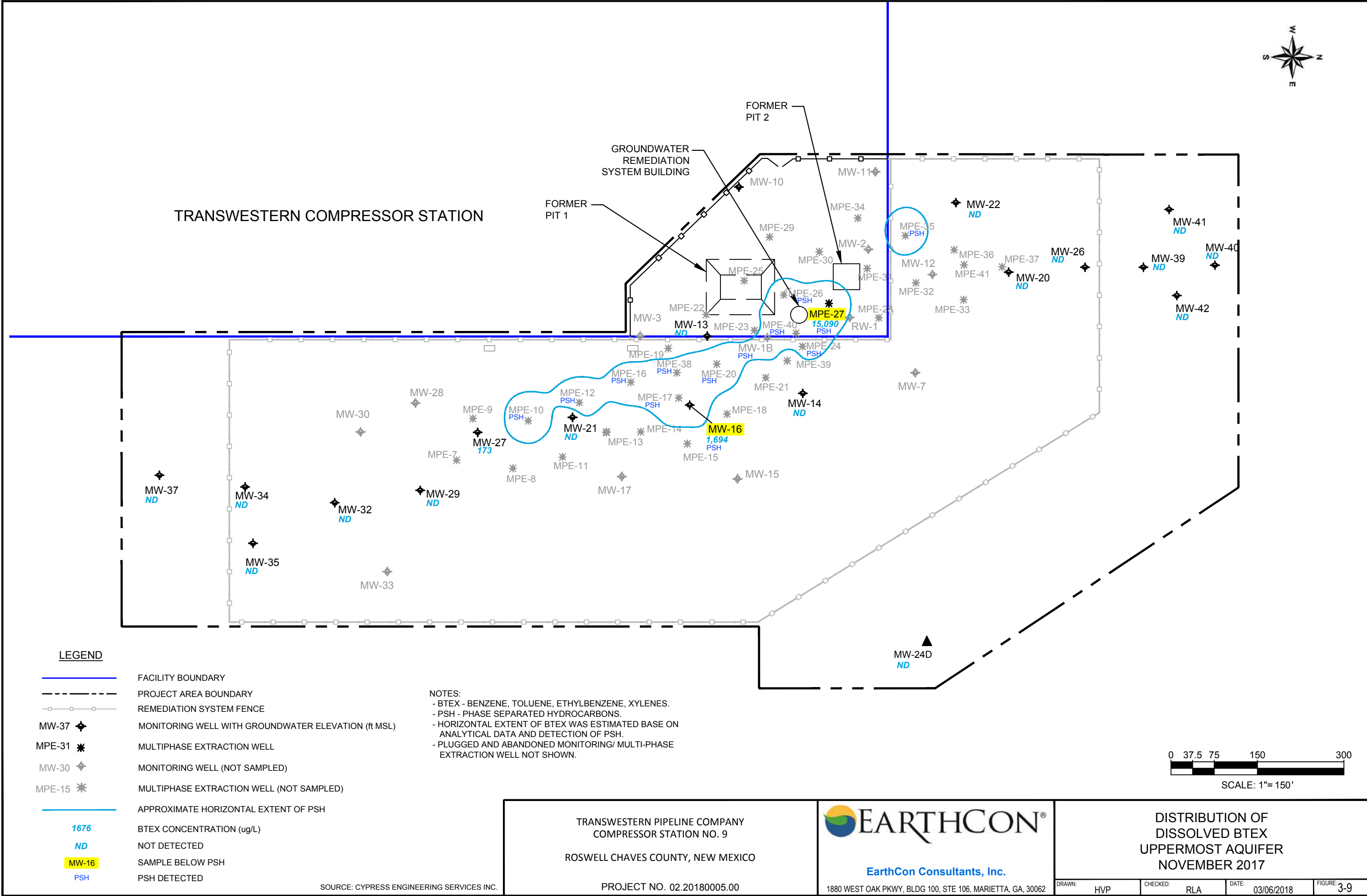
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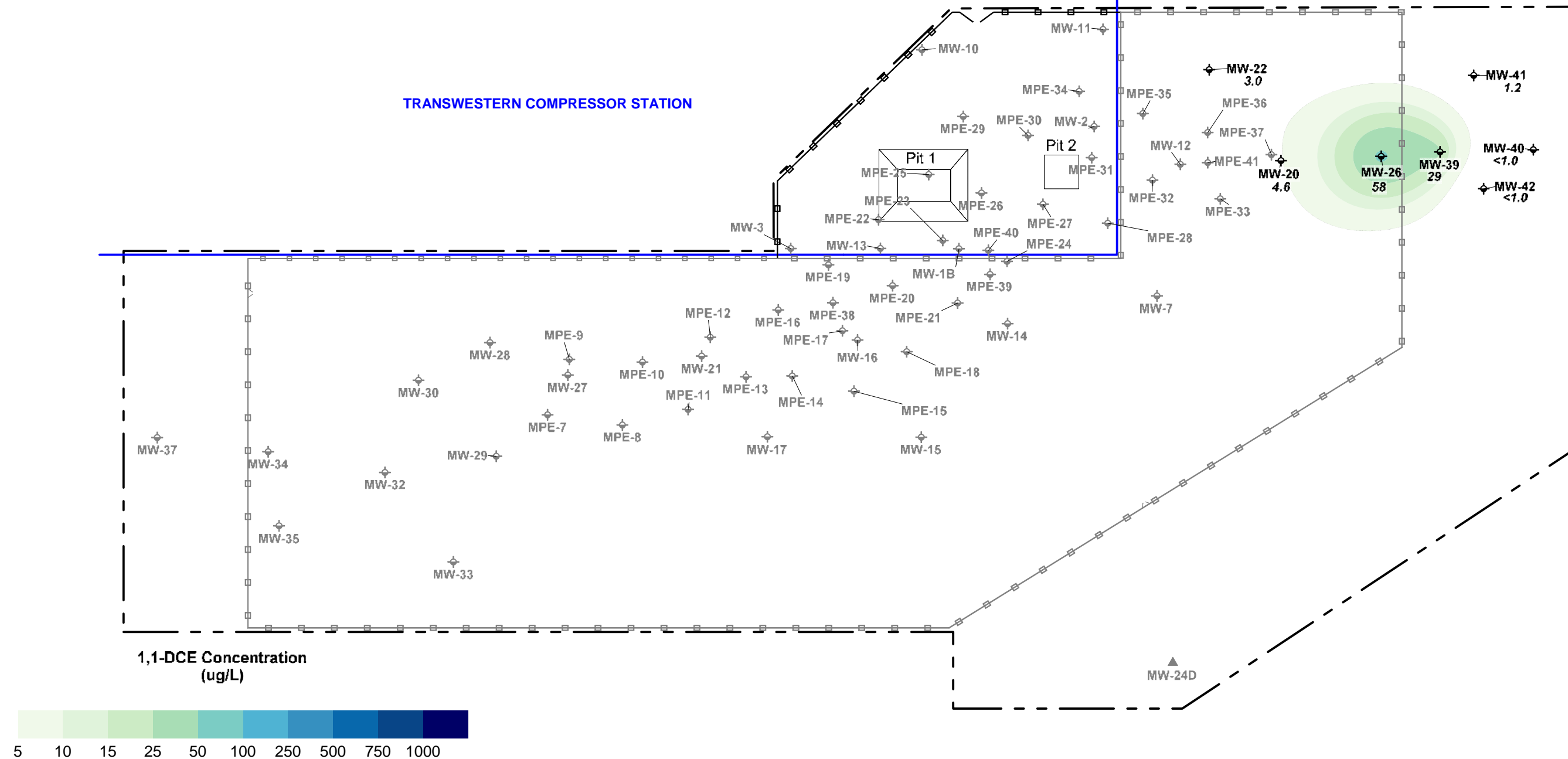
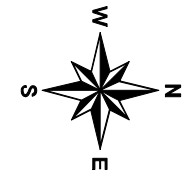
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FILE NAME: S:\Premier\Projects\Energy_Transfer\Transwestern-Roswell\2017 Report Files\Figures\CAD\Fig 3-9_Roswell_Dissolved_BTEX_Nov2017.dwg (3-9 DISS BTEX MAY-JUNE 2017) 03/07/18 10:44 - lpham



FILENAME: S:\PremierProjects\Energy Transwestern-Koswell\2017 Report Files\figures\summary_1_1 DCE MAY-JUNE 2017_KV1.sit



LEGEND

- Facility Boundary
- Project Area Boundary
- Remediation System Fence

- MW-26 58 Monitoring Well with Concentration (ug/L)
- MW-30 Monitoring Well (Not Sampled/Not Analyzed)
- MPE-15 Multi-Phase Extraction Well (Not Sampled/Not Analyzed)

Note: Plugged and abandoned monitoring/multi-phase extraction wells not shown.

SCALE
0 FT 75 FT 150 FT

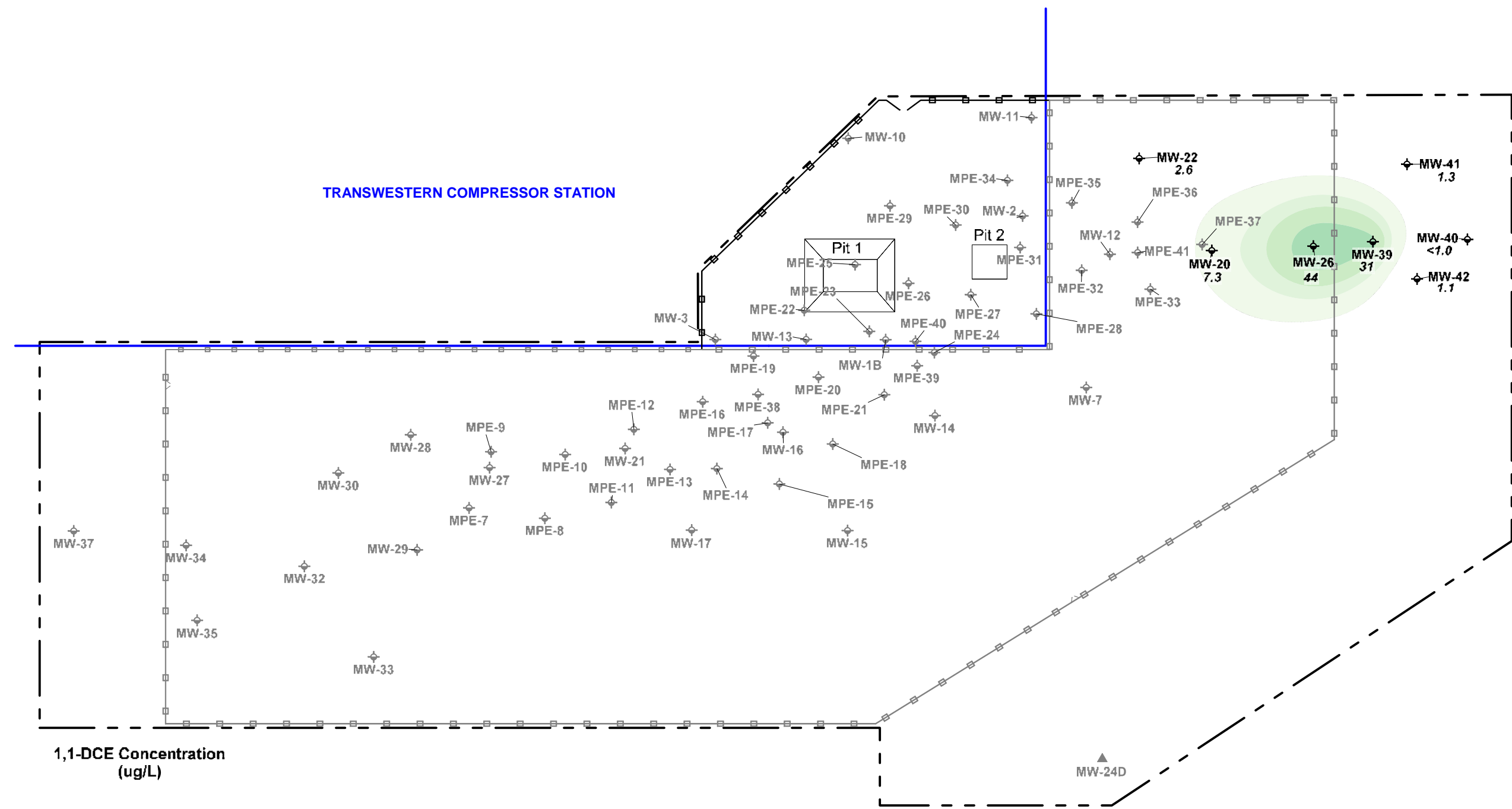
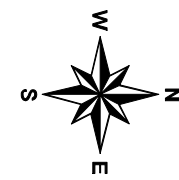
TRANSWESTERN PIPELINE COMPANY
COMPRESSOR STATION NO. 9
ROSWELL, CHAVES COUNTY, NEW MEXICO

EARTHCON
EarthCon Consultants Inc.
1880 West Oak Parkway
Building 100, Suite 106
Marietta, Georgia 30062

DISTRIBUTION OF
DISSOLVED 1,1-DCE IN THE
UPPERMOST AQUIFER
MAY & JUNE 2017

DRAWN: HVP	CHECKED: RLA	DATE: 03/18	FIGURE: 3-10
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FILENAME: S:\PremierProjects\Energy Transwestern-Roswell\2017 Report Files\figures\summary_1_1 DCE NOV 2017_KV1.sft



LEGEND

- Facility Boundary
- Project Area Boundary
- Remediation System Fence
- MW-26 58 Monitoring Well with Concentration (ug/L)
- MW-30 Monitoring Well (Not Sampled/Not Analyzed)
- MPE-15 Multi-Phase Extraction Well (Not Sampled/Not Analyzed)

TRANSWESTERN PIPELINE COMPANY
COMPRESSOR STATION NO. 9
ROSWELL, CHAVES COUNTY, NEW MEXICO
PROJ. NO: 02.2018005.00

EARTHCON
EarthCon Consultants Inc.
1880 West Oak Parkway
Building 100, Suite 106
Marietta, Georgia 30062

DISTRIBUTION OF
DISSOLVED 1,1-DCE IN THE
UPPERMOST AQUIFER
NOVEMBER 2017
DRAWN: HVP
CHECKED: RLA
DATE: 03/18
FIGURE: 3-11

APPENDICES

Appendix A
Historical Submittal Summary

APPENDIX A: Historical Submittal Summary
Transwestern Compressor Station No. 9 - Roswell, NM

Document	Date	Agency
Report of 2012 Groundwater Remediation Activities	March 15, 2013	NMOCD/NMED
Amended Investigation Work Plan and Groundwater Monitoring Plan	March 27, 2013	NMOCD/NMED
Amended Remediation Work Plan and Amended Final Design	May 22, 2013	NMED
Estimated Cost of Work for Corrective Action Financial Assurance	August 30, 2013	NMED
Investigation Report	December 19, 2013	NMOCD/NMED
Soil Vapor Extraction System Shutdown	February 11, 2014	NMOCD
Report of 2013 Groundwater Remediation Activities	March 11, 2014	NMOCD/NMED
Notice of Scheduled Semi-Annual Groundwater Sampling Event	March 26, 2014	NMED
Comments to March 7, 2014 Letter - Approval of Investigation Report	May 12, 2014	NMED
Notice of No Changes to the Operation and Maintenance (O&M) and Monitoring Plan	May 22, 2014	NMED
Notice of Construction Activities	May 29, 2014	NMED
Revised Groundwater/PSH Recovery System Operation and 2014 System Re-Start	June 20, 2014	NMED
Response to June 24, 2014 Letter	October 7, 2014	NMED
Notice of Scheduled Semi-Annual Groundwater Sampling Event	October 7, 2014	NMED
Notice of Scheduled Semi-Annual Groundwater Sampling Event	March 11, 2015	NMED
Report of 2014 Groundwater Remediation Activities	March 23, 2015	NMOCD/NMED
Estimated Cost of Work for Corrective Action Financial Assurance	March 26, 2015	NMED
Notice of Revisions to the Operation and Maintenance (O&M) and Monitoring Plan	May 27, 2015	NMED
Notice of Scheduled Semi-Annual Groundwater Sampling Event	October 6, 2015	NMED
Stage 2 Abatement Plan	December 3, 2015	NMOCD
Report of 2015 Groundwater Remediation Activities	February 29, 2016	NMOCD/NMED
Notice of Scheduled Semi-Annual Groundwater Sampling Event	March 14, 2016	NMED
Notice of No Changes to the Operation and Maintenance (O&M) and Monitoring Plan	March 22, 2016	NMOCD/NMED
Report of 2016 Groundwater Remediation Activities	March 13, 2017	NMOCD/NMED
Notice of Revisions to the Operation and Maintenance (O&M) and Monitoring Plan	March 17, 2017	NMOCD/NMED
Notice of Scheduled Semi-Annual Groundwater Sampling Event	April 13, 2017	NMED
Notice of SVE System Deactivation	April 21, 2017	NMED
Submittal of Revised Operation and Maintenance and Monitoring (O&MM Plan)	May 26, 2017	NMED
Response to Comments on 2016 Groundwater Remediation Activities Report	June 5, 2017	NMED
Notice of Scheduled Semi-Annual Groundwater Sampling Event	October 10, 2017	NMED
Response to Comments Revised Operation, Maintenance, and Monitoring Plan	October 18, 2017	NMED
Response to Approval with Modifications Comments	December 11, 2017	NMED

Prepared by: RLA 2/6/18

Checked by: SSD 2/9/18

Appendix B
Copies of May/June and November 2017 Field Notes

GROUNDWATER SAMPLING LOG

SITE NAME: <u>Twp Roswell Station 9</u>		SITE LOCATION: <u>6381 N. Main St. Roswell, NM 88209</u>	
WELL NO: <u>MW-1B</u>	SAMPLE ID: <u>MW-1B</u>	DATE: <u>05/24/17</u>	

PURGING DATA

WELL DIAMETER (inches) 2"	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH 53 feet 65 feet	STATIC DEPTH TO WATER (feet): 62.90	PURGE PUMP TYPE OR GAILER poly D5gms
WELL VOLUME PURGE: 1 WELL VOLUME = $\frac{(\text{WELL DEPTH} - \text{STATIC DEPTH TO WATER}) \times \text{WELL CAPACITY}}{3}$				
$\frac{(\text{65} - \text{62.90}) \times 3.1}{3} = 0.16$ gallons/foot = 0.49 gallons				
3 WELL VOLUMES = 1.48 gallons				

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME									
(only fill out if applicable)									
	=	gallons + (	gallons/foot X	feet) +	gallons =	gallons			

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT 13:35	PURGING ENDED AT 13:38	TOTAL VOLUME PURGED (gallons): 1.5
--	--	----------------------------	------------------------	------------------------------------

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYGEN REDUCTION POTENTIAL (mV)	COLOR (describe)	ODOR (describe)
<p> $D_{pstH} = 61.80'$ $DTW = 62.90'$ $T.O. = 64.90'$ 1.10' PSH Thickness No Parameters Taken: Bailed 1.5 Gallons & Sampled. </p>											

INSTRUMENTS USED:

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.15; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88									
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0008; 3/16" = 0.0014; 1/4" = 0.0028; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016									
PURGING EQUIPMENT USED: B = Bailar; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)									

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <i>Taylor M. Barnhill / CMC</i>		SAMPLER(S) SIGNATURE(S): <i>[Signature]</i>		SAMPLING INITIATED AT: <i>13:40</i>	SAMPLING ENDED AT: <i>13:42</i>
PUMP OR TUBING DEPTH IN WELL (feet):		TUBING MATERIAL CODE:		FIELD-FILTERED: Y <input checked="" type="radio"/> N <input type="radio"/>	FILTER SIZE: _____ µm
FIELD DECONTAMINATION: PUMP Y <input checked="" type="radio"/> N <input type="radio"/>		TUBING Y <input checked="" type="radio"/> N <input type="radio"/> (replaced)		DUPLICATE: Y <input checked="" type="radio"/> N <input type="radio"/>	

[illegible]

REMARKS:

MATERIAL CODES:		AG = Amber Glass; <u>CG</u> = Clear Glass;	PE = Polyethylene;	PP = Polypropylene;	S = Silicone;	T = Teflon;	O = Other (Specify)
SAMPLING EQUIPMENT CODES:		APP = After Peristaltic Pump; <u>B</u> = Bailor;	BP = Bladder Pump;	ESP = Electric Submersible Pump;	RFP = Reverse Flow Peristaltic Pump;	SM = Sirew Method (Tubing Gravity Drain);	O = Other (Specify)

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization.

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: < 10% units Temperature: < 10% °C Specific Conductance: < 10% $\mu\text{S}/\text{cm}$ Dissolved Oxygen: all readings < 10% mg/L

Oxygen Reduction Potential: $< 10\%$ mV

Revision Date: October 22, 2013

GROUNDWATER SAMPLING LOG

SITE NAME: Twp Roswell Station 9	SITE LOCATION: 6321 N. Main Street Roswell, NM 88201
WELL NO: MW-12	SAMPLE ID: MW-12
DATE: 05/24/17	

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: 44' to 64'	STATIC DEPTH TO WATER (feet): 56.68	PURGE PUMP TYPE: Poly Disposable
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY $= (63.05 \text{ feet} - 56.68 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.01 \text{ gallons}$				
3 WELL VOLUMES = 3.05 gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = _____ gallons + (_____ gallons/foot X _____ feet) + _____ gallons = _____ gallons				
INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT: 13:15	PURGING ENDED AT: 13:20	TOTAL VOLUME PURGED (gallons): 3.0

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) $\mu\text{mhos/cm}$ or $\mu\text{S/cm}$	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYGEN REDUCTION POTENTIAL (mV)	COLOR (describe)	ODOR (describe)
NO Parameters Taken - Strong H₂S Schem & odor Bled 3 Gallons & Took Sample.											

INSTRUMENTS USED: **YSI 556 MPS**

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; **2" = 0.16**; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal/Ft): 1/8" = 0.0005; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT USED: **B = Bail**; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Gregory M Barahill / CAB				SAMPLER SIGNATURE(S): <i>[Signature]</i>		SAMPLING INITIATED AT: 13:20		SAMPLING ENDED AT: 13:22	
PUMP OR TUBING DEPTH IN WELL (feet):				TUBING MATERIAL CODE:		FIELD-FILTERED: Y <input type="checkbox"/> N <input checked="" type="checkbox"/>		FILTER SIZE: _____ μm	
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/> TUBING Y <input checked="" type="checkbox"/> (replaced)				DUPLICATE: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>					

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-12	3	CG	40mL	HgCl₂	120mL	—	BTEX	B	0.25

REMARKS:

MATERIAL CODES: AG = Amber Glass; **CG = Clear Glass**; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; **B = Bail**; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPF = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: $\leq 10\%$ units Temperature: $\leq 10\%$ °C Specific Conductance: $\leq 10\%$ $\mu\text{S/cm}$ Dissolved Oxygen: all readings $\leq 10\%$ mg/L
 Oxygen Reduction Potential: $\leq 10\%$ mV

Revision Date: October 22, 2013

GROUNDWATER SAMPLING LOG

SITE NAME: <u>Top Roswell Station 9</u>	SITE LOCATION: <u>4381 N. Main Street - Roswell, NM 88201</u>
WELL NO: <u>MW-16</u>	DATE: <u>05/23/17</u>

PURGING DATA

WELL DIAMETER (inches): <u>2"</u>	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): <u>67.20'</u>	PURGE PUMP TYPE OR BAILER: <u>Poly Dispersal Bailer</u>
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY				
$= (71.46 \text{ feet} - 66.96' \text{ feet}) \times 0.16 \text{ gallons/foot} = 0.72 \text{ gallons}$				
3 WELL VOLUMES = <u>2.16</u> gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)				
= gallons + (gallons/foot X feet) + gallons = gallons				
INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT: <u>14:05</u>	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons): <u>2.25</u>

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYGEN REDUCTION POTENTIAL (mV)	COLOR (describe)	ODOR (describe)
<u>DPTH = 66.96'</u> <u>DTW = 67.20'</u> <u>T.D. = 71.46'</u> <u>0.24 PSH thickness.</u> <u>No parameters taken.</u> <u>veg Bailed Day 14:10 hr. - 1 gallon purged.</u> <u>will let re-charge then sample.</u>											

INSTRUMENTS USED:

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal/ft): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0028; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT USED: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA¹

SAMPLED BY (PRINT) / AFFILIATION: <u>Clayton M. Barnhill / CMB</u>		SAMPLER(S) SIGNATURE(S): <u>[Signature]</u>		SAMPLING INITIATED AT: <u>14:15</u>	SAMPLING ENDED AT: <u>14:17</u>
PUMP OR TUBING DEPTH IN WELL (feet):		TUBING MATERIAL CODE:		FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	FILTER SIZE: _____ μm
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/> N <input type="checkbox"/> TUBING Y <input checked="" type="checkbox"/> N <input type="checkbox"/> (replaced)		DUPLICATE: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
<u>MW-16</u>	<u>3</u>	<u>CG</u>	<u>40mL</u>	<u>HgCl2</u>	<u>120mL</u>	<u>N/A</u>	<u>BTEX</u>	<u>B</u>	<u>0.25</u>

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPF = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/L
Oxygen Reduction Potential: ≤ 10% mV

Revision Date: October 22, 2013

GROUNDWATER SAMPLING LOG

SITE NAME: TWP Raswell Station 9		SITE LOCATION: 6251 N. Main St. Ricker, NM 88201	
WELL NO: MW-20	SAMPLE ID: MW-20	DATE: 05/24/17	

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 1/2"	WELL SCREEN INTERVAL DEPTH 46.8 feet to 61.8 feet	STATIC DEPTH TO WATER (feet) 53.43	PURGE PLUMP TYPE OR BAILER BP
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY

$$= (44.0 \text{ feet} - 53.43) / 10.57 \text{ feet} \times 0.16 \text{ gallons/foot} = 1.69 \text{ gallons}$$

3 WELL VOLUMES = 5.07 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable)

$$\text{ft} \times \text{gallons} + (\text{gallons/foot} \times \text{feet}) + \text{gallons} = \text{gallons}$$

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT: 12:43	PURGING ENDED AT: 14:01	TOTAL VOLUME PURGED (gallons): 525
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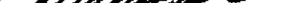
[illegible]

INSTRUMENTS USED:

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.18; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0028; 5/16" = 0.004; 3/8" = 0.008; 1/2" = 0.010; 5/8" = 0.018

PURGING EQUIPMENT USED: B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; Q = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Nathan MacBride / ICMB	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 14:02	SAMPLING ENDED AT: 14:05
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PUMP OR TUBING
DEPTH IN WELL (feet):

TUBING
MATERIAL CODE: PD

FIELD-FILTERED: Y N
Filtration Equipment Type:

FILTER SIZE: _____ μm

FIELD DECONTAMINATION: PUMP Y N

TUBING Y N (replaced)

DUPLICATE: Y N

N

SAMPLE CONTAINER SPECIFICATION

SAMPLE PRESERVATION

INTENDED
ANALYSIS AND/OR

SAMPLING EQUIPMENT

SAMPLE PUMP
FLOW RATE

[illegible]

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: < 10% units Temperature: < 10% °C Specific Conductance: < 10% $\mu\text{S}/\text{cm}$ Dissolved Oxygen: all readings < 10% mg/L

Oxygen Reduction Potential: $\leq 10\%$ mV

Revision Date: October 22, 2013

GROUNDWATER SAMPLING LOG

SITE NAME: <u>Twp Roswell Station 9</u>	SITE LOCATION: <u>6381 N Main St. Roswell NM 88241</u>
WELL NO: <u>MW-22</u>	SAMPLE ID: <u>MW-22</u>
DATE: <u>05/24/17</u>	

PURGING DATA

WELL DIAMETER (inches): <u>2"</u>	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): <u>58.47</u>	PURGE PUMP TYPE OR BAILER: <u>Poly Disposable</u>
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY				
$= (64.85 \text{ feet} - 58.47 \text{ feet}) / 6.38 \text{ feet} \times 0.16 \text{ gallons/foot} = 1.02 \text{ gallons}$				
3 WELL VOLUMES = <u>3.06</u> gallons				

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)	
=	gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):			FINAL PUMP OR TUBING DEPTH IN WELL (feet):			PURGING INITIATED AT: 10:20		PURGING ENDED AT: 10:30		TOTAL VOLUME PURGED (gallons) 3.0	
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND (circle units) μmhos/cm or <u>μS/cm</u>	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYGEN REDUCTION POTENTIAL (mV)	COLOR (describe)	ODOR (describe)
10:20 Initial	0	0	0.25	58.47	7.58	21.88	3.569	6.35	-27.9/1650	clear	None
10:24 1	1	1	0.25	—	7.78	19.68	3.551	5.66	-19.4/1108	8.5	None
10:28 2	2	2	0.25	—	7.01	19.46	3.542	4.07	-13.4/1589	"	"
10:30 3	3	3	0.25	—	6.90	19.38	3.538	4.84	-8.5/1716	"	"
					</						

INSTRUMENTS USED: <u>YSI 556 MPS</u>	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; <u>2" = 0.16</u> ; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88	
TUBING INSIDE DIA. CAPACITY (Gal./ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016	
PURGING EQUIPMENT USED: <u>B</u> = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)	

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <u>Clayton McBurnhill / CMA</u>				SAMPLER(S) SIGNATURE(S): <u>[Signature]</u>		SAMPLING INITIATED AT: <u>10:35</u>		SAMPLING ENDED AT: <u>10:37</u>	
PUMP OR TUBING DEPTH IN WELL (feet):				TUBING MATERIAL CODE:		FIELD-FILTERED: Y <u>N</u>		FILTER SIZE: <u>—</u> μm	
FIELD DECONTAMINATION: PUMP Y <u>N</u> TUBING Y <u>N</u> (replaced)				DUPLICATE: <u>Y</u> <u>N</u>					
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
<u>MW-22</u>	<u>3</u>	<u>CG</u>	<u>40ML</u>	<u>HNO₃</u>	<u>120ML</u>	<u>—</u>	<u>VOC'S</u>	<u>B</u>	<u>0.25</u>
<u>0:00 MW-22</u>	<u>3</u>	<u>CG</u>	<u>40ML</u>	<u>HNO₃</u>	<u>120ML</u>	<u>—</u>	<u>Equipment Puritate Blank VOC'S</u>	<u>B</u>	<u>0.25</u>

REMARKS: <u>Turbid Red Sand/Silt.</u>	
MATERIAL CODES: AG = Amber Glass; <u>CG</u> = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)	
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; <u>B</u> = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)	

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: $\leq 10\%$ units Temperature: $\leq 10\%$ °C Specific Conductance: $\leq 10\%$ $\mu\text{S/cm}$ Dissolved Oxygen: all readings $\leq 10\%$ mg/L
Oxygen Reduction Potential: $\leq 10\%$ mV

Revision Date: October 22, 2013

GROUNDWATER SAMPLING LOG

SITE NAME: Twp Roswell Station 9	SITE LOCATION: 6381 N Main St. Roswell, NM 88201
WELL NO: MW-26	SAMPLE ID: MW-26 DATE: 05/24/17

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 1/2"	WELL SCREEN INTERVAL DEPTH: 43 feet to 63 feet	STATIC DEPTH TO WATER (feet): 51.03'	PURGE PUMP TYPE OR BAILER: Bladder pump
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY				
$= (65 \text{ feet} - 51.03) 13.97 \text{ feet} \times 0.16 \text{ gallons/foot} = 2.23 \text{ gallons}$				
3 WELL VOLUMES = 6.70 gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)				
= gallons + (gallons/foot X feet) + gallons = gallons				

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT: 10:47	PURGING ENDED AT: 11:09	TOTAL VOLUME PURGED (gallons): 6.75
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TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (micro units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) % saturation	OXYGEN REDUCTION POTENTIAL (mv)	COLOR (describe)	ODOR (describe)
10:47 Initial	0	0	0.33	51.13	6.92	19.88	3.579	0.39	-7.9/-162.5	Clear	None
10:50 1	1	1	0.33	—	6.87	19.28	3.588	0.38	-3.7/-162.8	"	"
10:53 2	2	2	0.33	—	6.82	19.07	3.602	0.37	-3.8/-160.2	"	"
10:56 3	3	3	0.33	—	6.80	19.07	3.602	0.37	-2.7/-159.1	"	0
10:59 4	4	4	0.33	—	6.79	19.01	3.605	0.38	-2.2/-158.5	"	"
11:03 5	5	5	0.33	—	6.78	19.04	3.600	0.37	-2.6/-157.7	"	"
11:09 6.75	6.75	6.75	0.33	—	6.78	19.03	3.596	0.38	-1.8/-157.3	"	"

INSTRUMENTS USED:

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 1.5" = 0.09; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 8" = 2.45; 10" = 4.10; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
PURGING EQUIPMENT USED: B = Bailor; **BP = Bladder Pump**; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Clinton McBurnick / CMB	SAMPLER(S) SIGNATURE(S): <i>[Signature]</i>	SAMPLING INITIATED AT: 11:09	SAMPLING ENDED AT: 11:13
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: PP	FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	FILTER SIZE: 0.2 μm
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/> TUBING Y <input checked="" type="checkbox"/> (replaced)		DUPLICATE: Y N <input type="checkbox"/>	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-26	3	CG	40ML	H₂Cl₂	120 ML	6.78	VOL'S	BP	0.33
MV-26	3	CG	40ML	H₂Cl₂	120 ML	6.78	VOL'S	BP	0.33

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; **PP = Polypropylene**; S = Silicone; T = Teflon; O = Other (Specify)
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailor; **BP = Bladder Pump**; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:
STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:
pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/L
Oxygen Reduction Potential: ≤ 10% mV

Revision Date: October 22, 2013

GROUNDWATER SAMPLING LOG

SITE NAME: TWP Roswell Station 9	SITE LOCATION: 6381 N. Main St. Roswell, NM 88401
WELL NO: MW-27	SAMPLE ID: MW-27 DATE: 05/23/17

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): -	WELL SCREEN INTERVAL DEPT: 55 feet to 75 feet	STATIC DEPTH TO WATER (feet): 69.19'	PURGE PUMP TYPE: poly Disposable Bailer
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY				
$= (75 \text{ feet} - 69.19/5.81 \text{ feet}) \times 2.92 \text{ gallons/foot} = 0.92 \text{ gallons}$				
3 WELL VOLUMES = 2.78 gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)				
= gallons + (gallons/foot X feet) + gallons = gallons				
INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT: 13:48	PURGING ENDED AT: 13:53	TOTAL VOLUME PURGED (gallons): 3.0

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYGEN REDUCTION POTENTIAL (mV)	COLOR (describe)	ODOR (describe)
No Parameters Taken: Strong Sulfur Odor - almost Bn - Bailed 3 Gallons - then Sampled.											

INSTRUMENTS USED:

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; **2" = 0.16**; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal./ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT USED: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Clayton M. Barakat / CMAA				SAMPLE(S) SIGNATURE(S): <i>[Signature]</i>				SAMPLING INITIATED AT: 13:53		SAMPLING ENDED AT: 13:55	
PUMP OR TUBING DEPTH IN WELL (feet):				TUBING MATERIAL CODE:		FIELD-FILTERED: Y <input type="checkbox"/> N <input checked="" type="checkbox"/>		FILTER SIZE: _____ μm			
FIELD DECONTAMINATION: PUMP Y <input type="checkbox"/> N <input checked="" type="checkbox"/> TUBING Y <input type="checkbox"/> N <input checked="" type="checkbox"/> (replaced)				DUPLICATE: Y <input type="checkbox"/> N <input checked="" type="checkbox"/>							

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-27	3	CG	40mL	HgCl₂	120mL		BTEX	B	0.25

REMARKS:

MATERIAL CODES: AG = Amber Glass; **CG** = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; **B** = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/L
 Oxygen Reduction Potential: ≤ 10% mV

Revision Date: October 22, 2013

GROUNDWATER SAMPLING LOG

SITE NAME: TWP Roswell Station 9	SITE LOCATION:
WELL NO: MW-29	SAMPLE ID: MW-29 DATE: 05/23/17

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 1/2"	WELL SCREEN INTERVAL DEPTH: 60 feet to 75 feet	STATIC DEPTH TO WATER (feet): 70.03	PURGE PUMP TYPE OR BAILER: BP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY $= (74.45 \text{ feet} - 70.03 \text{ feet}) \times 0.16 \text{ gallons/foot} = 0.70 \text{ gallons}$				
3 WELL VOLUMES = 2.12 gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) $= 2.12 \text{ gallons} + (\text{gallons/foot} \times \text{feet}) + \text{gallons} = \text{gallons}$				

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):		FINAL PUMP OR TUBING DEPTH IN WELL (feet):		PURGING INITIATED AT: 13:10		PURGING ENDED AT: 13:46		TOTAL VOLUME PURGED (gallons): 2.25			
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYGEN REDUCTION POTENTIAL PH (mV)	COLOR (describe)	ODOR (describe)
13:10	Initial	0	0.066	70.03	6.93	22.02	2.927	0.50	-10.6	376	gray
13:25	1	1	0.066	—	6.93	21.34	2.885	0.38	-9.4	554	"
13:40	2	2	0.066	—	6.90	21.36	2.861	0.36	-7.8	668	clear
13:46	2.25	2.25	0.066	—	6.88	21.35	2.857	0.35	-7.1	713	"

INSTRUMENTS USED:

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; **2" = 0.16**; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0005; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; **1/2" = 0.010**; 5/8" = 0.016

PURGING EQUIPMENT USED: B = Bailor; **BP = Bladder Pump**; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Clayton M Barnhill / CMA				SAMPLER(S) SIGNATURE(S): <i>[Signature]</i>				SAMPLING INITIATED AT: 13:46		SAMPLING ENDED AT: 13:48	
PUMP OR TUBING DEPTH IN WELL (feet):				TUBING MATERIAL CODE: PP		FIELD-FILTERED: Y <input checked="" type="checkbox"/> N		FILTER SIZE: 1/2" μm			
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/> N TUBING Y <input checked="" type="checkbox"/> N (Replaced)				DUPLICATE: Y <input checked="" type="checkbox"/> N							
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (L per minute)		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-29	3	CG	40mL	H₂O₂	120mL	6.88	BTEX	BP	0.066		

REMARKS:

MATERIAL CODES: AG = Amber Glass; **CG = Clear Glass**; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailor; **BP = Bladder Pump**; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:
 STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:
 pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/L
 Oxygen Reduction Potential: ≤ 10% mV

GROUNDWATER SAMPLING LOG

SITE NAME: TWP Roswell Station 9		SITE LOCATION: 6381 N. Main St. Roswell, NH 8P201	
WELL NO: MW-32	SAMPLE ID: MW-32	DATE: 05/23/17	

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 1/2"	WELL SCREEN INTERVAL DEPTH 10 feet to 15 feet	STATIC DEPTH TO WATER (feet) 67.50	PURGE CUMPLEY OR BAILER: 3P
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY

$$= (74.20 \text{ feet} - 67.50) 6.70 \text{ feet} \times 0.16 \text{ gallons/foot} = 1.072 \text{ gallons}$$

 3 WELL VOLUMES = 3.21 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT: 12:41	PURGING ENDED AT: 12:58	TOTAL VOLUME PURGED (gallons): 3.35
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[illegible]

INSTRUMENTS USED: YST 556 MPS

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./FL): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT USED: B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <i>Justin M. Smith / CMB</i>	SAMPLER(S) SIGNATURE(S) <i>[Signature]</i>	SAMPLING INITIATED AT: <i>12:58</i>	SAMPLING ENDED AT: <i>13:00</i>
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PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: <i>PS</i>	FIELD-FILTERED: Y <i>(N)</i> Filtration Equipment Type:	FILTER SIZE: _____ μ m
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FIELD DECONTAMINATION:	PUMP	Y	N	TUBING	Y	N (replaced)	DUPLICATE:	Y	N
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SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (liters per minute)
SAMPLE	#	MATERIAL	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED (ml)	FINAL pH			

ID CODE	CONTAINERS	CODE	USED	ADDED IN FIELD (ML)	PH				
MW-32	3	CG	40ML	H ₂ O	120 mL	6.88	BTEX	BP	0.20

[illegible][illegible]

REMARKS:									
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MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump;
RPPP = Reverse Flow Peristaltic Pump; SM = Sraw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: $\leq 10\%$ units Temperature: $\leq 10\%$ °C Specific Conductance: $\leq 10\%$ $\mu\text{S}/\text{cm}$ Dissolved Oxygen: all readings $\leq 10\%$ mg/L

Oxygen Reduction Potential: $\leq 10\%$ mV

Revision Date: October 22, 2013

GROUNDWATER SAMPLING LOG

SITE NAME: <u>Twp Roswell Station 9</u>	SITE LOCATION: <u>6381 N. Main St. Roswell, NM 88201</u>
WELL NO: <u>MW-34</u>	DATE: <u>05/23/17</u>

PURGING DATA

WELL DIAMETER (inches): <u>2"</u>	TUBING DIAMETER (inches): <u>1/2"</u>	WELL SCREEN INTERVAL DEPTH: <u>49</u> feet to <u>79</u> feet	STATIC DEPTH TO WATER (feet): <u>64.09'</u>	PURGE PUMP TYPE OR BAILER: <u>BP</u>
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY				
= (<u>75.75</u>) feet - (<u>64.09</u>) <u>11.66</u> feet X <u>0.16</u> gallons/foot = <u>1.86</u> gallons				
3 WELL VOLUMES = <u>5.596</u> gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME				
(only fill out if applicable)				
= gallons + (gallons/foot X feet) + gallons = gallons				

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):			FINAL PUMP OR TUBING DEPTH IN WELL (feet):			PURGING INITIATED AT: 0956		PURGING ENDED AT: 10:31		TOTAL VOLUME PURGED (gallons): 5.75	
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYGEN REDUCTION POTENTIAL (mV) OR pH/mV	COLOR (describe)	ODOR (describe)
0956 Initial	0	0	0.166	64.09'	7.00	19.46	3.592	4.22	-13.8/150.0	Clear	None
10:02	1	1	0.166	-	6.96	19.54	3.483	1.33	-11.3/-123.8	"	"
10:08	2	2	0.166	-	6.94	19.55	3.467	0.72	-10.5/-128.1	"	"
10:14	3	3	0.166	-	6.95	19.62	3.458	0.67	-10.5/-125.1	"	"
10:20	4	4	0.166	-	6.94	19.66	3.451	0.56	-9.9/-115.7	"	"
10:26	5	5	0.166	-	6.92	19.66	3.449	0.56	-9.7/-116.6	"	"
10:31	5.75	5.75	0.166	-	6.93	19.67	3.447	0.55	-9.6/-109.7	"	"

INSTRUMENTS USED:

YSI 556 MFC

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal/ft): 1/8" = 0.0005; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.008; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT USED: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <u>Clayton M. Benhill / CMP</u>	SAMPLER (SIGNATURE): <u>[Signature]</u>	SAMPLING INITIATED AT: <u>10:31</u>	SAMPLING ENDED AT: <u>10:36</u>
PUMP OR TUBING DEPTH IN WELL (feet): <u>-</u>	TUBING MATERIAL CODE: <u>PP</u>	FIELD-FILTERED: <u>Y</u> <u>N</u>	FILTER SIZE: <u>-</u> μm
FIELD DECONTAMINATION: PUMP <u>Y</u> <u>N</u> TUBING <u>Y</u> <u>N</u> (replaced)		DUPLICATE: <u>Y</u> <u>N</u> <u>MS/MSD</u>	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
<u>MW-34</u>	<u>3</u>	<u>CG</u>	<u>40mL</u>	<u>HgCl₂</u>	<u>120</u>	<u>6.93</u>	<u>BTEX</u>	<u>BP</u>	<u>0.166</u>
<u>MW-34</u>	<u>3</u>	<u>CG</u>	<u>40mL</u>	<u>HgCl₂</u>	<u>120</u>	<u>6.93</u>	<u>MS/MSD</u>	<u>BP</u>	<u>0.166</u>

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPF = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/L
 Oxygen Reduction Potential: ≤ 10% mV

Revision Date: October 22, 2013

GROUNDWATER SAMPLING LOG

SITE NAME: TWP Roswell Station 9	SITE LOCATION: 6381 N. Main St. Roswell, NM 88201
WELL NO: MW-35	DATE: 05/23/17

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 1/2"	WELL SCREEN INTERVAL DEPTH: 49 feet to 74 feet	STATIC DEPTH TO WATER (feet): 61.05	PURGE PUMP TYPE OR BAILER: BP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY				
$= ((76.71 \text{ feet} - 61.05) 15.66 \text{ feet}) \times 2.51 \text{ gallons/foot} = 2.51 \text{ gallons}$				
3 WELL VOLUMES = 7.51 gallons				

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME	
(only fill out if applicable)	
=	gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT: 10:39	PURGING ENDED AT: 11:12	TOTAL VOLUME PURGED (gallons): 7.5
--	--	------------------------------------	--------------------------------	---

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) $\mu\text{mhos/cm}$ or $\mu\text{S/cm}$	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYGEN REDUCTION POTENTIAL (mV)	COLOR (describe)	ODOR (describe)
10:39	Initial	0		61.05	6.96	20.73	3.470	3.52	-15.7/40.6	Clear	None
10:55	1.0	1		—	7.04	20.52	3.732	3.51	-15.8/41.8	"	"
11:00	2.0	2		—	7.03	19.72	3.776	3.52	-15.5/54.2	"	"
11:03	3.0	3		—	7.02	19.53	3.750	3.33	-14.9/82.1	TURBID	None
11:05	4.0	4		—	7.03	19.40	3.741	3.14	-15.1/70.3	TURBID	None
11:07	5.0	5		—	7.04	19.32	3.740	3.00	-15.7/74.5	"	"
11:09	6.0	6		—	7.04	19.34	3.759	2.90	-15.3/78.9	"	"
11:11	7.0	7		—	7.04	19.26	3.754	2.89	-15.5/80.7	"	"
11:12	7.5	7.5		—	7.04	19.25	3.754	2.88	-15.5/80.2	"	"

INSTRUMENTS USED: YSI 556 MPS	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88	
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016	
PURGING EQUIPMENT USED: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)	

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Clayton A. Burdick / CMB	SAMPLE SIGNATURE(S): <i>[Signature]</i>	SAMPLING INITIATED AT: 11:15	SAMPLING ENDED AT: 11:18
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: PP	FIELD-FILTERED: Y <input checked="" type="checkbox"/> N	FILTER SIZE: — μm
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/> N TUBING Y <input checked="" type="checkbox"/> N (replaced)		DUPLICATE: Y <input checked="" type="checkbox"/> N	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (gal. per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW35	3	CG	40mL	HgCl₂	120	7.04	BTEX	BP	

REMARKS:	
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)	
SAMPLING EQUIPMENT CODES: AFP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Suck Method (Tubing Gravity Drain); O = Other (Specify)	

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization;
 STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:
 pH: $\leq 10\%$ units Temperature: $\leq 10\%$ °C Specific Conductance: $\leq 10\%$ $\mu\text{S/cm}$ Dissolved Oxygen: all readings $\leq 10\%$ mg/L
 Oxygen Reduction Potential: $\leq 10\%$ mV

Revision Date: October 22, 2013

GROUNDWATER SAMPLING LOG

SITE NAME: <u>Two Roswell Station 9</u>	SITE LOCATION: <u>6351 N. Main St. Roswell, NM 88201</u>
WELL NO: <u>MW-37</u>	SAMPLE ID: <u>MW-37</u>
DATE: <u>05/23/17</u>	

PURGING DATA

WELL DIAMETER (inches): <u>2"</u>	TUBING DIAMETER (inches): <u>1/2"</u>	WELL SCREEN INTERVAL DEPTH: <u>50</u> feet to <u>70</u> feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER: <u>BP</u>
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY				
= (<u>69.6</u> feet - <u>59.13</u>) / <u>10.48</u> (feet) X <u>0.16</u> gallons/foot = <u>1.67</u> gallons				
3 WELL VOLUMES = <u>5.030</u> gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME				
(only fill out if applicable)				
= gallons + (gallons/foot X feet) + gallons = gallons				
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <u>N/A</u>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <u>N/A</u>	PURGING INITIATED AT: <u>0932</u>	PURGING ENDED AT: <u>0942</u>	TOTAL VOLUME PURGED (gallons): <u>5.0</u>

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYGEN REDUCTION POTENTIAL (mv) pH (mv)	COLOR (describe)	ODOR (describe)
<u>0932</u>	<u>Initial</u>	<u>0</u>	<u>0.25</u>	<u>59.13</u>	<u>7.64</u>	<u>19.17</u>	<u>3.622</u>	<u>7.33</u>	<u>-37.3/100.9</u>	<u>Clear</u>	<u>None</u>
<u>0936</u>	<u>1</u>	<u>1</u>	<u>0.25</u>	<u>-</u>	<u>7.08</u>	<u>19.16</u>	<u>2.636</u>	<u>7.07</u>	<u>-16.7/166.3</u>	<u>Clear</u>	<u>None</u>
<u>0938</u>	<u>2</u>	<u>2</u>	<u>0.25</u>	<u>-</u>	<u>6.97</u>	<u>19.12</u>	<u>3.632</u>	<u>6.973</u>	<u>-16.6/164.9</u>	<u>Clear</u>	<u>None</u>
<u>0940</u>	<u>3</u>	<u>3</u>	<u>0.25</u>	<u>-</u>	<u>6.95</u>	<u>19.09</u>	<u>3.625</u>	<u>3.39</u>	<u>-10.8/144.2</u>	<u>Clear</u>	<u>None</u>
<u>0942</u>	<u>4</u>	<u>4</u>	<u>0.25</u>	<u>-</u>	<u>6.95</u>	<u>19.09</u>	<u>3.629</u>	<u>3.38</u>	<u>-10.6/143.4</u>	<u>Clear</u>	<u>None</u>
<u>0942</u>	<u>5</u>	<u>5</u>	<u>0.25</u>	<u>-</u>	<u>6.95</u>	<u>19.09</u>	<u>3.626</u>	<u>3.44</u>	<u>-10.5/140.8</u>	<u>Clear</u>	<u>None</u>

INSTRUMENTS USED:

YSI 556 MPS

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT USED: B = Bailor; BP Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <u>Dayton M. Bernick / CMB</u>	SAMPLE(S) SIGNATURE(S): <u>[Signature]</u>	SAMPLING INITIATED AT: <u>0942</u>	SAMPLING ENDED AT: <u>0944</u>
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y <u>N</u>	FILTER SIZE: <u>0.45</u> μm
FIELD DECONTAMINATION: PUMP Y <u>N</u> TUBING Y <u>N</u> (replaced)		DUPLICATE: Y <u>N</u>	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml. per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
<u>MW-37</u>	<u>3</u>	<u>CG</u>	<u>40mL</u>	<u>HgCl2</u>	<u>120 mL</u>	<u>6.95</u>	<u>BTEX</u>	<u>BP</u>	<u>0.25</u>

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPF = Reverse Flow Peristaltic Pump; SM = Siphon Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/L
 Oxygen Reduction Potential: ≤ 10% mV

Revision Date: October 22, 2013

GROUNDWATER SAMPLING LOG

SITE NAME: TWP Roswell Station 9	SITE LOCATION: 6381 N Main Street Roswell, NM 804
WELL NO: MPE-13	SAMPLE ID: MPE-13
DATE: 15/24/17	

PURGING DATA

WELL DIAMETER (inches): 4"	TUBING DIAMETER (inches): —	WELL SCREEN INTERVAL DEPTH 54 feet to 74 feet	STATIC DEPTH TO WATER (feet): 64.83'	PURGE PUMP TYPE OR BAILER: 3.0' x 4" Stainless Steel Poly Disposable 8.30
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY $= (77.60' \text{ feet} - 64.83') 12.77' \text{ feet} \times 0.65 \text{ gallons/foot} = 8.30 \text{ gallons}$				
3 WELL VOLUMES = 24.90 gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) $= \text{gallons} + (\text{gallons/foot} \times \text{feet}) + \text{gallons} = \text{gallons}$				
INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT: 13:50	PURGING ENDED AT: 14:30	TOTAL VOLUME PURGED (gallons): 25

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) $\mu\text{mhos/cm}$ or $\mu\text{S/cm}$	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYGEN REDUCTION POTENTIAL (mV)	COLOR (describe)	ODOR (describe)
Failed MPE-13 4" Pump Black H₂O - strong H₂S odor No Parameters Taken. Failed 3 Well Volumes - then will 3.0' x 3.5" Stainless Steel Bailer then Sampled with Disposable 2" poly Bailer, Trip, Pump											

INSTRUMENTS USED:

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT USED: **B** = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Clayton McCarroll / CND				SAMPLER SIGNATURE: <i>[Signature]</i>				SAMPLING INITIATED AT: 14:30		SAMPLING ENDED AT: 14:35	
PUMP OR TUBING DEPTH IN WELL (feet):				TUBING MATERIAL CODE:		FIELD FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		FILTER SIZE: — μm			
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/> TUBING Y <input checked="" type="checkbox"/> (Replaced)				DUPLICATE: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>							

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MPE-13	3	CG	40mL	HgCl₂	120mL	—	BTEX	B	1.0

REMARKS:

MATERIAL CODES: AG = Amber Glass; **CG** = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; **B** = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: $\leq 10\%$ units Temperature: $\leq 10\%$ °C Specific Conductance: $\leq 10\%$ $\mu\text{S/cm}$ Dissolved Oxygen: all readings $\leq 10\%$ mg/L
Oxygen Reduction Potential: $\leq 10\%$ mV

Revision Date: October 22, 2013

Location Twp Roswell Station 9 05/22/17

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ARRIVE ON-SITE @ 0930 hr.

Overcast 61% Humidity 28%

Summer Air Pressure 30.11" →

N Windy Temp - Projected High 81°F

Well Depth DTH T.O. 3rd Remarks

MW-37	Φ	59.13	69.61	5.030	2" Bladder pump
MW-34	Φ	64.09	75.75	5.596	2" Bladder pump
MW-35	Φ	61.05	76.71	7.51	2" Bladder pump
MW-28-32	Φ	67.50	74.20	3.21	2" Bladder pump
MW-33	Φ	65.69	—	—	2" Bladder pump
MW-29	Φ	70.03	74.45	2.17	2" Bladder pump
* Had to pull pump to get water level					
MW-30	Φ	67.34	—	—	2" Bladder pump
MW-28	Φ	70.44	—	—	2" Bladder pump
* Had to pull pump to get water level					
MW-27	Φ	69.19	75.0	2.28	2" MW
MPE-9	Φ	68.60	—	—	4" MPE well
MPE-7	Φ	68.53	—	—	4" MPE well
MPE-8	Φ	66.87	—	—	4" MPE well

Location Twp Roswell Station 9 05/22/17

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Well	Depth	DTH	T.O. 3rd	Remarks
MPE-11	Φ	64.54	—	4" MPE well
MPE-10	Φ	66.73	67.63	—
* PSH in well 0.90' thickness				
MPE-12	Φ	65.60	—	4" MPE well
MW-21	Φ	66.32	—	2" Bladder pump
MPE-13	Φ	64.83	77.60	25' in well
Top of pump @ 67.53'				
MW-17	Φ	62.89	—	2" MW
* Had to pull pump to get water level				
MPE-14	Φ	65.28	65.67	—
* PSH in well 0.39' thickness				
* Top of pump @ 67.91'				
MPE-16	Φ	66.21	67.10	—
* PSH in well 0.89' thickness				
71.95' Top of Pump				
MPE-19	Φ	66.40	—	4" MPE well
MPE-38	Φ	67.05	70.05	—
* PSH in well 3.0' thickness				
* Top of Pump 70.60'				

Location Twf Roswell Station 9 Date 05/22/17

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Well	DPTH	PAV	T.D.	SCV	Remarks
MPE-17	66.60	66.95	—	—	4" MPE well pump in well
* PSH in well.	0.35'	Thickness *			
* Top of Pump @	68.70'	*			2" MW
MW-16	66.96'	67.20'	71.46'		
* PSH in well.	0.24'	Thickness *			
MPE-15	64.28'	—	—	—	4" MPE well
MW-15	60.67'	—	—	—	2" well
MPE-18	63.43'	—	—	—	4" bladder pump
MW-14	56.14'	—	—	—	4" MPE well
MW-7	62.30'	—	—	—	8" MW bladder pump
MW-26	51.03'	65.0	6.70	—	2" MW
MW-20	53.43'	64.0	5.07	—	2" bladder pump
MPE-37	53.26'	—	—	—	4" MPE well
MPE-33	55.02'	—	—	—	4" MPE well
MPE-41	56.48'	61.47'	—	—	4" MPE well with pump
* PSH in well.	4.99'	Thickness *			
* Top of Pump @	61.96'	*			4" MPE well
MPE-36	56.13'	—	—	—	2" MW
MW-22	58.44'	64.86'	3.06'	—	4" MPE well
MPE-35	58.70'	61.45'	—	—	4" well
* PSH in well.	2.75'	Thickness *			

Location Twf Roswell Station 9 Date 05/22/17

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Well	DPTH	DTW	T.D.	SCV	Remarks
MPE-32	58.62'	60.75'	—	—	4" MPE well with pump
* PSH in well.	2.13'	Thickness *			
* Top of Pump	61.50'	*			2" MW
MW-12	56.68	63.05	3.0	—	4" deep
MW-34	61.03'	—	—	—	2" bladder pump
MW-42	53.71'	—	—	—	2" bladder pump
MW-40	52.98'	—	—	—	2" bladder pump
MW-41	56.58'	—	—	—	2" bladder pump
MW-39	49.99'	—	—	—	2" bladder pump
MW-11	65.55'	—	—	—	2" MPE well
MPE-34	65.38'	—	—	—	4" MPE well
MPE-30	5' Snake in Vault = Bull	—	—	—	4" MPE well
SVE-30	Redhead Snake in Vault = 4-5'	—	—	—	2" SVE well
MPE-29	68.65'	—	—	—	4" MPE well
MW-10	70.03'	—	—	—	2" MW
MW-3	67.55'	—	—	—	2" MW
MW-13	65.10'	—	—	—	2" bladder pump
MPE-25	68.27'	—	—	—	4" MPE well
SVE-25	32.81'	—	—	—	2" SVE well
MPE-24	59.80	61.40'	—	—	4" MPE well with pump
* PSH in well.	1.60'	Thickness *			
Top of Pump @	61.45'				

Location Twp Roswell Station 9 Date 05/22/17

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Well	DPTH	DIA	T.D.	Gal. 3CU	Remarks
SVE-24	Ø	Ø	28.65'	—	2" SVE well
MPE-39	61.0	62.30'	—	—	4" MPE well with pump
* PSH in well	1.30'	Thickness	*		
* Top of pump	59.45'	—	—	—	4" MPE with pump
MPE-21	Ø	Ø	59.45'	—	4" MPE with pump
MPE-20	* Top of pump	61.98'	*		
MPE-20	64.57'	65.60'	—	—	4" MPE with pump
* PSH in well	1.03'	Thickness	*		
* Top of pump	70.21'	—	—	—	2" MW
MW-2	Ø	60.29'	—	—	4" MPE with pump
MPE-31	Ø	64.81'	—	—	4" MPE with pump
* Top of pump	67.60'	Ø	67.60'	*	
SVE-31	Ø	Ø	33.18'	—	2" SVE well
MPE-28	Ø	29.44'	29.44'	—	4" MPE well
* PSH in well	57.65'	57.80'	—	*	PSH in well 0.15' Thickness
SVE-28	Ø	29.44'	34.60'	—	2" SVE well
RW-1	Ø	34.03'	—	—	4" MW
MPE-27	64.58'	64.70'	—	—	4" MPE with pump
* PSH in well	0.12'	Thickness	*		
* Top of pump	65.75'	Ø	65.75'	*	

Location Twp Roswell Station 9 Date 05/22/17

Project / Client GW Monitoring 2017
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Well	DPTH	DIA	T.D.	Gal. 3CU	Remarks
SVE-27	Ø	Ø	34.15'	—	2" SVE well
MPE-26	65.98'	66.30'	—	—	4" MPE well
* PSH in well	0.42'	Thickness	*		
SVE-26	Ø	Ø	32.65'	—	2" SVE well
MPE-22	Ø	68.50'	—	—	4" MPE well
SVE-22	33.0	33.10'	—	—	2" SVE well
* Black nesty Engine oil	Ø	Ø	Ø	Ø	0.10' Thickness 4" MPE with pump
MPE-23	63.62'	65.03'	—	—	4" MPE with pump
* PSH in well	1.41'	Thickness	*		
* Top of pump	65.80'	Ø	65.80'	*	
SVE-23	33.60'	34.15'	—	—	2" SVE well
* Black nesty engine oil	Ø	Ø	Ø	Ø	0.55' Thickness
MPE-40	61.87'	67.35'	—	—	4" MPE well
* PSH in well	5.48'	Thickness	*		
MW-18	61.80'	62.90'	64.90'	—	2" MW 1.56' thickness
* PSH in well	1.10'	*	*		

Left Site @ 16:00 hr.

Location Trip Roswell Station 9 Date 05/23/17

Project / Client EarthGen By: CMB Environmental & Geological Services, Inc.

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Calibrated YSI 556 mps
a Specific Conductance c 0835
Calitech 500mc 1415 mps c 250C

Expires: 12/08/16 01/08/17

Initial: 1.432 ms/cm c 20.99°C

Final: 1.413 ms/cm c 20.99°C

pH: 7.0 : Calitech 500mc pH 7.0
c 25°C Expires: 08/15/17

Initial: c 0837 7.30 c 20.83°C

Final: 7.00 c 20.83°C

pH 4.0: Calitech pH 4.0 c 25°C

c 0838 Exp. 02/09/17

Initial: 3.96 c 20.89°C

Final: 4.00 c 20.90°C

ORP c 0840: GeoTech 200 mV

Exp. 250 mV c 25°C Exp 04/17

Initial: 207.2 c 20.77°C

Final: 200.0 c 20.80°C

Red.: 8.30 mg/L in Ambient Air

Initial: 7.38 mg/L c 21.58°C

Final: 8.30 mg/L c 21.57°C

Location Trip Roswell Station 9 Date 05/23/17

Project / Client EarthGen By: CMB Environmental & Geological Services, Inc.

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ARRIVE on-site c 0930 hr.

overcast 62°F Humidity 41%

N Wind @ 20 mph Barometric

Pressure 30.20" →

Started Sampling c 0913 hr.

Field Calibrated D.O. mg/L

Initial: 9.51 mg/L c 21.96°C

Final: 8.30 mg/L c 21.84°C

Continued GW Sampling

Left Site c 13:00 hr.

05/24/17 ARRIVE on-site c

0830 hr. Continued GW

Monitoring. Left Site c

15:00 hr. c 0928 hr.

Sunny 63°F Humidity c 37%

SSW Wind c 5 mph

Barometric Pressure c 29.98"

Left Site c 15:00 hr.

[Signature]

GROUNDWATER SAMPLING LOG

SITE NAME	Two Roswell station 9		SITE LOCATION	6381 North Main St - Roswell NM 8822	
WELL NO	MW-39		SAMPLE ID	MW-39	
			DATE	06/16/17	

PURGING DATA

WELL DIAMETER (inches)	2"	TUBING DIAMETER (inches)	1/2"	WELL SCREEN INTERVAL DEPTH	55 feet to 75 feet	STATIC DEPTH TO WATER (feet)	50.05	PURGE PUMP TYPE OR BAILER	BP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY									
= (75 feet - 50.05 feet) X 0.16 gallons/foot = 3.992 gallons									
3 WELL VOLUMES = 11.98 gallons									
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME									
= gallons + (gallons/foot X feet) + gallons = gallons									

INITIAL PUMP OR TUBING DEPTH IN WELL (feet)			FINAL PUMP OR TUBING DEPTH IN WELL (feet)			PURGING INITIATED AT		PURGING ENDED AT		TOTAL VOLUME PURGED (gallons)	
64.0			64.0			10:45		11:15		12.0	
TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYGEN REDUCTION POTENTIAL (mV)	COLOR (describe)	ODOR (describe)
10:45	Initial Parameters	0	0.40	50.05	6.76	19.05	3.664	6.87	-9.1/122.10/cm		Strong odor
10:50	2.0	2	0.40	—	6.75	18.96	3.662	6.24	-8.7/122.8	"	"
10:55	4.0	4	0.40	—	6.74	18.95	3.665	6.70	-8.5/122.4	"	"
11:00	6.0	6	0.40	—	6.74	18.98	3.663	6.74	-8.0/121.7	"	"
11:05	8.0	8	0.40	—	6.77	18.95	3.659	5.23	-9.7/121.0	"	"
11:10	10.0	10	0.40	—	6.79	19.00	3.660	4.78	-10.9/120.5	"	"
11:15	12.0	12	0.40	—	6.79	19.04	3.662	5.11	-10.7/120.8	"	"
INSTRUMENTS USED:											

INSTRUMENTS USED:

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, 2" = 0.16, 3" = 0.37, 4" = 0.65, 5" = 1.02, 6" = 1.47, 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal/Ft): 1/8" = 0.0006, 3/16" = 0.0014, 1/4" = 0.0026, 5/16" = 0.004, 3/8" = 0.006, 1/2" = 0.010, 5/8" = 0.016

PURGING EQUIPMENT USED: B = Bailor, BP = Bladder Pump, ESP = Electric Submersible Pump, PP = Peristaltic Pump, O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION	Clayton M. Barnhill, PE/CMB		SAMPLER'S SIGNATURE	Clayton M. Barnhill	
PUMP OR TUBING DEPTH IN WELL (feet)	64.0	TUBING MATERIAL CODE	PP	SAMPLING INITIATED AT	11:15
FIELD DECONTAMINATION	PUMP Y <input checked="" type="checkbox"/>	TUBING Y <input checked="" type="checkbox"/>	DUPLICATE	Y <input checked="" type="checkbox"/>	SAMPLING ENDED AT
			FIELD-FILTERED: Y <input checked="" type="checkbox"/>	Filter Size: _____ μm	11:16

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-39	3	CG	40 mL	HCL	120 mL	6.79	VOC'S 8260	BP	0.40

REMARKS:

MATERIAL CODES: AG = Amber Glass, CG = Clear Glass, PE = Polyethylene, PP = Polypropylene, S = Silicone, T = Teflon, O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump, B = Bailor, BP = Bladder Pump, ESP = Electric Submersible Pump, RFPP = Reverse Flow Peristaltic Pump, SM = Straw Method (Tubing Gravity Drain), O = Other (Specify)

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/L
 Oxygen Reduction Potential: ≤ 10% mV

Revision Date: October 22, 2012

GROUNDWATER SAMPLING LOG

SITE NAME	TWP Roswell Station 9		SITE LOCATION	6381 North Main Street Roswell NM 8820	
WELL NO	MW-40	SAMPLE ID	MW-40	DATE	06/16/17

PURGING DATA

WELL		TUBING		WELL SCREEN INTERVAL		STATIC DEPTH		PURGE PUMP TYPE			
DIAMETER (inches)		DIAMETER (inches)		DEPTH		TO WATER (feet)		OR BAILER			
2"		1/2"		55 feet to 75 feet		53.09		BP			
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY											
= (70.13 feet - 53.09 feet) X 0.16 gallons/foot = 2.72 gallons											
3 WELL VOLUMES = 8.179 gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME											
(only fill out if applicable)											
= gallons + (gallons/foot X feet) + gallons = gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet)		FINAL PUMP OR TUBING DEPTH IN WELL (feet)		PURGING INITIATED AT		PURGING ENDED AT		TOTAL VOLUME PURGED (gallons)			
62.31		62.31		0905		0926		8.25			
TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) $\mu\text{mhos/cm}$ or $\mu\text{S/cm}$	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYGEN REDUCTION POTENTIAL (mV) pH / ORP	COLOR (describe)	ODOR (describe)
0905	0	0	0.40	53.09	6.65	19.06	3.638	5.44	-3.4/116.0	Clear	None
0910	2.0	2.0	0.40	-	6.63	19.01	3.635	5.62	-2.7/113.1	Clear	None
0915	4.0	4.0	0.40	-	6.65	18.98	3.636	5.95	-3.8/113.5	Clear	None
0920	6.0	6.0	0.40	-	6.66	19.13	3.639	5.73	-4.9/114.7	Clear	None
0926	8.25	8.25	0.40	-	6.66	18.98	3.636	5.45	-4.1/115.9	Clear	None
INSTRUMENTS USED:											
YSI 556 mps Serial # 05F 2274 AL											
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, 1.5" = 0.16, 3" = 0.37, 4" = 0.65, 5" = 1.02, 6" = 1.47, 12" = 5.88											
TUBING INSIDE DIA. CAPACITY (Gal/Ft): 1/8" = 0.0006, 3/16" = 0.0014, 1/4" = 0.0026, 5/16" = 0.004, 3/8" = 0.006, 1/2" = 0.010, 5/8" = 0.016											
PURGING EQUIPMENT USED: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLED BY (PRINT) / AFFILIATION <i>Clayton M Barnhill, CMB</i>		SAMPLER(S) SIGNATURE(S) <i>Clayton M Barnhill</i>		SAMPLING INITIATED AT 10:30		SAMPLING ENDED AT 10:32	
PUMP OR TUBING DEPTH IN WELL (feet) 62.31'		TUBING MATERIAL CODE PP		FIELD-FILTERED Y <input checked="" type="checkbox"/> R <input checked="" type="checkbox"/> Filtration Equipment Type		FILTER SIZE _____ µm	
FIELD DECONTAMINATION PUMP Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/>		TUBING Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> (replaced)		DUPLICATE Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/>			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD
MW-40	3	CG	40mL	HCL	120 mL	6.66	8260 VOC's
REMARKS: Placed purged H ₂ O in on-site 55 gal drum.							
MATERIAL CODES: AG = Amber Glass, CG = Clear Glass, PE = Polyethylene, PP = Polypropylene, S = Silicone, T = Teflon, O = Other (Specify)							
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump, B = Bailor, BP = Bladder Pump, ESP = Electric Submersible Pump, RFPP = Reverse Flow Peristaltic Pump, SM = Straw Method (Tubing Gravity Drain), O = Other (Specify)							

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization.
Stabilization: Open

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS

ph: $\leq 10\%$ units Temperature: $\leq 10\%$ °C Specific Conductance: $\leq 10\%$ $\mu\text{S}/\text{cm}$ Dissolved Oxygen: all readings $\leq 10\%$ mg/L
Oxygen Reduction Potential: $\leq 10\%$ mV

Revision Date: October 22, 2012

GROUNDWATER SAMPLING LOG

SITE NAME	Twp Roswell station 9	SITE LOCATION	Twp Roswell station 9 6381 N. W. St. Rd. 40
WELL NO	MW-42	SAMPLE ID	MB-42
		DATE	06/16/17

PURGING DATA

WELL DIAMETER (inches)	2"	TUBING DIAMETER (inches)	1/2"	WELL SCREEN INTERVAL DEPTH	55 feet to 76 feet	STATIC DEPTH TO WATER (feet)	53.98'	PURGE PUMP TYPE OR BAILER	BP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY									
= (75-53.98) feet - 53.98 feet X 0.16 gallons/foot = 3.36 gallons									
3 WELL VOLUMES = 10.08 gallons									
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)									
= gallons + (gallons/foot X feet) + gallons = gallons									

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):			FINAL PUMP OR TUBING DEPTH IN WELL (feet):			PURGING INITIATED AT		PURGING ENDED AT		TOTAL VOLUME PURGED (gallons)	
64.03			64.03			0828		0852		10.0	
TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	OXYGEN REDUCTION POTENTIAL (mV)	COLOR (describe)	ODOR (describe)
08:28	Initial	0	0.42	53.98	7.25	19.35	3.684	5.62	33.7/93.1	Clear	None
08:34	2.5	2.5	0.42	—	6.50	18.65	3.693	5.59	3.7/116.8	Clear	None
08:40	5.0	5.0	0.42	—	6.48	18.63	3.681	5.29	5.1/117.7	Clear	None
08:46	7.5	7.5	0.42	—	6.55	18.61	3.673	5.12	1.7/112.6	Clear	None
0852	10.0	10.0	0.42	—	6.55	18.62	3.672	5.11	1.2/112.4	Clear	None
	</										

INSTRUMENTS USED:

YSI 556 MPS Serial # 05F2247AL

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, 2" = 0.16, 3" = 0.37, 4" = 0.65, 5" = 1.02, 6" = 1.47, 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006, 3/16" = 0.0014, 1/4" = 0.0026, 5/16" = 0.004, 3/8" = 0.006, 1/2" = 0.010, 5/8" = 0.016

PURGING EQUIPMENT USED: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION	SAMPLER(S) SIGNATURE(S)	SAMPLING INITIATED AT	SAMPLING ENDED AT
Clayton M Barahill / CMB	<i>Clayton M Barahill</i>	10:35	10:37
PUMP OR TUBING DEPTH IN WELL (feet)	TUBING MATERIAL CODE	FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	FILTER SIZE: <u>0.45</u> μm
64.03	98	Filtration Equipment Type	

FIELD DECONTAMINATION PUMP Y ☒ TUBING Y ☒ (replaced) DUPLICATE Y ☒

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-42	3	CG	40ML	HCL	120mL	6.55	8260 VAS	BP	9.42
									0.42

REMARKS:

Purged H₂O Placed in on-site 55 Gallon Drum

MATERIAL CODES: AG = Amber Glass, CG = Clear Glass, PE = Polyethylene, PP = Polypropylene, S = Silicone, T = Teflon, O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump, B = Bailer, BP = Bladder Pump, ESP = Electric Submersible Pump, RFPP = Reverse Flow Peristaltic Pump, SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: $\leq 10\%$ units Temperature: $\leq 10\%$ °C Specific Conductance: $\leq 10\%$ $\mu\text{S/cm}$ Dissolved Oxygen: all readings $\leq 10\%$ mg/LOxygen Reduction Potential: $\leq 10\%$ mV

Location: Twp Roswell Station 9 Date: 06/16/17

Project / Client: GW Monitoring 2017
 EarthCon: By: CMB Environmental
 & Geological Services Inc.

Page 1 of 3
 Collocated YSI 556 Series 1#
 06/16/17 @ 06:45 hr. Specific Conductance
 Calitech 500mc 1413 mc/cm @ 25°C
 Exp. 12/05/17

Initial: 1.392 ms/cm @ 23.17°C
 Final: 1.413 ms/cm @ 23.17°C

pH Test: Calitech 50mc pH 7.0 @ 25°C
 Exp. 05/22/18 @ 06:45 hr.

Initial: 7.16 @ 23.15°C
 Final: 7.00 @ 23.61°C

pH 4.0: Calitech 500mc pH 4.00 @ 25°C

Expires: 04/07/2018 @ 06:50 hr.
 Initial: 4.09 @ 23.06°C

Final: 4.00 @ 23.12°C

ORP: Geotech 250mc 200 mv ORP

Expires 04/17 @ 06:52 hr.

Initial: @ 196.1 @ 23.11°C

Final: 200.0 @ 23.10°C

D.O.: 8.30 mg/l ambient air
 @ 6:56 hr.

Initial: 7.62 mg/l @ 27.12°C

Final: 8.30 mg/l @ 27.04°C

Location: Twp Roswell Station 9 Date: 06/16/17

Project / Client: GW Monitoring 2017 EarthCon
 EarthCon: By: CMB Environmental & Geological
 Services, Inc. Page 2 of 3

Pressure on site @ 07:40 hr.

Summary 75°F No Wind

Humidity 37% Barometric

Pressure 29.91" →

Well #	Depth	DTW	T.D	Remarks
MW-42	Ø	53.98'	75'	10.83 in well
MW-40	Ø	53.09	75'	8.25 " " "
MW-41	Ø	56.65	75'	6.45 " " "
MW-39	Ø	50.05	75'	11.98 " " "
MW-26	Ø	51.27'	-	Strong 4" MPE
MW-20	Ø	53.49'	-	2" MPE
MPE-37	Ø	53.33'	-	4" MPE
MPE-24	Ø	-	-	Well 4" MPE
→ 60.29'	60.30'	-	-	Well 4" MPE
MPE-21	Ø	58.83'	-	Well 4" MPE
MPE-39	Ø	61.27	70.11	Well 4" MPE
MPE-26	65.75	66.20'	-	Well 4" MPE
0.45' 85# Inconcrete	-	-	-	Well 4" MPE
MPE-27	Ø	64.61'	-	Well 4" MPE
MPE-31	Ø	64.78'	-	Well 4" MPE
MPE-28	Ø	57.70'	-	Well 4" MPE
57.58	-	-	-	Well 4" MPE

Twp Roswell station 9

06/16/17

GW Monitoring 2017

EarthCon By: CMB Environmental
& Geological Services, Inc.

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MPE-39 started pumping
@ 13:00 MPE-39 @ 450PMSampled @ 13:30 hr.
3x40ml VOA's/4hr For BTEX
8021

GROUNDWATER SAMPLING LOG

SITE NAME	Twp Roswell Station 9	SITE LOCATION	6381 N. Main Street, Nimsen
WELL NO	MW-13	SAMPLE ID	MW-13
PURGING DATA		DATE	11/16/17
PURGE PUMP TYPE			

WELL NO		MW-13		PURGING DATA			
WELL DIAMETER (inches)	2"	TUBING DIAMETER (inches)	1/2"	WELL SCREEN INTERVAL DEPTH	57 feet to 72 feet	STATIC DEPTH TO WATER (feet)	66.42'
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY							
= (72.0 feet - 66.42' = 5.58') X 0.16 gallons/foot				= 0.89 gallons			
3 WELL VOLUMES = 2.67 gallons							
TUBING VOLUME = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME							

3 WELL VOLUMES = 2.67 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

	gallons + (	gallons/foot X	feet) +	gallons =	gallons
(only fill out if applicable)					
			PURGING	TOTAL VOLUME	<u>25</u>

(only fill out if applicable)		=		gallons + (		gallons/foot x		feet)		TOTAL VOLUME	
INITIAL PUMP OR TUBING DEPTH IN WELL (feet)		FINAL PUMP OR TUBING DEPTH IN WELL (feet)		PURGING INITIATED AT 11:40		PURGING ENDED AT 12:00		PURGED (gallons)		2.5	
				COND		DISSOLVED OXYGEN		OXYGEN SATURATION		COLOR	
										ODOR	

INITIAL PUMP OR TUBING DEPTH IN WELL (feet)		DEPTH IN WELL (feet)		INITIATED AT		COND		DISSOLVED OXYGEN		OXYGEN REDUCTION POTENTIAL	COLOR (describe)	ODOR (describe)
TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	(circle units) μmhos/cm or (S/cm)	(circle units) mg/L or % saturation	mV			
11:40	Initial	0	0.25	66.42'	7.12	21.61	3.498	3.39	-7.9/77.7	Turbid	None	
11:52	1.0	1.0	0.25	—	7.13	21.62	3.503	2.67	-8.4/30.7	Red Silty	None	
11:55	2.0	2	0.25	—	7.15	21.54	3.484	2.43	-9.2/-11.5	Turbid	None	
12:00	2.75 2.5	2.75	Bailed Dry @ 2.5 Gallons purged - Will let Re-charge then sample.									

INSTRUMENTS USED:

INSTRUMENTS USED:

WELL CAPACITY (Gallons Per Foot) 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, 2" = 0.16, 3" = 0.37, 4" = 0.65, 5" = 1.02, 6" = 1.47, 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.) 1/8" = 0.0006, 3/16" = 0.0014, 1/4" = 0.0026, 5/16" = 0.004, 3/8" = 0.006, 1/2" = 0.010, 5/8" = 0.016

PP = Peristaltic Pump, O = Other (Specify)

PURGING EQUIPMENT USED: B = Bailer BP = Bladder Pump, ESP = Electric Submersible Pump, PP = Peristaltic Pump, O = Other (Specify)

[illegible]

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization.
2. Sample collection will occur after 3 well volumes are purged or after well stabilization.

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:
 pH: $\leq 10\%$ units Temperature: $\leq 10\%$ °C Specific Conductance: $\leq 10\%$ $\mu\text{S}/\text{cm}$ Dissolved Oxygen: all readings $\leq 10\%$ mg/L
 Oxygen Reduction Potential: $\leq 10\%$ mV

Revision Date: October 22, 2013

GROUNDWATER SAMPLING LOG

SITE NAME <i>Twp Riswell Station 9</i>		SITE LOCATION <i>6381 N. Main Street - Riswell PA</i>	
WELL NO <i>MW-14</i>	SAMPLE ID <i>MW-14</i>	DATE <i>11/15/17</i>	

PURGING DATA

WELL DIAMETER (inches) 2"	TUBING DIAMETER (inches) 1/2"	WELL SCREEN INTERVAL DEPTH 49.5 feet to 64.5 feet	STATIC DEPTH TO WATER (feet) 56.67	PURGE PUMP TYPE OR BAILER BP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY				
= (64.5 feet - 56.67) = 7.83 (feet) X 0.16 gallons/foot = 1.25 gallons				
3 WELL VOLUMES = 3.75 gallons				

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)									
	=	gallons + (	gallons/foot X	feet) +	gallons =	gallons			

INITIAL PUMP OR TUBING DEPTH IN WELL (feet) 59.85	FINAL PUMP OR TUBING DEPTH IN WELL (feet) 57.85	PURGING INITIATED AT 11:05	PURGING ENDED AT 11:38	TOTAL VOLUME PURGED (gallons) 3.75
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[illegible]

INSTRUMENTS USED:

YSI 556 mps Serial # 05F2274 AL

WELL CAPACITY (Gallons Per Foot) 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, 1.5" = 0.16, 3" = 0.37, 4" = 0.65, 5" = 1.02, 6" = 1.47, 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.) 1/8" = 0.0006, 3/16" = 0.0014, 1/4" = 0.0026, 5/16" = 0.004, 3/8" = 0.006, 7/8" = 0.010, 5/8" = 0.016

PURGING EQUIPMENT USED: B = Bailer; BP = Bladder Pump, ESP = Electric Submersible Pump, PP = Peristaltic Pump, O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION <i>Clayton M Barahip / CMB</i>		SAMPLE(S) SIGNATURE(S) <i>Clayton M Barahip</i>		SAMPLING INITIATED AT <i>11:39</i>		SAMPLING ENDED AT <i>12:47</i>	
PUMP OR TUBING DEPTH IN WELL (feet): <i>57.85'</i>		TUBING MATERIAL CODE <i>PE</i>		FIELD-FILTERED Y <input checked="" type="radio"/> N <input type="radio"/> Filtration Equipment Type <i>2</i>		FILTER SIZE: _____ μ m	
FIELD DECONTAMINATION PUMP Y <input checked="" type="radio"/> N <input type="radio"/>		TUBING Y <input checked="" type="radio"/> N <input type="radio"/> (Replaced)		DUPLICATE Y <input checked="" type="radio"/> N <input type="radio"/>			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	
<i>MW-14</i>	<i>3</i>	<i>CG</i>	<i>40mL</i>	<i>HCL</i>	<i>120mL</i>	<i>7.01</i>	
REMARKS:							
MATERIAL CODES: AG Amber Glass, <u>CG</u> Clear Glass, PE = Polyethylene, PP = Polypropylene, S = Silicone, T = Teflon, O = Other (Specify)							
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump, B = Bailor, <u>BP</u> Bladder Pump, ESP = Electric Submersible Pump, RFPP = Reverse Flow Peristaltic Pump, SM = Straw Method (Tubing Gravity Drain), O = Other (Specify)							

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization.

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS.

pH: < 10% units Temperature: < 10% °C Specific Conductance: < 10% $\mu\text{S}/\text{cm}$ Dissolved Oxygen: all readings < 10% mg/L

Oxygen Reduction Potential: $\leq 10\%$ mV

Revision Date: October 22, 2013

GROUNDWATER SAMPLING LOG

SITE NAME TWP Roswell Station 9	SITE LOCATION 6381 N. Main Street Roswell NM 88201
WELL NO MW-16	SAMPLE ID MW-16 DATE 11/15/17

PURGING DATA

WELL DIAMETER (inches) 2"	TUBING DIAMETER (inches) 1"	WELL SCREEN INTERVAL DEPTH 54' TO 74' feet	STATIC DEPTH TO WATER (feet) 68.55'	PUMP TYPE BAILER
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY				
= (71.46' - 68.44' = 3.02') X 0.16 gallons/foot = 0.48 gallons				
3 WELL VOLUMES = 1.45 gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME				
(only fill out if applicable)				

INITIAL PUMP OR TUBING DEPTH IN WELL (feet)		FINAL PUMP OR TUBING DEPTH IN WELL (feet)		PURGING INITIATED AT	PURGING ENDED AT	TOTAL VOLUME PURGED (gallons)	
				0930	0940	1 gallon	
TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) μmhos/cm or μS/cm
0930 Initial	0	0	0.25	68.55'	No parameters taken		
0940 1	1	1	0.25		0.11' Napl/Pst Thickness		
				Sample below pst/Napl			
@ 0940 DTW = 71.64'							
Let well re-charge then sample							

INSTRUMENTS USED: **None**

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, 2" = 0.16, 3" = 0.37, 4" = 0.65, 5" = 1.02, 6" = 1.47, 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal/Ft): 1/8" = 0.0006, 3/16" = 0.0014, 1/4" = 0.0026, 5/16" = 0.004, 3/8" = 0.006, 1/2" = 0.010, 5/8" = 0.016

PURGING EQUIPMENT USED: **B** = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION Clayton Mearns / CMB				SAMPLE(S) SIGNATURE(S) <i>[Signature]</i>				SAMPLING INITIATED AT 10:35		SAMPLING ENDED AT 10:40	
PUMP OR TUBING DEPTH IN WELL (feet):				TUBING MATERIAL CODE:				FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		FILTER SIZE: 10 μm	
FIELD DECONTAMINATION PUMP Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				TUBING Y <input checked="" type="checkbox"/> N (replaced) <input type="checkbox"/>				DUPLICATE Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		Equipment Rinse	
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml per minute)		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-16	3	CG	40 mL	HCL	120 mL	N/A	BTEX	B	0.25		
0930-MW-16	3	CG	40 mL	HCL	120 mL	N/A	BTEX	B	0.25		
Equipment Rinse											
REMARKS											
MATERIAL CODES: AG = Amber Glass, CG = Clear Glass, PE = Polyethylene, PP = Polypropylene, S = Silicone, T = Teflon, O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump, B = Bailer, BP = Bladder Pump, ESP = Electric Submersible Pump, RFPF = Reverse Flow Peristaltic Pump, SM = Straw Method (Tubing Gravity Drain), O = Other (Specify)											

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/L

Oxygen Reduction Potential: ≤ 10% mV

Revision Date: October 22, 2013

GROUNDWATER SAMPLING LOG

SITE NAME	TwP Roswell Station 9		SITE LOCATION	6381 N. main street Roswell NM 88201	
WELL NO	MW-20	SAMPLE ID	mw-20		DATE 11/15/17

PURGING DATA

WELL DIAMETER (inches) <u>2"</u>	TUBING DIAMETER (inches) <u>1/2"</u>	WELL SCREEN INTERVAL DEPTH <u>46.8</u> feet to <u>61.8</u> feet	STATIC DEPTH TO WATER (feet) <u>56.10</u>	PURGE PUMP TYPE OR BAILER <u>BP</u>
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY

$$= (64 \text{ feet} - 56.10 = 7.9 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.26 \text{ gallons}$$

3 WELL VOLUMES = 3.79 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

$$\text{gallons} + (\text{gallons/foot} \times \text{feet}) + \text{gallons} = \text{gallons}$$

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <i>N/A</i>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <i>N/A</i>	PURGING INITIATED AT <i>13:05</i>	PURGING ENDED AT <i>13:41</i>	TOTAL VOLUME PURGED (gallons): <i>44</i>
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[illegible]

INSTRUMENTS USED:

YSI 556 MPS Serial # 05F2274 AL

WELL CAPACITY (Gallons Per Foot) 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, 2" = 0.16, 3" = 0.37, 4" = 0.65, 5" = 1.02, 6" = 1.47, 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.) 1/8" = 0.0006, 3/16" = 0.0014, 1/4" = 0.0026, 5/16" = 0.004, 3/8" = 0.006, 1/2" = 0.010, 5/8" = 0.016

PURGING EQUIPMENT USED: B = Bailer; BP = Bladder Pump, ESP = Electric Submersible Pump, PP = Peristaltic Pump, O = Other (Specify)

SAMPLING DATA¹

SAMPLED BY (PRINT) / AFFILIATION <i>Jonathan M. Borchert / CMAA</i>	SAMPLER(S) SIGNATURE(S) <i>[Signature]</i>	SAMPLING INITIATED AT <i>13:42</i>	SAMPLING ENDED AT <i>13:44</i>
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PUMP OR TUBING DEPTH IN WELL (feet):	N/A	TUBING MATERIAL CODE:	PE	FIELD-FILTERED: Y <input checked="" type="radio"/> N <input type="radio"/>	Filtration Equipment Type:	0	FILTER SIZE: _____ μm
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FIELD DECONTAMINATION	PUMP	Y	<input checked="" type="radio"/> N	TUBING	Y	<input checked="" type="radio"/> N (Replaced)	DUPLICATE	Y	<input checked="" type="radio"/> N
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SAMPLE CONTAINER SPECIFICATION	SAMPLE PRESERVATION	INTENDED	SAMPLING	SAMPLE PUMP
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SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	ANALYSIS AND/OR METHOD	EQUIPMENT CODE	FLOW RATE (ml per minute)
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[illegible]

REMARKS:

MATERIAL CODES: AG = Amber Glass, CG = Clear Glass, PE = Polyethylene, PP = Polypropylene, S = Silicone, T = Teflon, O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump, B = Boiler, BP = Bladder Pump, ESP = Electric Submersible Pump,
RFPP = Reverse Flow Peristaltic Pump, SM = Straw Method (Tubing Gravity Drain), O = Other (Specify)

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization.

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS.

pH: < 10% units Temperature: < 10% °C Specific Conductance: < 10% $\mu\text{S}/\text{cm}$ Dissolved Oxygen: all readings \leq 10% mg/L

Oxygen Reduction Potential: $< 10\%$ mV

Revision Date: October 22, 2013

GROUNDWATER SAMPLING LOG

SITE NAME TWP Roswell Station 9	SITE LOCATION 6381 N. Main Street Roswell NM 88201
WELL NO Monitor Well 21	SAMPLE ID MW-21 DATE 11/14/17

PURGING DATA

WELL DIAMETER (inches) 2"	TUBING DIAMETER (inches) 1/2"	WELL SCREEN INTERVAL DEPTH 54' feet to 74' feet	STATIC DEPTH TO WATER (feet) 66.65	PURGE PUMP TYPE OR BAILER BP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY				
$= (75' - 66.65' = 8.35' \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.336 \text{ gallons}$				
3 WELL VOLUMES = 4.00 gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)				
$= \text{gallons} + (\text{gallons/foot} \times \text{feet}) + \text{gallons} = \text{gallons}$				

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 68.21'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 63.21'	PURGING INITIATED AT 14:10	PURGING ENDED AT 15:00	TOTAL VOLUME PURGED (gallons) 3.0
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TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYGEN REDUCTION POTENTIAL (mV) pH 100p	COLOR (describe)	ODOR (describe)
14:10	Initial	0	0.071	66.65	7.78	20.6	3.007	6.05	-33.8/-28.3	Clear	None
14:24	1	1	0.071	—	7.18	20.08	2.960	1.64	-10.0/-63.0	Clear	None
14:40	2	2	0.0625	—	7.11	20.24	2.953	1.40	-7.3/-67.5	Clear	None
15:00	3	3	0.0625	—	7.09	20.45	2.988	1.37	-6.7/-70.6	Clear	None
	4	4									

* Used well stabilization criteria
Rather than 3 well Volumes for sample *

INSTRUMENTS USED: YSI 556 mps Serial # 05F2274 AL	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, 2" = 0.16, 3" = 0.37, 4" = 0.65, 5" = 1.02, 6" = 1.47, 12" = 5.86	
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006, 3/16" = 0.0014, 1/4" = 0.0026, 5/16" = 0.004, 3/8" = 0.006, 1/2" = 0.010, 5/8" = 0.016	
PURGING EQUIPMENT USED: B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)	

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION Clayton M. Barnhill / KMB	SAMPLER(S) SIGNATURE(S) <i>Clayton M. Barnhill</i>	SAMPLING INITIATED AT 15:01	SAMPLING ENDED AT 15:05
PUMP OR TUBING DEPTH IN WELL (feet): 68.21'	TUBING MATERIAL CODE PE	FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	FILTER SIZE: _____ μm
FIELD DECONTAMINATION PUMP Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	TUBING Y <input checked="" type="checkbox"/> N <input type="checkbox"/> (replaced)	DUPLICATE Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-21-3	3	CG	40mL	HCL	120 mL	7.09	BTEX	BP	0.0625
MW-21-3 Duplicate	3	CG	40mL	HCL	120 mL	7.09	BTEX	BP	0.0625

REMARKS:

MATERIAL CODES: AG = Amber Glass, **CG** = Clear Glass, PE = Polyethylene, PP = Polypropylene, S = Silicone, T = Teflon, O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump, B = Bailor, **BP** = Bladder Pump, ESP = Electric Submersible Pump, RFPF = Reverse Flow Peristaltic Pump, SM = Straw Method (Tubing Gravity Drain), O = Other (Specify)

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/L
Oxygen Reduction Potential: ≤ 10% mV

Revision Date: October 22, 2013

GROUNDWATER SAMPLING LOG

SITE NAME	TWP Roswell Station 9	SITE LOCATION	6381 N. Main St. Roswell, NM 88201
WELL NO	Mon MW-22	SAMPLE ID	MW-22
		DATE	11/15/17

PURGING DATA

WELL DIAMETER (inches)	TUBING DIAMETER (inches)	WELL SCREEN INTERVAL DEPTH (feet to feet)	STATIC DEPTH TO WATER (feet)	PURGE PUMP TYPE
			59.68	Bailer
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY				
= 1 (65.15 - 59.68 = 5.47) feet X 0.16 gallons/foot = 0.875 gallons				
3 WELL VOLUMES = 2.62 gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME				
(only fill out if applicable)				
= gallons + (gallons/foot X feet) + gallons = gallons				
INITIAL PUMP OR TUBING DEPTH IN WELL (feet)	FINAL PUMP OR TUBING DEPTH IN WELL (feet)	PURGING INITIATED AT	PURGING ENDED AT	TOTAL VOLUME PURGED (gallons)
		14:55	14:09	2.75

TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYGEN REDUCTION POTENTIAL (mV)	COLOR (describe)	ODOR (describe)
14:55 Initial	0	0	0.25	59.68	7.04	19.71	3.453	6.90	-4.7/120	Red Silty	
14:05	1	1	0.25	—	7.04	19.92	3.452	6.74	-4.7/120	"	"
14:07	2	2	0.25	—	7.05	18.97	3.442	7.27	-4.5/121.4	"	"
14:09	2.75	2.75	0.25	—	7.03	18.69	3.439	7.18	-4.1/124.2	"	"

INSTRUMENTS USED: VSI 556 MP Series # 05F22742

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, 1.5" = 0.08, 1.75" = 0.10, 2" = 0.12, 2.25" = 0.14, 2.5" = 0.16, 2.75" = 0.18, 3" = 0.20, 3.25" = 0.22, 3.5" = 0.24, 3.75" = 0.26, 4" = 0.28, 4.25" = 0.30, 4.5" = 0.32, 4.75" = 0.34, 5" = 0.36, 5.25" = 0.38, 5.5" = 0.40, 5.75" = 0.42, 6" = 0.44, 6.25" = 0.46, 6.5" = 0.48, 6.75" = 0.50, 7" = 0.52, 7.25" = 0.54, 7.5" = 0.56, 7.75" = 0.58, 8" = 0.60, 8.25" = 0.62, 8.5" = 0.64, 8.75" = 0.66, 9" = 0.68, 9.25" = 0.70, 9.5" = 0.72, 9.75" = 0.74, 10" = 0.76, 10.25" = 0.78, 10.5" = 0.80, 10.75" = 0.82, 11" = 0.84, 11.25" = 0.86, 11.5" = 0.88, 11.75" = 0.90, 12" = 0.92, 12.25" = 0.94, 12.5" = 0.96, 12.75" = 0.98, 13" = 1.00, 13.25" = 1.02, 13.5" = 1.04, 13.75" = 1.06, 14" = 1.08, 14.25" = 1.10, 14.5" = 1.12, 14.75" = 1.14, 15" = 1.16, 15.25" = 1.18, 15.5" = 1.20, 15.75" = 1.22, 16" = 1.24, 16.25" = 1.26, 16.5" = 1.28, 16.75" = 1.30, 17" = 1.32, 17.25" = 1.34, 17.5" = 1.36, 17.75" = 1.38, 18" = 1.40, 18.25" = 1.42, 18.5" = 1.44, 18.75" = 1.46, 19" = 1.48, 19.25" = 1.50, 19.5" = 1.52, 19.75" = 1.54, 20" = 1.56, 20.25" = 1.58, 20.5" = 1.60, 20.75" = 1.62, 21" = 1.64, 21.25" = 1.66, 21.5" = 1.68, 21.75" = 1.70, 22" = 1.72, 22.25" = 1.74, 22.5" = 1.76, 22.75" = 1.78, 23" = 1.80, 23.25" = 1.82, 23.5" = 1.84, 23.75" = 1.86, 24" = 1.88, 24.25" = 1.90, 24.5" = 1.92, 24.75" = 1.94, 25" = 1.96, 25.25" = 1.98, 25.5" = 2.00, 25.75" = 2.02, 26" = 2.04, 26.25" = 2.06, 26.5" = 2.08, 26.75" = 2.10, 27" = 2.12, 27.25" = 2.14, 27.5" = 2.16, 27.75" = 2.18, 28" = 2.20, 28.25" = 2.22, 28.5" = 2.24, 28.75" = 2.26, 29" = 2.28, 29.25" = 2.30, 29.5" = 2.32, 29.75" = 2.34, 30" = 2.36, 30.25" = 2.38, 30.5" = 2.40, 30.75" = 2.42, 31" = 2.44, 31.25" = 2.46, 31.5" = 2.48, 31.75" = 2.50, 32" = 2.52, 32.25" = 2.54, 32.5" = 2.56, 32.75" = 2.58, 33" = 2.60, 33.25" = 2.62, 33.5" = 2.64, 33.75" = 2.66, 34" = 2.68, 34.25" = 2.70, 34.5" = 2.72, 34.75" = 2.74, 35" = 2.76, 35.25" = 2.78, 35.5" = 2.80, 35.75" = 2.82, 36" = 2.84, 36.25" = 2.86, 36.5" = 2.88, 36.75" = 2.90, 37" = 2.92, 37.25" = 2.94, 37.5" = 2.96, 37.75" = 2.98, 38" = 3.00, 38.25" = 3.02, 38.5" = 3.04, 38.75" = 3.06, 39" = 3.08, 39.25" = 3.10, 39.5" = 3.12, 39.75" = 3.14, 40" = 3.16, 40.25" = 3.18, 40.5" = 3.20, 40.75" = 3.22, 41" = 3.24, 41.25" = 3.26, 41.5" = 3.28, 41.75" = 3.30, 42" = 3.32, 42.25" = 3.34, 42.5" = 3.36, 42.75" = 3.38, 43" = 3.40, 43.25" = 3.42, 43.5" = 3.44, 43.75" = 3.46, 44" = 3.48, 44.25" = 3.50, 44.5" = 3.52, 44.75" = 3.54, 45" = 3.56, 45.25" = 3.58, 45.5" = 3.60, 45.75" = 3.62, 46" = 3.64, 46.25" = 3.66, 46.5" = 3.68, 46.75" = 3.70, 47" = 3.72, 47.25" = 3.74, 47.5" = 3.76, 47.75" = 3.78, 48" = 3.80, 48.25" = 3.82, 48.5" = 3.84, 48.75" = 3.86, 49" = 3.88, 49.25" = 3.90, 49.5" = 3.92, 49.75" = 3.94, 50" = 3.96, 50.25" = 3.98, 50.5" = 4.00, 50.75" = 4.02, 51" = 4.04, 51.25" = 4.06, 51.5" = 4.08, 51.75" = 4.10, 52" = 4.12, 52.25" = 4.14, 52.5" = 4.16, 52.75" = 4.18, 53" = 4.20, 53.25" = 4.22, 53.5" = 4.24, 53.75" = 4.26, 54" = 4.28, 54.25" = 4.30, 54.5" = 4.32, 54.75" = 4.34, 55" = 4.36, 55.25" = 4.38, 55.5" = 4.40, 55.75" = 4.42, 56" = 4.44, 56.25" = 4.46, 56.5" = 4.48, 56.75" = 4.50, 57" = 4.52, 57.25" = 4.54, 57.5" = 4.56, 57.75" = 4.58, 58" = 4.60, 58.25" = 4.62, 58.5" = 4.64, 58.75" = 4.66, 59" = 4.68, 59.25" = 4.70, 59.5" = 4.72, 59.75" = 4.74, 60" = 4.76, 60.25" = 4.78, 60.5" = 4.80, 60.75" = 4.82, 61" = 4.84, 61.25" = 4.86, 61.5" = 4.88, 61.75" = 4.90, 62" = 4.92, 62.25" = 4.94, 62.5" = 4.96, 62.75" = 4.98, 63" = 5.00, 63.25" = 5.02, 63.5" = 5.04, 63.75" = 5.06, 64" = 5.08, 64.25" = 5.10, 64.5" = 5.12, 64.75" = 5.14, 65" = 5.16, 65.25" = 5.18, 65.5" = 5.20, 65.75" = 5.22, 66" = 5.24, 66.25" = 5.26, 66.5" = 5.28, 66.75" = 5.30, 67" = 5.32, 67.25" = 5.34, 67.5" = 5.36, 67.75" = 5.38, 68" = 5.40, 68.25" = 5.42, 68.5" = 5.44, 68.75" = 5.46, 69" = 5.48, 69.25" = 5.50, 69.5" = 5.52, 69.75" = 5.54, 70" = 5.56, 70.25" = 5.58, 70.5" = 5.60, 70.75" = 5.62, 71" = 5.64, 71.25" = 5.66, 71.5" = 5.68, 71.75" = 5.70, 72" = 5.72, 72.25" = 5.74, 72.5" = 5.76, 72.75" = 5.78, 73" = 5.80, 73.25" = 5.82, 73.5" = 5.84, 73.75" = 5.86, 74" = 5.88, 74.25" = 5.90, 74.5" = 5.92, 74.75" = 5.94, 75" = 5.96, 75.25" = 5.98, 75.5" = 6.00, 75.75" = 6.02, 76" = 6.04, 76.25" = 6.06, 76.5" = 6.08, 76.75" = 6.10, 77" = 6.12, 77.25" = 6.14, 77.5" = 6.16, 77.75" = 6.18, 78" = 6.20, 78.25" = 6.22, 78.5" = 6.24, 78.75" = 6.26, 79" = 6.28, 79.25" = 6.30, 79.5" = 6.32, 79.75" = 6.34, 80" = 6.36, 80.25" = 6.38, 80.5" = 6.40, 80.75" = 6.42, 81" = 6.44, 81.25" = 6.46, 81.5" = 6.48, 81.75" = 6.50, 82" = 6.52, 82.25" = 6.54, 82.5" = 6.56, 82.75" = 6.58, 83" = 6.60, 83.25" = 6.62, 83.5" = 6.64, 83.75" = 6.66, 84" = 6.68, 84.25" = 6.70, 84.5" = 6.72, 84.75" = 6.74, 85" = 6.76, 85.25" = 6.78, 85.5" = 6.80, 85.75" = 6.82, 86" = 6.84, 86.25" = 6.86, 86.5" = 6.88, 86.75" = 6.90, 87" = 6.92, 87.25" = 6.94, 87.5" = 6.96, 87.75" = 6.98, 88" = 7.00, 88.25" = 7.02, 88.5" = 7.04, 88.75" = 7.06, 89" = 7.08, 89.25" = 7.10, 89.5" = 7.12, 89.75" = 7.14, 90" = 7.16, 90.25" = 7.18, 90.5" = 7.20, 90.75" = 7.22, 91" = 7.24, 91.25" = 7.26, 91.5" = 7.28, 91.75" = 7.30, 92" = 7.32, 92.25" = 7.34, 92.5" = 7.36, 92.75" = 7.38, 93" = 7.40, 93.25" = 7.42, 93.5" = 7.44, 93.75" = 7.46, 94" = 7.48, 94.25" = 7.50, 94.5" = 7.52, 94.75" = 7.54, 95" = 7.56, 95.25" = 7.58, 95.5" = 7.60, 95.75" = 7.62, 96" = 7.64, 96.25" = 7.66, 96.5" = 7.68, 96.75" = 7.70, 97" = 7.72, 97.25" = 7.74, 97.5" = 7.76, 97.75" = 7.78, 98" = 7.80, 98.25" = 7.82, 98.5" = 7.84, 98.75" = 7.86, 99" = 7.88, 99.25" = 7.90, 99.5" = 7.92, 99.75" = 7.94, 100" = 7.96, 100.25" = 7.98, 100.5" = 8.00, 100.75" = 8.02, 101" = 8.04, 101.25" = 8.06, 101.5" = 8.08, 101.75" = 8.10, 102" = 8.12, 102.25" = 8.14, 102.5" = 8.16, 102.75" = 8.18, 103" = 8.20, 103.25" = 8.22, 103.5" = 8.24, 103.75" = 8.26, 104" = 8.28, 104.25" = 8.30, 104.5" = 8.32, 104.75" = 8.34, 105" = 8.36, 105.25" = 8.38, 105.5" = 8.40, 105.75" = 8.42, 106" = 8.44, 106.25" = 8.46, 106.5" = 8.48, 106.75" = 8.50, 107" = 8.52, 107.25" = 8.54, 107.5" = 8.56, 107.75" = 8.58, 108" = 8.60, 108.25" = 8.62, 108.5" = 8.64, 108.75" = 8.66, 109" = 8.68, 109.25" = 8.70, 109.5" = 8.72, 109.75" = 8.74, 110" = 8.76, 110.25" = 8.78, 110.5" = 8.80, 110.75" = 8.82, 111" = 8.84, 111.25" = 8.86, 111.5" = 8.88, 111.75" = 8.90, 112" = 8.92, 112.25" = 8.94, 112.5" = 8.96, 112.75" = 8.98, 113" = 9.00, 113.25" = 9.02, 113.5" = 9.04, 113.75" = 9.06, 114" = 9.08, 114.25" = 9.10, 114.5" = 9.12, 114.75" = 9.14, 115" = 9.16, 115.25" = 9.18, 115.5" = 9.20, 115.75" = 9.22, 116" = 9.24, 116.25" = 9.26, 116.5" = 9.28, 116.75" = 9.30, 117" = 9.32, 117.25" = 9.34, 117.5" = 9.36, 117.75" = 9.38, 118" = 9.40, 118.25" = 9.42, 118.5" = 9.44, 118.75" = 9.46, 119" = 9.48, 119.25" = 9.50, 119.5" = 9.52, 119.75" = 9.54, 120" = 9.56, 120.25" = 9.58, 120.5" = 9.60, 120.75" = 9.62, 121" = 9.64, 121.25" = 9.66, 121.5" = 9.68, 121.75" = 9.70, 122" = 9.72, 122.25" = 9.74, 122.5" = 9.76, 122.75" = 9.78, 123" = 9.80, 123.25" = 9.82, 123.5" = 9.84, 123.75" = 9.86, 124" = 9.88, 124.25" = 9.90, 124.5" = 9.92, 124.75" = 9.94, 125" = 9.96, 125.25" = 9.98, 125.5" = 10.00, 125.75" = 10.02, 126" = 10.04, 126.25" = 10.06, 126.5" = 10.08, 126.75" = 10.10, 127" = 10.12, 127.25" = 10.14, 127.5" = 10.16, 127.75" = 10.18, 128" = 10.20, 128.25" = 10.22, 128.5" = 10.24, 128.75" = 10.26, 129" = 10.28, 129.25" = 10.30, 129.5" = 10.32, 129.75" = 10.34, 130" = 10.36, 130.25" = 10.38, 130.5" = 10.40, 130.75" = 10.42, 131" = 10.44, 131.25" = 10.46, 131.5" = 10.48, 131.75" = 10.50, 132" = 10.52, 132.25" = 10.54, 132.5" = 10.56, 132.75" = 10.58, 133" = 10.60, 133.25" = 10.62, 133.5" = 10.64, 133.75" = 10.66, 134" = 10.68, 134.25" = 10.70, 134.5" = 10.72, 134.75" = 10.74, 135" = 10.76, 135.25" = 10.78, 135.5" = 10.80, 135.75" = 10.82, 136" = 10.84, 136.25" = 10.86, 136.5" = 10.88, 136.75" = 10.90, 137" = 10.92, 137.25" = 10.94, 137.5" = 10.96, 137.75" = 10.98, 138" = 11.00, 138.25" = 11.02, 138.5" = 11.04, 138.75" = 11.06, 139" = 11.08, 139.25" = 11.10, 139.5" = 11.12, 139.75" = 11.14, 140" = 11.16, 140.25" = 11.18, 140.5" = 11.20, 140.75" = 11.22, 141" = 11.24, 141.25" = 11.26, 141.5" = 11.28, 141.75" = 11.30, 142" = 11.32, 142.25" = 11.34, 142.5" = 11.36, 142.75" = 11.38, 143" = 11.40, 143.25" = 11.42, 143.5" = 11.44, 143.75" = 11.46, 144" = 11.48, 144.25" = 11.50, 144.5" = 11.52, 144.75" = 11.54, 145" = 11.56, 145.25" = 11.58, 145.5" = 11.60, 145.75" = 11.62, 146" = 11.64, 146.25" = 11.66, 146.5" = 11.68, 146.75" = 11.70, 147" = 11.72, 147.25" = 11.74, 147.5" = 11.76, 147.75" = 11.78, 148" = 11.80, 148.25" = 11.82, 148.5" = 11.84, 148.75" = 11.86, 149" = 11.88, 149.25" = 11.90, 149.5" = 11.92, 149.75" = 11.94, 150" = 11.96, 150.25" = 11.98, 150.5" = 12.00, 150.75" = 12.02, 151" = 12.04, 151.25" = 12.06, 151.5" = 12.08, 151.75" = 12.10, 152" = 12.12, 152.25" = 12.14, 152.5" = 12.16, 152.75" = 12.18, 153" = 12.20, 153.25" = 12.22, 153.5" = 12.24, 153.75" = 12.26, 154" = 12.28, 154.25" = 12.30, 154.5" = 12.32, 154.75" = 12.34, 155" = 12.36, 155.25" = 12.38, 155.5" = 12.40, 155.75" = 12.42, 156" = 12.44, 156.25" = 12.46, 156.5" = 12.48, 156.75" = 12.50, 157" = 12.52, 157.25" = 12.54, 157.5" = 12.56, 157.75" = 12.58, 158" = 12.60, 158.25" = 12.62, 158.5" = 12.64, 158.75" = 12.66, 159" = 12.68, 159.25" = 12.70, 159.5" = 12.72, 159.75" = 12.74, 160" = 12.76, 160.25" = 12.78, 160.5" = 12.80, 160.75" = 12.82, 161" = 12.84, 161.25" = 12.86, 161.5" = 12.88, 161.75" = 12.90, 162" = 12.92, 162.25" = 12.94, 162.5" = 12.96, 162.75" = 12.98, 163" = 13.00, 163.25" = 13.02, 163.5" = 13.04, 163.75" = 13.06, 164" = 13.08, 164.25" = 13.10, 164.5" = 13.12, 164.75" = 13.14, 165" = 13.16, 165.25" = 13.18, 165.5" = 13.20, 165.75" = 13.22, 166" = 13.24, 166.25" = 13.26, 166.5" = 13.28, 166.75" = 13.30, 167" = 13.32, 167.25" = 13.34, 167.5" = 13.36, 167.75" = 13.38, 168" = 13.40, 168.25" = 13.42, 168.5" = 13.44, 168.75" = 13.46, 169" = 13.48, 169.25" = 13.50, 169.5" = 13.52, 169.75" = 13.54, 170" = 13.56, 170.25" = 13.58, 170.5" = 13.60, 170.75" = 13.62, 171" = 13.64, 171.25" = 13.66, 171.5" = 13.68, 171.75" = 13.70, 172" = 13.72, 172.25" = 13.74, 172.5" = 13.76, 172.75" = 13.78, 173" = 13.80, 173.25" = 13.82, 173.5" = 13.84, 173.75" = 13.86, 174" = 13.88, 174.25" = 13.90, 174.5" = 13.92, 174.75" = 13.94, 175" = 13.96, 175.25" = 13.98, 175.5" = 14.00, 175.75" = 14.02, 176" = 14.04, 176.25" = 14.06, 176.5" = 14.08, 176.75" = 14.10, 177" = 14.12, 177.25" = 14.14, 177.5" = 14.16, 177.75" = 14.18, 178" = 14.20, 178.25" = 14.22, 178.5" = 14.24, 178.75" = 14.26, 179" = 14.28, 179.25" = 14.30, 179.5" = 14.32, 179.75" = 14.34, 180" = 14.36, 180.25" = 14.38, 180.5" = 14.40, 180.75" = 14.42, 181" = 14.44, 181.25" = 14.46, 181.5" = 14.48, 181.75" = 14.50, 182" = 14.52, 182.25" = 14.54, 182.5" = 14.56, 182.75" = 14.58, 183" = 14.60, 183.25" = 14.62, 183.5" = 14.64, 183.75" = 14.66, 184" = 14.68, 184.25" = 14.70, 184.5" = 14.72, 184.75" = 14.74, 185" = 14.76, 185.25" = 14.78, 185.5" = 14.80, 185.75" = 14.82, 186" = 14.84, 186.25" = 14.86, 186.5" = 14.88, 186.75" = 14.90, 187" = 14.92, 187.25" = 14.94, 187.5" = 14.96, 187.75" = 14.98, 188" = 15.00, 188.25" = 15.02, 188.5" = 15.04, 188.75" = 15.06, 189" = 15.08, 189.25" = 15.10, 189.5" = 15.12, 189.75" = 15.14, 190" = 15.16, 190.25" = 15.18, 190.5" = 15.20, 190.75" = 15.22, 191" = 15.24, 191.25" = 15.26, 191.5" = 15.28, 191.75" = 15.30, 192" = 15.32, 192.25" = 15.34, 192.5" = 15.36, 192.75" = 15.38, 193" = 15.40, 193.25" = 15.42, 193.5" = 15.44, 193.75" = 15.46, 194" = 15.48, 194.25" = 15.50, 194.5" = 15.52, 194.75" = 15.54, 195" = 15.56, 195.25

GROUNDWATER SAMPLING LOG

SITE NAME TWP Roswell Station 9	SITE LOCATION 6381 N. Main St. Roswell, NM 86201
WELL NO MW-24D	SAMPLE ID MW-24D
DATE	

PURGING DATA

WELL DIAMETER (inches) 4"	TUBING DIAMETER (inches) 1/2	WELL SCREEN INTERVAL DEPTH 146 feet to 176 feet	STATIC DEPTH TO WATER (feet) 62.67'	PURGE PUMP TYPE ESP OR BAILER
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY				
= (180' feet - 62.67') = 117.33 feet X 0.65 gallons/foot = 76.26 gallons				
3 WELL VOLUMES = 228.79 gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME				
(only fill out if applicable)				
= gallons + (gallons/foot X feet) + gallons = gallons				

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 100'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 150'	PURGING INITIATED AT 12:38	PURGING ENDED AT 13:11	TOTAL VOLUME PURGED (gallons): 55
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TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYGEN REDUCTION POTENTIAL (mV)	COLOR (describe)	ODOR (describe)
12:38	1	1	1.66	62.67	6.33	19.65	3.411	0.86	23.3/-12.7	Clear	None
12:41	5	5	1.66	—	6.45	19.54	3.372	0.31	10.3/-133.2	Clear	None
12:44	10	10	1.66	—	6.72	19.60	3.357	0.34	8.9/-118.0	"	"
12:47	15	15	1.66	—	6.78	19.73	2.972	0.74	6.4/-77.2	"	"
12:50	20	20	1.66	—	6.58	19.71	2.881	0.94	10.3/-33.1	"	"
12:53	25	25	1.66	—	6.66	19.51	3.425	0.70	8.6/-37.6	"	"
13:02	40	40	1.66	—	6.74	19.48	3.424	0.50	6.4/-40.7	"	"
13:08	50	50	1.66	—	6.79	19.44	3.425	0.38	5.3/-43.1	"	"
13:11	55	55	1.66	—	6.82	19.44	3.425	0.31	4.2/-45.0	"	"

INSTRUMENTS USED:

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, 2" = 0.16, 3" = 0.37, 4" = 0.65, 5" = 1.02, 6" = 1.47, 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006, 3/16" = 0.0014, 1/4" = 0.0026, 5/16" = 0.004, 3/8" = 0.006, 1/2" = 0.010, 5/8" = 0.016

PURGING EQUIPMENT USED: B = Bailer; BP = Bladder Pump; **ESP** = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION Clayton M Barahic / KMB	SAMPLER(S) SIGNATURE(S) <i>Clayton M Barahic</i>	SAMPLING INITIATED AT 13:11	SAMPLING ENDED AT 13:12
PUMP OR TUBING DEPTH IN WELL (feet) 150'	TUBING MATERIAL CODE PP	FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	FILTER SIZE: _____ μm
FIELD DECONTAMINATION PUMP Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	TUBING Y <input checked="" type="checkbox"/> N <input type="checkbox"/> (Replaced)	DUPLICATE Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-24D	3	CG	40ML	HCL	120 mL	6.82	BTex 8021	ESP	1.66
@ 13:30 MW-24D	3	GG	40ML	HCL	120 mL	6.82	BTex 8021	ESP	1.66
Equipment Rinse									

REMARKS

MATERIAL CODES: AG = Amber Glass, **CG** = Clear Glass, PE = Polyethylene, **PP** = Polypropylene, S = Silicone, T = Teflon, O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump, B = Bailer, BP = Bladder Pump, **ESP** = Electric Submersible Pump, RFPP = Reverse Flow Peristaltic Pump, SM = Straw Method (Tubing Gravity Drain), O = Other (Specify)

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/L
 Oxygen Reduction Potential: ≤ 10% mV

Revision Date: October 22, 2013

GROUNDWATER SAMPLING LOG

SITE NAME Twp Roswell Station 9	SITE LOCATION Twp Roswell Station 9
WELL NO MW-26	SAMPLE ID MW-26
DATE 11/15/17	

PURGING DATA

WELL DIAMETER (inches) 2"	TUBING DIAMETER (inches) 1/2"	WELL SCREEN INTERVAL DEPTH 43 feet to 63 feet	STATIC DEPTH TO WATER (feet) 52.42'	PURGE PUMP TYPE OR BAILER BP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY				
= (65 feet - 52.42 = 12.58 feet) X 0.16 gallons/foot = 2.01 gallons				
3 WELL VOLUMES = 6.03 gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)				
= gallons + (gallons/foot X feet) + gallons = gallons				

INITIAL PUMP OR TUBING DEPTH IN WELL (feet)		FINAL PUMP OR TUBING DEPTH IN WELL (feet)		PURGING INITIATED AT		PURGING ENDED AT		TOTAL VOLUME PURGED (gallons)			
56.63'		56.63'		12:05		12:37		6.25			
TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/l or % saturation	OXYGEN REDUCTION POTENTIAL (mV)	COLOR (describe)	ODOR (describe)
12:05 Initial	0	0	0.20	52.42'	7.09	19.04	3.472	6.31	-4.2/84.0	Clear	None
12:15	2	2	0.20	—	6.95	18.77	3.538	5.99	-1.2/93.9	Clear	None
12:25	4	4	0.20	—	6.92	18.79	3.544	5.78	0.5/113.7	Clear	None
12:35	6	6	0.20	—	6.93	18.84	3.588	5.99	-0.2/119.0	Clear	None
12:37	6.25	6.25	0.20	—	7.02	18.87	3.588	5.98	-1.2/116.3	Clear	None

INSTRUMENTS USED: **YSI 556 mps Serial # 05F2274AL**

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, 1.5" = 0.08, 2" = 0.16, 3" = 0.37, 4" = 0.65, 5" = 1.02, 6" = 1.47, 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006, 3/16" = 0.0014, 1/4" = 0.0026, 5/16" = 0.004, 3/8" = 0.006, 1/2" = 0.010, 5/8" = 0.016

PURGING EQUIPMENT USED: B = Bailor; **BP** = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION Clayton M Bernhill / Cmp		SAMPLER(S) SIGNATURE(S) <i>[Signature]</i>		SAMPLING INITIATED AT 12:40	SAMPLING ENDED AT 12:43
PUMP OR TUBING DEPTH IN WELL (feet) 56.63		TUBING MATERIAL CODE PE		FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	FILTER SIZE: 0.45 μm
FIELD DECONTAMINATION PUMP Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		TUBING Y <input checked="" type="checkbox"/> N <input type="checkbox"/> (Replaced)		DUPLICATE Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-26	3	CG	40mL	HCL	120mL	7.02	VOC'S 8260	BP	0.20
MW-26	3	CG	40mL	HCL	120mL	7.02	VOC'S 8260	BP	0.20
Duplicate									

REMARKS: **Purged water placed in on-site DRUM**

MATERIAL CODES: AG = Amber Glass, **CG** = Clear Glass; PE = Polyethylene, PP = Polypropylene, S = Silicone, T = Teflon, O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailor; **BP** = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/L
Oxygen Reduction Potential: ≤ 10% mV

GROUNDWATER SAMPLING LOG

SITE NAME	TWP Roswell Station #9		SITE LOCATION	6381 North Main St. Roswell, NM 88201	
WELL NO	Monitor Well #27	SAMPLE ID	MW-27	DATE	11/14/17

PURGING DATA

[illegible]

SAMPLING DATA¹

SAMPLED BY (PRINT) / AFFILIATION <i>Clayton H Barahill / CME</i>				SAMPLER(S) SIGNATURE(S) <i>[Signature]</i>				SAMPLING INITIATED AT <i>13:41</i>		SAMPLING ENDED AT <i>13:42</i>	
PUMP OR TUBING DEPTH IN WELL (feet):				TUBING MATERIAL CODE <i>PP Polyc</i>		FIELD-FILTERED: Y <input checked="" type="radio"/> N <input type="radio"/>		Filtration Equipment Type _____ FILTER SIZE: _____ µm			
FIELD DECONTAMINATION PUMP Y <input checked="" type="radio"/> N <input type="radio"/>				TUBING Y <input checked="" type="radio"/> N <input type="radio"/> (replaced)				DUPLICATE: Y <input checked="" type="radio"/> N <input type="radio"/>			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml per minute)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
<i>MW-27</i>	<i>3</i>	<i>CG</i>	<i>40mL</i>	<i>HCL</i>	<i>120 mL</i>	<i>6.8</i>	<i>B Tex 802/</i>	<i>B</i>	<i>0.25</i>		
REMARKS:											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization;
STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS.

pH: $\leq 10\%$ units Temperature: $\leq 10\%$ °C Specific Conductance: $\leq 10\%$ $\mu\text{S}/\text{cm}$ Dissolved Oxygen: all readings $\leq 10\%$ mg/L
Oxygen Reduction Potential: $< 10\%$ mV

Revision Date: October 22, 2013

GROUNDWATER SAMPLING LOG

SITE NAME	Twp Roswell Station #9	SITE LOCATION	6381 N. Main Street Roswell NM 86201
WELL NO	MW-29	SAMPLE ID	MW-29
		DATE	11/14/17

PURGING DATA

WELL DIAMETER (inches)	2"	TUBING DIAMETER (inches)	1 1/2"	WELL SCREEN INTERVAL DEPTH	60 feet to 75 feet	STATIC DEPTH TO WATER (feet)	70.45'	PURGE PUMP TYPE	OR BAILEY
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY = 74.50' feet - 70.45' = 4.05' feet X 0.16 gallons/foot = 0.648 gallons 3 WELL VOLUMES = 1.94 gallons									
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = gallons + (gallons/foot X feet) + gallons = gallons									
INITIAL PUMP OR TUBING DEPTH IN WELL (feet)		FINAL PUMP OR TUBING DEPTH IN WELL (feet)		PURGING INITIATED AT		PURGING ENDED AT		TOTAL VOLUME PURGED (gallons)	
				12:45		12:51		2.0	

TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	OXYGEN REDUCTION POTENTIAL (mV)	COLOR (describe)	ODOR (describe)
12:45	Initial	0	0.25	70.45	7.11	19.49	2.785	2.67	-7.3/45.5	Turbid	None
12:47	0.50	0.50	0.25	-	7.10	19.18	2.815	2.36	-6.7/59.7	Turbid	None
12:49	1.0	1.0	0.25	-	7.08	19.17	2.790	2.51	-6.2/60.7	"	"
12:50	1.5	1.5	0.25	-	7.07	19.12	2.838	2.99	-6.0/62.0	"	"
12:51	2.0	2	0.25	-	7.07	18.99	2.854	3.19	-6.2/63.8	"	"

INSTRUMENTS USED: YSI 556 MPS Serial # 05F 2274 AL

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, 2" = 0.16, 3" = 0.37, 4" = 0.65, 5" = 1.02, 6" = 1.47, 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006, 3/16" = 0.0014, 1/4" = 0.0026, 5/16" = 0.004, 3/8" = 0.006, 1/2" = 0.010, 5/8" = 0.016

PURGING EQUIPMENT USED: B = Baille, BP = Bladder Pump, ESP = Electric Submersible Pump, PP = Peristaltic Pump, O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION				SAMPLER(S) SIGNATURE(S)				SAMPLING INITIATED AT		SAMPLING ENDED AT	
Clayton M. Barnhill / CMB				Clayton M. Barnhill				12:55		12:56	
PUMP OR TUBING DEPTH IN WELL (feet)				TUBING MATERIAL CODE				FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		FILTER SIZE: _____ μm	
Pump Removed				N/A Baille				Filteration Equipment Type:			
FIELD DECONTAMINATION PUMP Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				TUBING Y <input checked="" type="checkbox"/> N <input type="checkbox"/> (replaced)				DUPLICATE Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		Equipment Runsite	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-29	3	CG	40mL	HCL	120mL	7.07	BTEX 8021	B	0.25
MW-29	3	CG	40mL	HCL	120mL	7.07	BTEX 8021	B	0.25
Equipment Rinse									

REMARKS

MATERIAL CODES: AG = Amber Glass, CG = Clear Glass, PE = Polyethylene, PP = Polypropylene, S = Silicone, T = Teflon, O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump, B = Baille, BP = Bladder Pump, ESP = Electric Submersible Pump, RFPP = Reverse Flow Peristaltic Pump, SM = Straw Method (Tubing Gravity Drain), O = Other (Specify)

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/L
 Oxygen Reduction Potential: ≤ 10% mV

Revision Date: October 22, 2013

8824
N/A

PURGING DATA

SAMPLING DATA

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization;
STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

Revision Date: October 22, 2013

GROUNDWATER SAMPLING LOG

SITE NAME Twp Roswell Station #9	SITE LOCATION 6381 N. Main St. Roswell, NM 88207
WELL NO MW-34	SAMPLE ID MW-34 DATE 11/14/17

PURGING DATA

WELL DIAMETER (inches) 2"	TUBING DIAMETER (inches) 1/2"	WELL SCREEN INTERVAL DEPTH 49 feet to 79 feet	STATIC DEPTH TO WATER (feet) 64.51	PURGE PUMP TYPE OR BAILER BP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY $= (75.75 \text{ feet} - 64.51 \text{ feet}) = 11.24' \text{ feet} \times 0.16 \text{ gallons/foot} = 1.79 \text{ gallons}$				
3 WELL VOLUMES = 5.39 gallons EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)				
INITIAL PUMP OR TUBING DEPTH IN WELL (feet) 67.0	FINAL PUMP OR TUBING DEPTH IN WELL (feet) 67.0	PURGING INITIATED AT 0934	PURGING ENDED AT 10:09	TOTAL VOLUME PURGED (gallons) 5.4

TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND (circle units) $\mu\text{mhos/cm}$ or $\mu\text{S/cm}$	DISSOLVED OXYGEN (circle units) (mg/l) or % saturation	OXYGEN REDUCTION POTENTIAL (mV)	COLOR (describe)	ODOR (describe)
0934 Initial	0	0	0.125	64.51	7.05	17.74	3.523	4.30	-48/17.3	Clear	None
0942	1	1	0.125	-	7.09	19.15	3.329	0.66	-66/24.5	Clear	None
0948	2	2	0.166	-	7.09	19.14	3.331	0.42	-6.5/8.7	Clear	None
0954	3	3	0.166	-	7.09	19.15	3.321	0.35	-6.5/4.3	Clear	None
10:00	4	4	0.166	-	7.09	19.18	3.313	0.31	-6.5/2.9	Clear	None
10:06	5	5	0.166	-	7.09	19.18	3.312	0.29	-6.4/2.6	Clear	None
10:09	5.4	5.4	0.166	-	7.09	19.18	3.312	0.28	-6.4/2.6	Clear	None

INSTRUMENTS USED: **YSI 556 MPS Serial # 05F2274 AL**

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, 1.5" = 0.08, 2" = 0.16, 3" = 0.37, 4" = 0.65, 5" = 1.02, 6" = 1.47, 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006, 3/16" = 0.0014, 1/4" = 0.0026, 5/16" = 0.004, 3/8" = 0.006, 1/2" = 0.010, 5/8" = 0.016

PURGING EQUIPMENT USED: B = Bailer, **BP** = Bladder Pump, ESP = Electric Submersible Pump, PP = Peristaltic Pump, O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION Clayton M Barahin / CMB				SAMPLER(S) SIGNATURE(S) <i>Clayton M Barahin</i>				SAMPLING INITIATED AT 10:09		SAMPLING ENDED AT 10:11	
PUMP OR TUBING DEPTH IN WELL (feet) 67.0'				TUBING MATERIAL CODE PE		FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		FILTER SIZE: 0.45 μm			
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/> N <input type="checkbox"/> TUBING Y <input checked="" type="checkbox"/> N <input type="checkbox"/> (replaced)				DUPLICATE: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>							

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-34	3	CG	40mL	HCL	120 mL	7.09	BTEX 602	BP	0.146
MW-34 Duplicate	3	CG	40mL	HCL	120 mL	7.09	BTEX 8021	BP	0.146

REMARKS:

MATERIAL CODES: AG = Amber Glass, **CG** = Clear Glass, PE = Polyethy., PP = Polypropylene, S = Silicone, T = Teflon, O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump, B = Bailer, **BP** = Bladder Pump, ESP = Electric Submersible Pump, RFPP = Reverse Flow Peristaltic Pump, SM = Straw Method (Tubing Gravity Drain), O = Other (Specify)

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: $\leq 10\%$ units Temperature: $\leq 10\%$ °C Specific Conductance: $\leq 10\%$ $\mu\text{S/cm}$ Dissolved Oxygen: all readings $\leq 10\%$ mg/L
 Oxygen Reduction Potential: $\leq 10\%$ mV

Revision Date: October 22, 2013

GROUNDWATER SAMPLING LOG

SITE NAME Twp Roswell Station 9	SITE LOCATION 6381 N. Main St. Roswell, NH 03071
WELL NO MW-35	SAMPLE ID MW-35 DATE 11/14/17

PURGING DATA

WELL DIAMETER (inches) 2"	TUBING DIAMETER (inches) 1/2"	WELL SCREEN INTERVAL DEPTH 49 feet to 79 feet	STATIC DEPTH TO WATER (feet) 61.51'	PURGE PUMP TYPE OR BAILER BP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY				
= (76.71 feet - 61.51') X 0.16 gallons/foot = 2.43 gallons				
3 WELL VOLUMES = 7.29 gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME				
= 7.3 gallons				
INITIAL PUMP OR TUBING DEPTH IN WELL (feet) 61.05	FINAL PUMP OR TUBING DEPTH IN WELL (feet) 61.05	PURGING INITIATED AT 10:25	PURGING ENDED AT 11:42	TOTAL VOLUME PURGED (gallons) 7.3

TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/l or % saturation	OXYGEN REDUCTION POTENTIAL (mV)	COLOR (describe)	ODOR (describe)
10:25 Initial	0		0.037	61.51'	7.14	18.38	3.322	2.68	-8.9/19.8	Clear	None
10:52 1	1		0.037		7.18	19.43	3.663	6.16	-10.3/104.4	Clear	None
11:17 2	2		0.037		7.16	19.25	3.671	6.37	-10.1/117.7	Clear	None
11:42 3	3		0.037		7.19	19.30	3.672	6.35	-10.4/122.3	Clear	None
4	4										
5	5										
6	6										
7.30	7.30										

*** Used Well Stabilization criteria rather than 3 Well Volumes for Sample ***

INSTRUMENTS USED: **VSI 556 MPS Serial # 05F 2274 AL**

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, 1.5" = 0.08, 2" = 0.1, 2.5" = 0.125, 3" = 0.15, 4" = 0.2, 5" = 0.25, 6" = 0.3, 8" = 0.4, 10" = 0.5, 12" = 0.6

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006, 3/16" = 0.0014, 1/4" = 0.0026, 5/16" = 0.004, 3/8" = 0.006, 1/2" = 0.010, 5/8" = 0.016

PURGING EQUIPMENT USED: B = Bailer, **BP** = Bladder Pump, ESP = Electric Submersible Pump, PP = Peristaltic Pump, O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION Clayton M Baranik / CMBS				SAMPLER(S) SIGNATURE(S) <i>[Signature]</i>				SAMPLING INITIATED AT 11:42		SAMPLING ENDED AT 11:43	
PUMP OR TUBING DEPTH IN WELL (feet) 61.05'				TUBING MATERIAL CODE PE		FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		Filteration Equipment Type PE		FILTER SIZE: 0.45 μm	
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/> TUBING Y <input checked="" type="checkbox"/> (Replaced)				DUPLICATE: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>							

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-35	3	CG	40mL	HCL	120 mL	7.19	BTE 8021	BP	0.037

REMARKS:

MATERIAL CODES: AG = Amber Glass, **CG** = Clear Glass, PE = Polyethylene, PP = Polypropylene, S = Silicone, T = Teflon, O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump, B = Bailer, **BP** = Bladder Pump, ESP = Electric Submersible Pump, RFPP = Reverse Flow Peristaltic Pump, SM = Straw Method (Tubing Gravity Drain), O = Other (Specify)

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS

pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/l
 Oxygen Reduction Potential: ≤ 10% mV

Revision Date: October 22, 2013

GROUNDWATER SAMPLING LOG

SITE NAME Twp Roswell Station #9	SITE LOCATION 6381 N. Main St. Roswell, NM 88201
WELL NO MW-37	SAMPLE ID MW-37
DATE 11/14/17	

PURGING DATA

WELL DIAMETER (inches) 2"	TUBING DIAMETER (inches) 1 1/2"	WELL SCREEN INTERVAL DEPTH 50 feet to 70 feet	STATIC DEPTH TO WATER (feet) 59.61	PURGE PUMP TYPE OR BAILER BP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY $= (69.61 \text{ feet} - 59.61 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.6 \text{ gallons}$				
3 WELL VOLUMES = 4.8 gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)				

INITIAL PUMP OR TUBING DEPTH IN WELL (feet)			FINAL PUMP OR TUBING DEPTH IN WELL (feet)			PURGING INITIATED AT		PURGING ENDED AT		TOTAL VOLUME PURGED (gallons)	
64.20			64.20			0900		0923		5.0	
TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYGEN REDUCTION POTENTIAL (mV)	COLOR (describe)	ODOR (describe)
0900 Initial	0	0	0.25	59.61	7.07	18.74	3.523	5.97	-68/2044	Clear	None
0905 1	1	1	0.25	—	7.18	18.82	3.520	3.40	-10.1/1920	Clear	None
0909 2	2	2	0.25	—	7.10	18.81	3.514	3.26	-7.2/1923	"	"
0915 3	3	3	0.25	—	7.07	18.76	3.514	3.26	-5.9/1917	"	"
0919 4	4	4	0.25	—	7.07	18.81	3.511	3.29	-5.5/1913	"	"
0923 5	5	5	0.25	—	7.06	18.82	3.515	3.30	-5.4/1913	"	"
					</						

INSTRUMENTS USED:

YSI 556 mps Series / # 05F 2274 AL

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, 2" = 0.16, 3" = 0.37, 4" = 0.65, 5" = 1.02, 6" = 1.47, 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal/Ft): 1/8" = 0.0006, 3/16" = 0.0014, 1/4" = 0.0026, 5/16" = 0.004, 3/8" = 0.006, 1/2" = 0.010, 5/8" = 0.016

PURGING EQUIPMENT USED: B = Bailer; **BP** Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION Clayton M. Barnhill / CMB				SAMPLE(S) SIGNATURE(S) <i>Clayton M. Barnhill</i>				SAMPLING INITIATED AT 0923		SAMPLING ENDED AT 0924	
PUMP OR TUBING DEPTH IN WELL (feet) 64.20				TUBING MATERIAL CODE PE				FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		FILTER SIZE: 0.25 μm	
FIELD DECONTAMINATION PUMP Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				TUBING Y <input checked="" type="checkbox"/> N <input type="checkbox"/> (replaced)				DUPLICATE Y <input checked="" type="checkbox"/> N <input type="checkbox"/>			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLE PUMP FLOW RATE	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-37	3	CG	404L	HCL	120 mL	7.06	BTEX 8021	BP	0.25		
REMARKS:											
MATERIAL CODES: AG = Amber Glass, CG = Clear Glass, PE = Polyethylene, PP = Polypropylene, S = Silicone, T = Teflon, O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump, B = Bailer, BP = Bladder Pump, ESP = Electric Submersible Pump, RFPP = Reverse Flow Peristaltic Pump, SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: $\leq 10\%$ units Temperature: $\leq 10\%$ °C Specific Conductance: $\leq 10\%$ $\mu\text{S/cm}$ Dissolved Oxygen: all readings $\leq 10\%$ mg/L
 Oxygen Reduction Potential: $\leq 10\%$ mV

Revision Date: October 22, 2013

GROUNDWATER SAMPLING LOG

SITE NAME	TWP Roswell station 9	SITE LOCATION	6361 N. Main Street Roswell, NM
WELL NO	MW-39	SAMPLE ID	MW-39
		DATE	11/16/17 58201

PURGING DATA

WELL DIAMETER (inches)	2"	TUBING DIAMETER (inches)	1/2"	WELL SCREEN INTERVAL DEPTH	50.82'	STATIC DEPTH TO WATER (feet)	50.82'	PUMP TYPE	BP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY = (10.11 feet 50.82' - 19.29 feet) X 0.16 gallons/foot = 3.08 gallons 3 WELL VOLUMES = 9.25 gallons									
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = gallons + (gallons/foot X feet) + gallons = gallons									

INITIAL PUMP OR TUBING DEPTH IN WELL (feet)			64.0			FINAL PUMP OR TUBING DEPTH IN WELL (feet)			64.0			PURGING INITIATED AT 10:35		PURGING ENDED AT 11:05		TOTAL VOLUME PURGED (gallons) 9.25	
TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYGEN REDUCTION POTENTIAL (mV)	COLOR (describe)	ODOR (describe)						
10:35 Initial	0	0	0.285	50.82	7.04	18.79	3.499	5.20	-4.4/25.5	Clear	None						
10:42	2	2	0.285	—	7.01	18.76	3.500	5.48	-3.0/139.9	Clear	None						
10:46	4	4	0.50	—	7.01	18.76	3.502	5.64	-3.5/131.2	"	"						
10:53	6	6	0.285	—	7.00	18.75	3.501	5.45	-2.6/136.7	"	"						
11:00	8	8	0.285	—	7.01	18.75	3.500	5.30	-3.3/136.1	"	"						
11:05	9.25	9.25	0.265	—	7.01	18.76	3.500	5.22	-3.4/136.0	"	"						

INSTRUMENTS USED:		YSI 556 MPS Serial # 05F 2274AL	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, 2" = 0.16, 3" = 0.37, 4" = 0.65, 5" = 1.02, 6" = 1.47, 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./ft.): 1/8" = 0.0006, 3/16" = 0.0014, 1/4" = 0.0026, 5/16" = 0.004, 3/8" = 0.006, 1/2" = 0.010, 5/8" = 0.016			
PURGING EQUIPMENT USED: B = Bailor; <u>BP</u> = Bladder Pump, ESP = Electric Submersible Pump, PP = Peristaltic Pump, O = Other (Specify)			

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION				SAMPLER'S SIGNATURE(S)				SAMPLING INITIATED AT		SAMPLING ENDED AT	
Dayton M Barnhill / CMB				<i>[Signature]</i>				11:05		11:07	
PUMP OR TUBING DEPTH IN WELL (feet):				TUBING MATERIAL CODE		FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		FILTER SIZE: _____ μm			
64.0'				PE		Filtration Equipment Type					
FIELD DECONTAMINATION PUMP Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				TUBING Y <input checked="" type="checkbox"/> N <input type="checkbox"/> (replaced)				DUPLICATE Y <input checked="" type="checkbox"/> N <input type="checkbox"/>			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL FOL ADDED IN FIELD (mL)	FINAL pH					
MW-39	3	CG	40mL	HCL	120mL	7.01	8260 Voc's		BP		0.285
REMARKS:											
MATERIAL CODES: AG = Amber Glass, <u>CG</u> = Clear Glass, PE = Polyethylene, PP = Polypropylene, S = Silicone, T = Teflon, O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump, B = Bailor, <u>BP</u> = Bladder Pump, ESP = Electric Submersible Pump, RFPP = Reverse Flow Peristaltic Pump, SM = Straw Method (Tubing Gravity Drain), O = Other (Specify)											

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:
 STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:
 pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/L
 Oxygen Reduction Potential: ≤ 10% mV

GROUNDWATER SAMPLING LOG

SITE NAME TWP Roswell Station 9	SITE LOCATION 6381 N. Main St. Roswell, NM 8844
WELL NO MW-40	SAMPLE ID MW-40
DATE 11/16/17	

PURGING DATA

WELL DIAMETER (inches) 2"	TUBING DIAMETER (inches) 1/2"	WELL SCREEN INTERVAL DEPTH feet to feet	STATIC DEPTH TO WATER (feet) 54.11	PURGE PUMP TYPE OR BAILER BP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY				
= (70.13 feet - 54.11 = 16.02 feet) X 0.16 gallons/foot = 2.56 gallons				
3 WELL VOLUMES = 7.68 gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)				
= gallons + (gallons/foot X feet) + gallons = gallons				
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 62.31'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 62.31'	PURGING INITIATED AT 0829	PURGING ENDED AT 0845	TOTAL VOLUME PURGED (gallons) 7.75

TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYGEN REDUCTION POTENTIAL (mV) OR pH/ORP	COLOR (describe)	ODOR (describe)
0829	Initial	0	0.50	54.11	6.60	18.17	3.458	4.53	13.5/mV	Clear	None
0831	1	1	0.50	—	6.61	18.61	3.460	4.20	13.0/101.3	"	"
0833	2	2	0.50	—	6.76	18.67	3.460	4.34	6.8/100.7	"	"
0837	4	4	0.50	—	6.92	18.68	3.460	4.09	3.0/102.4	"	"
0839	5	5	0.50	—	6.91	18.65	3.464	4.17	0.4/105.1	"	"
0841	6	6	0.50	—	6.92	18.65	3.465	4.22	0.0/105.6	"	"
0845	7.75	7.75	0.50	—	6.93	18.65	3.465	4.23	0.0/105.7	"	"

INSTRUMENTS USED: **YSI 556 mps Serial # 05F2274AL**

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, 2" = 0.16, 3" = 0.37, 4" = 0.65, 5" = 1.02, 6" = 1.47, 12" = 5.68

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006, 3/16" = 0.0014, 1/4" = 0.0026, 5/16" = 0.004, 3/8" = 0.006, 1/2" = 0.010, 5/8" = 0.016

PURGING EQUIPMENT USED: B = Bailer; **BP** = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION Clayton M Barahin / CMB				SAMPLER(S) SIGNATURE(S) <i>[Signature]</i>				SAMPLING INITIATED AT 0845		SAMPLING ENDED AT 0848	
PUMP OR TUBING DEPTH IN WELL (feet): 62.31				TUBING MATERIAL CODE PE				FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		FILTER SIZE: 0.45 μm	
FIELD DECONTAMINATION PUMP Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				TUBING Y <input checked="" type="checkbox"/> N (Replaced) <input type="checkbox"/>				DUPLICATE: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-40	3	CG	40mL	HCL	120 mL	6.93	8260 Voc's		BP		
MW-40 Duplicate	3	CG	40mL	HCL	120 mL	6.93	8260 Voc's		BP		
REMARKS:											
MATERIAL CODES: AG = Amber Glass, CG = Clear Glass, PE = Polyethylene, PP = Polypropylene, S = Silicone, T = Teflon, O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump, B = Bailer, BP = Bladder Pump, ESP = Electric Submersible Pump, RFP = Reverse Flow Peristaltic Pump, SM = Straw Method (Tubing Gravity Drain), O = Other (Specify)											

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/L
Oxygen Reduction Potential: ≤ 10% mV

Revision Date October 22, 2013

GROUNDWATER SAMPLING LOG

SITE NAME Twp Roswell Station 9	SITE LOCATION 6381 N. Main St. Roswell NM 88201
WELL NO MW-41	SAMPLE ID MW-41
DATE 11/16/17	

PURGING DATA

WELL DIAMETER (inches) 2"	TUBING DIAMETER (inches) 1/2"	WELL SCREEN INTERVAL DEPTH (feet to feet)	STATIC DEPTH TO WATER (feet) 57.12	PURGE PUMP TYPE OR BAILER BP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY				
= (70.06 feet 57.12 = 12.94 feet) X 0.16 gallons/foot = 2.070 gallons				
3 WELL VOLUMES = 6.21 gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)				
= gallons + (gallons/foot X feet) + gallons = gallons				
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 58.49	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 58.49	PURGING INITIATED AT 0905	PURGING ENDED AT 0936	TOTAL VOLUME PURGED (gallons): 6.25

TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYGEN REDUCTION POTENTIAL (mV) OR pH (mV)	COLOR (describe)	ODOR (describe)
0905 Initial	0	0	0.20	57.12	7.17	18.93	3.397	7.04	-9.6/110.6	Clear	None
0910	1	1	0.20	—	7.08	18.82	3.396	7.08	-6.1/112.7	"	"
0915	2	2	0.20	—	7.04	18.85	3.395	7.05	-4.9/113.4	"	"
0922	4	4	0.28	—	7.03	18.86	3.396	6.69	-4.2/115.7	"	"
0934	6	6	0.28	—	7.03	18.92	3.396	6.71	-4.1/119.5	"	"
0936	6.25	6.25	0.28	—	7.03	18.92	3.396	6.74	-4.1/119.6	"	"

INSTRUMENTS USED:

VSI 556 mps Serial # 05F 2274 AL

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, 2" = 0.16, 3" = 0.37, 4" = 0.65, 5" = 1.02, 6" = 1.47, 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006, 3/16" = 0.0014, 1/4" = 0.0026, 5/16" = 0.004, 3/8" = 0.006, 1/2" = 0.010, 5/8" = 0.016

PURGING EQUIPMENT USED: B = Bailer, **BP** = Bladder Pump, ESP = Electric Submersible Pump, PP = Peristaltic Pump, O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION Clayton M Barnhill / CMB				SAMPLER(S) SIGNATURE(S)			SAMPLING INITIATED AT 0936		SAMPLING ENDED AT 0938	
PUMP OR TUBING DEPTH IN WELL (feet): 58.49'				TUBING MATERIAL CODE PE		FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		FILTER SIZE: 0.45 μm		
FIELD DECONTAMINATION PUMP Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				TUBING Y <input checked="" type="checkbox"/> N <input type="checkbox"/> (replaced)		DUPLICATE: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-41	3	CG	40mL	HCL	120mL	7.03	Vx'SB260	BP	0.28

REMARKS:

MATERIAL CODES: AG = Amber Glass, **CG** = Clear Glass, PE = Polyethylene, PP = Polypropylene, S = Silicone, T = Teflon, O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump, B = Bailer, **BP** = Bladder Pump, ESP = Electric Submersible Pump, RFPP = Reverse Flow Peristaltic Pump, SM = Straw Method (Tubing Gravity Drain), O = Other (Specify)

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/L

Oxygen Reduction Potential: ≤ 10% mV

Revision Date October 22, 2013

GROUNDWATER SAMPLING LOG

SITE NAME TWP Roswell Station 9	SITE LOCATION 6381 N. Main St. Roswell, NM 88201
WELL NO MW-42	DATE 11/16/17

PURGING DATA

WELL DIAMETER (inches) 2"	TUBING DIAMETER (inches) 1/2"	WELL SCREEN INTERVAL DEPTH feet to feet	STATIC DEPTH TO WATER (feet) 55.46'	PURGE PUMP TYPE OR BAILER BP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY				
= (15.45 feet - 55.46 = 20.49') X 0.16 gallons/foot = 3.28 gallons				
3 WELL VOLUMES = 9.8 gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)				
= gallons + (gallons/foot X feet) + gallons = gallons				

INITIAL PUMP OR TUBING DEPTH IN WELL (feet)		FINAL PUMP OR TUBING DEPTH IN WELL (feet)		PURGING INITIATED AT		PURGING ENDED AT		TOTAL VOLUME PURGED (gallons)			
64.03'		64.03'		0952		10:18		10			
TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	OXYGEN REDUCTION POTENTIAL (mV) pH	COLOR (describe)	ODOR (describe)
0952 Initial	0	0	0.40	53.46	7.05	18.54	3.543	4.97	-4.8	Clear	None
0957	2	2	0.40	—	7.00	18.53	3.516	4.33	-3.0/12.0	"	"
10:01	4	4	0.50	—	6.98	18.52	3.511	4.26	-2.5/12.5	"	"
10:08	6	6	0.285	—	7.00	18.51	3.504	4.13	-2.7/11.9	"	"
10:13	8	8	0.40	—	6.98	18.48	3.512	4.05	-2.5/12.3	"	"
10:18	10	10	0.40	—	6.99	18.49	3.514	4.22	-2.6/12.6	"	"

INSTRUMENTS USED: **YSI 556 MPS Serial # 05F 2274AL**

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, **1.5" = 0.16**, 3" = 0.37, 4" = 0.65, 5" = 1.02, 6" = 1.47, 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006, 3/16" = 0.0014, 1/4" = 0.0026, 5/16" = 0.004, 3/8" = 0.006, **1/2" = 0.010**, 5/8" = 0.016

PURGING EQUIPMENT USED: B = Bailer; **BP** = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION Clayton M. Barnhill / CMB				SAMPLER(S) SIGNATURE(S) <i>Clayton M. Barnhill</i>				SAMPLING INITIATED AT 10:18		SAMPLING ENDED AT 10:20	
PUMP OR TUBING DEPTH IN WELL (feet): 64.03'				TUBING MATERIAL CODE PE				FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		FILTER SIZE: _____ μm	
FIELD DECONTAMINATION PUMP Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				TUBING Y <input checked="" type="checkbox"/> N <input type="checkbox"/> (Displaced)				DUPLICATE: Y <input type="checkbox"/> N <input checked="" type="checkbox"/>			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-42	3	CG	40mL	HCL	120 mL	6.99	Voc's 8260		BP		
REMARKS:											
MATERIAL CODES: AG = Amber Glass, CG = Clear Glass, PE = Polyethylene, PP = Polypropylene, S = Silicone, T = Teflon, O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump, B = Bailer, BP = Bladder Pump, ESP = Electric Submersible Pump, RFP = Reverse Flow Peristaltic Pump, SM = Straw Method (Tubing Gravity Drain), O = Other (Specify)											

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization.

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: ≤ 10% units Temperature: ≤ 10% °C Specific Conductance: ≤ 10% μS/cm Dissolved Oxygen: all readings ≤ 10% mg/L
Oxygen Reduction Potential: ≤ 10% mV

Revision Date October 22, 2013

GROUNDWATER SAMPLING LOG

SITE NAME	TWP Roswell Station 9		SITE LOCATION	6381 N Main St. Roswell NM 86201	
WELL NO.	MPE-27	SAMPLE ID	MPE-27	DATE	11/16/17

PURGING DATA

[illegible]

INSTRUMENTS USED:

WELL CAPACITY (Gallons Per Foot)	0.75" = 0.02,	1" = 0.04,	1.25" = 0.06,	2" = 0.16,	3" = 0.37,	4" = 0.65,	5" = 1.02,	6" = 1.47,	12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.)	1/8" = 0.0006,	3/16" = 0.0014,	1/4" = 0.0026,	5/16" = 0.004,	3/8" = 0.006,	1/2" = 0.010,	5/8" = 0.016		

PURGING EQUIPMENT USED: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA¹

SAMPLED BY (PRINT) / AFFILIATION		SAMPLER(S) SIGNATURE(S)		SAMPLING INITIATED AT		SAMPLING ENDED AT	
PUMP OR TUBING DEPTH IN WELL (feet)		TUBING MATERIAL CODE		FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		FILTER SIZE: _____ µm	
FIELD DECONTAMINATION		PUMP Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		TUBING Y <input checked="" type="checkbox"/> N <input type="checkbox"/> (replaced)		DUPLICATE: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	SAMPLE PUMP FLOW RATE (mL per minute)
MPE-27	3	CG	120mL	HCL	120 mL	N/A	BTEX 8021
							MPE
REMARKS:							
MATERIAL CODES: AG = Amber Glass, CG = Clear Glass, PE = Polyethylene, PP = Polypropylene, S = Silicone, T = Teflon, O = Other (Specify)							
SAMPLING EQUIPMENT CODES: APP = After Penstaltic Pump, B = Bailer, BP = Bladder Pump, ESP = Electric Submersible Pump, RFPP = Reverse Flow Penstaltic Pump, SM = Straw Method (Tubing Gravity Drain), G = Other (Specify)							

NOTES: 1. Sample collection will occur after 3 well volumes are purged or after well stabilization:
STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS:

pH: $\leq 10\%$ units Temperature: $\leq 10\%$ °C Specific Conductance: $\leq 10\%$ $\mu\text{S}/\text{cm}$ Dissolved Oxygen: all readings $\leq 10\%$ mg/L
Oxygen Reduction Potential: $< 10\%$ mV

Revision Date: October 22, 2013

Location TWP Roswell Station 9 Date 11/13/17
 Project / Client GW Monitoring 2017 / EarthCan
 By: CMB Environmental &
 Geological Services, Inc. Page 1 of 6

MW's MPE Well, S SUE wells
 Gauged with Solinst I.P. Serial # 222719

Well	DPTH	T.D.	3CV	Remarks
------	------	------	-----	---------

MW-37	Ø	59.61	69.61	4.8' 2" Bladder
MW-34	Ø	64.51	75.75	5.39' 2" Bladder
MW-33	Ø	65.88	—	— 2" Bladder
MW-32	Ø	67.77	74.20	3.08' 2" Bladder
MW-29	Ø	70.45	74.50	2" Bladder

Pulled pump - To Gauge Well MW-29

MW-28	Ø	70.45	—	2" BP in well
MW-30	Ø	67.59	—	2" BP in well
MW-35	Ø	61.51	76.71	7.30' 2" BP in well
MW-27	Ø	69.55	75.31	2" MW
MPE-7	Ø	68.87	—	4" MPE well
MPE-8	Ø	67.78	—	4" MPE well
MPE-9	Ø	68.95	—	4" MPE well
MPE-10	Ø	67.04	68.05	4" MPE well

* 1.01' Thickness NAPL / PSH *

MPE-11	Ø	65.51	—	4" MPE well
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MPE-12	Ø	65.83	66.85	— 4" MPE well
--------	---	-------	-------	---------------

* NAPL / PSH in well 1.02' Thickness *

Location TWP Roswell Station 9 Date 11/13/17
 Project / Client GW Monitoring 2017 / EarthCan
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 Geological Services, Inc. Page 2 of 6

Well	DPTH	T.D.	3CV	Remarks
------	------	------	-----	---------

MW-21	Ø	66.65	75	4.0' 2" MW
MW-16	Ø	68.44	68.55	71.46 1.45' 2" MW

* PSH / NAPL in well. 0.11' Thickness *

MPE-19	Ø	67.37	—	4" MPE well
--------	---	-------	---	-------------

MPE-16	Ø	67.80	67.90	4" MPE well
--------	---	-------	-------	-------------

* PSH / NAPL in well 0.10' Thickness *

MPE-13	Ø	66.42	—	4" MPE well
--------	---	-------	---	-------------

Pulled pump to Gauge MPE-13 in well

MPE-14	Ø	66.45	—	4" MPE well
--------	---	-------	---	-------------

MPE-17	Ø	68.20	68.35	— 4" MPE well
--------	---	-------	-------	---------------

* PSH / NAPL in well 0.15' Thickness *

MPE-38	Ø	68.90	71.45	4" MPE well
--------	---	-------	-------	-------------

* PSH / NAPL in well 2.55' Thickness *

MPE-15	Ø	64.83	—	4" MPE well
--------	---	-------	---	-------------

MW-17	Ø	63.92	—	2" MW well
-------	---	-------	---	------------

* Pulled BP to Gauge Well *

MW-15	Ø	61.20	—	2" MW well
-------	---	-------	---	------------

MW-7	Ø	64.46	—	3" MW well
------	---	-------	---	------------

MW-14	Ø	56.67	64.5	3.75' 2" BP in well
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MPE-39	Ø	62.50	—	4" MPE well
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Location Twp Roswell Station 9 Date 11/13/17

Project / Client GW Monitoring 2017 / EarthCam

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Services, Inc. Page 3 of 6

Well	Dpsk	Dtn	T.D.	3CV gallons	Remarks
MPE-21	Ø	60.90'	—	—	4" MPE well w/ pump
MPE-18	Ø	64.32'	—	—	4" MPE well
MPE-20	Ø	66.13	67.27'	—	4" MPE w/ pump
* PSH / Napl in well				1.14'	Thickness * 4" MPE well w/ pump
MPE-24	Ø	61.21	61.23'	—	4" MPE w/ pump
* PSH / Napl in well				0.02'	Thickness * 2" SVE well
SVE-24	Ø	Ø	28.80'	—	2" SVE well
MPE-32	Ø	62.93'	—	—	4" MPE w/ pump
MPE-33	Ø	57.40'	—	—	4" MPE well
MW-26	Ø	52.42'	65.0	6.03	2" BP in well
MW-20	Ø	56.10'	64.0	3.79	2" BP in well
MPE-37	Ø	55.83'	—	—	4" MPE well
MPE-36	Ø	58.35	—	—	4" MPE well
MW-22	Ø	59.63'	65.15'	2.62	2" MW
MPE-35	Ø	59.19	62.05'	—	4" MPE well
* PSH / Napl in well				2.86'	Thickness * 2" MW
MW-12	Ø	57.21	—	—	2" MW
MPE-41	Ø	61.20'	—	—	4" MPE with pump

Location Twp Roswell Station 9 Date 11/13/17

Project / Client GW Monitoring 2017 / EarthCam

By: OMB Environmental & Geological

Services, Inc. Page 4 of 6

Well	Dpsk	Dtn	T.D.	3CV gallons	Remarks
SVE-30	Ø	42.0	44.20	—	2" SVE well
MPE-30	Ø	67.95'	—	—	4" MPE well
MPE-34	Ø	65.70'	—	—	4" MPE well
MW-11	Ø	66.83'	—	—	2" MW
MW-2	Ø	60.83'	—	—	2" MW
MPE-31	Ø	66.45	—	—	4" MPE well
SVE-31	Ø	30.48	33.30'	—	2" SVE w/ pump
MPE-28	Ø	58.33	—	—	2" SVE well
SVE-28	Ø	28.76'	34.77'	—	2" SVE well
RW-1	Ø	32.96'	—	—	4" MW
MPE-27	Ø	67.95'	68.27'	—	4" MPE well w/ pump
* PSH / Napl in well				0.32'	Thickness * 2" SVE well
SVE-27	Ø	33.48	34.30'	—	2" SVE well
SVE-26	Ø	Ø	32.75'	—	2" SVE well
MPE-26	Ø	66.67	—	—	4" MPE well
* PSH / Napl in well				0.03'	Thickness * 2" SVE well
SVE-25	Ø	31.88'	32.90'	—	2" SVE well
MPE-25	Ø	69.10'	—	—	4" MPE well
MPE-29	Ø	69.77'	—	—	4" MPE well
MW-10	Ø	70.62'	—	—	2" MW
MW-3	Ø	68.20'	—	—	2" MW

Location Twp Roswell Station 9 Date 11/13/17
 Project / Client SW Monitoring 2017 / EarthCam
 By: CMB Environmental & Geological Services, Inc. Page 5 of 6

Well #	DPTH	DTH	T.D.	BCV	Gallons	Remarks
MW-13	Ø	66.42	72.0	2.67	2" APN	well
* Removed BP To Take Water Level						
MW-40	Ø	54.11	70.13	7.68	2" BP	well
MW-41	Ø	57.12	70.06	6.21	2" BP	well
MW-42	Ø	55.46	75.95	9.8	2" BP	well
MW-39	Ø	50.82	70.11	9.25	2" BP	well
MPE-23	Ø	72.45	-	-	4" MPE	well
S.						
SVE-23	32.64'	33.28	PSH/NAPE	0.64' thickness	2" SVE	well
SVE-22	33.14'	33.19	PSH/NAPE	0.05' thickness	2" SVE	well
MPE-22	Ø	68.78	-	-	4" MPE	well
MW-18	62.65'	64.41	PSH/NAPE	1.76' thickness	2" MW	well
MPE-40	63.72	70.58	-	-	4" MPE	well
* PSH/NAPE in well 6.86' thickness						
MW-24D	Ø	62.67	180'	228.79	PSH/NAPE	well

Location Twp Roswell Station 9 Date 11/14/17

Project / Client SW Monitoring 2017 / EarthCam
 By: CMB Environmental & Geological Services, Inc. Page 6 of 6
 Calibrated VSI 556 mPS
 Serial # 05F 2274 AC

Conductivity: 0.0745 hr. Colitech
500 mC 1413 µm/cm 25°C Expires: 12/6/18
 Initial: 1.336 mS/cm 15.7°C
 Final: 1.413 mS/cm 15.7°C
 PH 7.0: 0.0749 hr. Colitech
 PH 7.0 25°C 500 mC Expires: 05/22/18
 Initial: 6.89 15.55°C
 Final: 7.0 15.55°C
 PH 4.0: 0.0750 hr. Colitech 500 mC
 PH 4.0 25°C Expires: 04/07/2018
 Initial: 3.84 15.53°C
 Final: 4.0 15.56°C
 ORP: 0.0757 hr. Horica 500 mC
 ORP 100 mV 25°C Expires: 06/23/18
 Initial: 98.40 15.56°C
 Final: 100.0 mV 15.56°C
 D.O.: 0.0800 hr. Ambient Air
 Initial: 7.59 mg/L D.O.
 Final: 8.30 mg/L D.O.

John M. [Signature]

Appendix C
Data Validation Report – RPDs and
Analytical Data Packages – Semi-annual Groundwater Sampling

APPENDIX C - Data Validation Report - RPDs
Transwestern Compressor Station No. 9 - Roswell, NM

Well	Sampling Date	Benzene	Toluene	Ethylbenzene	Xylenes (total)	1,1-Dichloroethane	1,1-Dichloroethene
MW-20 (MW-20 DUP)	05/24/17	< 1.0	< 1.0	< 1.0	< 1.5	9.5	4.6
	05/24/17	< 1.0	< 1.0	< 1.0	< 1.5	9.8	5.1
	RPD:	--	--	--	--	3	10
MW-26 (MW-26 DUP)	05/24/17	< 1.0	< 1.0	< 1.0	< 1.5	9.1	58
	05/24/17	< 1.0	< 1.0	< 1.0	< 1.5	9.1	58
	RPD:	--	--	--	--	0	0
MW-21 (MW-21 DUP)	11/14/17	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	11/14/17	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	RPD:	--	--	--	--	--	--
MW-34 (MW-34 DUP)	11/14/17	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	11/14/17	< 1.0	< 1.0	< 1.0	< 2.0	NA	NA
	RPD:	--	--	--	--	--	--

NOTES:

Relative Percent Difference (RPD) = $\text{abs}([(S-D) / ((S+D)/2)] * 100)$

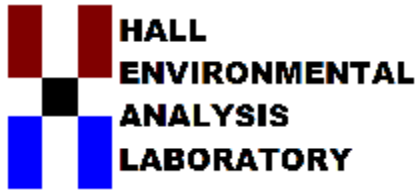
S = Concentration of analyte in Real Sample

D = Concentration of analyte in Duplicate Sample

ug/L - all concentrations reported in micrograms per liter.

Prepared by: RLA 1/26/18

Checked by: SSD 2/9/18



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 02, 2017

JD Haines

Earth Con

1880 West Oak Parkway Building 100 Suite 106

Morieta, GA 30062

TEL: (317) 450-6126

FAX

RE: Earth Con Consultants Inc TWP Roswell Station 9

OrderNo.: 1705E13

Dear JD Haines:

Hall Environmental Analysis Laboratory received 17 sample(s) on 5/26/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705E13

Date Reported: 6/2/2017

CLIENT: Earth Con

Client Sample ID: MW-37

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 5/23/2017 9:42:00 AM

Lab ID: 1705E13-001

Matrix: AQUEOUS

Received Date: 5/26/2017 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	1.0		µg/L	1	5/31/2017 5:21:00 PM
Toluene	ND	1.0		µg/L	1	5/31/2017 5:21:00 PM
Ethylbenzene	ND	1.0		µg/L	1	5/31/2017 5:21:00 PM
Xylenes, Total	ND	1.5		µg/L	1	5/31/2017 5:21:00 PM
Surr: 1,2-Dichloroethane-d4	99.1	70-130		%Rec	1	5/31/2017 5:21:00 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	5/31/2017 5:21:00 PM
Surr: Dibromofluoromethane	103	70-130		%Rec	1	5/31/2017 5:21:00 PM
Surr: Toluene-d8	102	70-130		%Rec	1	5/31/2017 5:21:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705E13

Date Reported: 6/2/2017

CLIENT: Earth Con

Client Sample ID: MW-34

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 5/23/2017 10:31:00 AM

Lab ID: 1705E13-002

Matrix: AQUEOUS

Received Date: 5/26/2017 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	1.0		µg/L	1	5/31/2017 5:45:00 PM
Toluene	ND	1.0		µg/L	1	5/31/2017 5:45:00 PM
Ethylbenzene	ND	1.0		µg/L	1	5/31/2017 5:45:00 PM
Xylenes, Total	ND	1.5		µg/L	1	5/31/2017 5:45:00 PM
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	5/31/2017 5:45:00 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	5/31/2017 5:45:00 PM
Surr: Dibromofluoromethane	105	70-130		%Rec	1	5/31/2017 5:45:00 PM
Surr: Toluene-d8	102	70-130		%Rec	1	5/31/2017 5:45:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705E13

Date Reported: 6/2/2017

CLIENT: Earth Con

Client Sample ID: MW-35

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 5/23/2017 11:15:00 AM

Lab ID: 1705E13-003

Matrix: AQUEOUS

Received Date: 5/26/2017 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	1.0		µg/L	1	5/31/2017 6:09:00 PM
Toluene	ND	1.0		µg/L	1	5/31/2017 6:09:00 PM
Ethylbenzene	ND	1.0		µg/L	1	5/31/2017 6:09:00 PM
Xylenes, Total	ND	1.5		µg/L	1	5/31/2017 6:09:00 PM
Surr: 1,2-Dichloroethane-d4	98.2	70-130		%Rec	1	5/31/2017 6:09:00 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	5/31/2017 6:09:00 PM
Surr: Dibromofluoromethane	104	70-130		%Rec	1	5/31/2017 6:09:00 PM
Surr: Toluene-d8	102	70-130		%Rec	1	5/31/2017 6:09:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705E13

Date Reported: 6/2/2017

CLIENT: Earth Con

Client Sample ID: MW-32

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 5/23/2017 12:58:00 PM

Lab ID: 1705E13-004

Matrix: AQUEOUS

Received Date: 5/26/2017 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	1.0		µg/L	1	5/31/2017 6:33:00 PM
Toluene	ND	1.0		µg/L	1	5/31/2017 6:33:00 PM
Ethylbenzene	ND	1.0		µg/L	1	5/31/2017 6:33:00 PM
Xylenes, Total	ND	1.5		µg/L	1	5/31/2017 6:33:00 PM
Surr: 1,2-Dichloroethane-d4	98.2	70-130		%Rec	1	5/31/2017 6:33:00 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	5/31/2017 6:33:00 PM
Surr: Dibromofluoromethane	106	70-130		%Rec	1	5/31/2017 6:33:00 PM
Surr: Toluene-d8	102	70-130		%Rec	1	5/31/2017 6:33:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705E13

Date Reported: 6/2/2017

CLIENT: Earth Con

Client Sample ID: MW-29

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 5/23/2017 1:46:00 PM

Lab ID: 1705E13-005

Matrix: AQUEOUS

Received Date: 5/26/2017 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	1.1	1.0		µg/L	1	5/31/2017 6:56:00 PM
Toluene	ND	1.0		µg/L	1	5/31/2017 6:56:00 PM
Ethylbenzene	ND	1.0		µg/L	1	5/31/2017 6:56:00 PM
Xylenes, Total	ND	1.5		µg/L	1	5/31/2017 6:56:00 PM
Surr: 1,2-Dichloroethane-d4	97.5	70-130		%Rec	1	5/31/2017 6:56:00 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	5/31/2017 6:56:00 PM
Surr: Dibromofluoromethane	103	70-130		%Rec	1	5/31/2017 6:56:00 PM
Surr: Toluene-d8	103	70-130		%Rec	1	5/31/2017 6:56:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705E13

Date Reported: 6/2/2017

CLIENT: Earth Con

Client Sample ID: MW-27

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 5/23/2017 1:53:00 PM

Lab ID: 1705E13-006

Matrix: AQUEOUS

Received Date: 5/26/2017 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	5.0	D	µg/L	10	5/31/2017 7:20:00 PM
Toluene	ND	5.0	D	µg/L	10	5/31/2017 7:20:00 PM
Ethylbenzene	ND	5.0	D	µg/L	10	5/31/2017 7:20:00 PM
Xylenes, Total	ND	7.5	D	µg/L	10	5/31/2017 7:20:00 PM
Surr: 1,2-Dichloroethane-d4	96.8	70-130	D	%Rec	10	5/31/2017 7:20:00 PM
Surr: 4-Bromofluorobenzene	106	70-130	D	%Rec	10	5/31/2017 7:20:00 PM
Surr: Dibromofluoromethane	101	70-130	D	%Rec	10	5/31/2017 7:20:00 PM
Surr: Toluene-d8	104	70-130	D	%Rec	10	5/31/2017 7:20:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705E13

Date Reported: 6/2/2017

CLIENT: Earth Con

Client Sample ID: MW-16

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 5/23/2017 2:15:00 PM

Lab ID: 1705E13-007

Matrix: AQUEOUS

Received Date: 5/26/2017 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	110	10		µg/L	20	5/31/2017 7:44:00 PM
Toluene	ND	10		µg/L	20	5/31/2017 7:44:00 PM
Ethylbenzene	66	10		µg/L	20	5/31/2017 7:44:00 PM
Xylenes, Total	1500	15		µg/L	20	5/31/2017 7:44:00 PM
Surr: 1,2-Dichloroethane-d4	95.7	70-130		%Rec	20	5/31/2017 7:44:00 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	20	5/31/2017 7:44:00 PM
Surr: Dibromofluoromethane	99.5	70-130		%Rec	20	5/31/2017 7:44:00 PM
Surr: Toluene-d8	104	70-130		%Rec	20	5/31/2017 7:44:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705E13

Date Reported: 6/2/2017

CLIENT: Earth Con

Client Sample ID: MW-22

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 5/24/2017 10:35:00 AM

Lab ID: 1705E13-008

Matrix: AQUEOUS

Received Date: 5/26/2017 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
Toluene	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
Ethylbenzene	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
Naphthalene	ND	2.0		µg/L	1	5/31/2017 8:07:00 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	5/31/2017 8:07:00 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	5/31/2017 8:07:00 PM
Acetone	ND	10		µg/L	1	5/31/2017 8:07:00 PM
Bromobenzene	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
Bromodichloromethane	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
Bromoform	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
Bromomethane	ND	3.0		µg/L	1	5/31/2017 8:07:00 PM
2-Butanone	ND	10		µg/L	1	5/31/2017 8:07:00 PM
Carbon disulfide	ND	10		µg/L	1	5/31/2017 8:07:00 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
Chlorobenzene	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
Chloroethane	ND	2.0		µg/L	1	5/31/2017 8:07:00 PM
Chloroform	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
Chloromethane	ND	3.0		µg/L	1	5/31/2017 8:07:00 PM
2-Chlorotoluene	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
4-Chlorotoluene	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
cis-1,2-DCE	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/31/2017 8:07:00 PM
Dibromochloromethane	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
Dibromomethane	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
1,1-Dichloroethene	3.0	1.0		µg/L	1	5/31/2017 8:07:00 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	5/31/2017 8:07:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705E13

Date Reported: 6/2/2017

CLIENT: Earth Con

Client Sample ID: MW-22

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 5/24/2017 10:35:00 AM

Lab ID: 1705E13-008

Matrix: AQUEOUS

Received Date: 5/26/2017 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
2-Hexanone	ND	10		µg/L	1	5/31/2017 8:07:00 PM
Isopropylbenzene	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	5/31/2017 8:07:00 PM
Methylene Chloride	ND	3.0		µg/L	1	5/31/2017 8:07:00 PM
n-Butylbenzene	ND	3.0		µg/L	1	5/31/2017 8:07:00 PM
n-Propylbenzene	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
sec-Butylbenzene	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
Styrene	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
tert-Butylbenzene	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/31/2017 8:07:00 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
trans-1,2-DCE	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/31/2017 8:07:00 PM
Vinyl chloride	ND	1.0		µg/L	1	5/31/2017 8:07:00 PM
Xylenes, Total	ND	1.5		µg/L	1	5/31/2017 8:07:00 PM
Surr: 1,2-Dichloroethane-d4	99.6	70-130		%Rec	1	5/31/2017 8:07:00 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	5/31/2017 8:07:00 PM
Surr: Dibromofluoromethane	103	70-130		%Rec	1	5/31/2017 8:07:00 PM
Surr: Toluene-d8	103	70-130		%Rec	1	5/31/2017 8:07:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705E13

Date Reported: 6/2/2017

CLIENT: Earth Con

Client Sample ID: MW-22 Equipment Rinsate Blan

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 5/24/2017 10:00:00 AM

Lab ID: 1705E13-009

Matrix: AQUEOUS

Received Date: 5/26/2017 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
Toluene	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
Ethylbenzene	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
Naphthalene	ND	2.0		µg/L	1	5/31/2017 10:05:00 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	5/31/2017 10:05:00 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	5/31/2017 10:05:00 PM
Acetone	19	10		µg/L	1	5/31/2017 10:05:00 PM
Bromobenzene	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
Bromodichloromethane	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
Bromoform	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
Bromomethane	ND	3.0		µg/L	1	5/31/2017 10:05:00 PM
2-Butanone	ND	10		µg/L	1	5/31/2017 10:05:00 PM
Carbon disulfide	ND	10		µg/L	1	5/31/2017 10:05:00 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
Chlorobenzene	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
Chloroethane	ND	2.0		µg/L	1	5/31/2017 10:05:00 PM
Chloroform	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
Chloromethane	ND	3.0		µg/L	1	5/31/2017 10:05:00 PM
2-Chlorotoluene	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
4-Chlorotoluene	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
cis-1,2-DCE	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/31/2017 10:05:00 PM
Dibromochloromethane	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
Dibromomethane	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	5/31/2017 10:05:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705E13

Date Reported: 6/2/2017

CLIENT: Earth Con

Client Sample ID: MW-22 Equipment Rinsate Blan

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 5/24/2017 10:00:00 AM

Lab ID: 1705E13-009

Matrix: AQUEOUS

Received Date: 5/26/2017 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
2-Hexanone	ND	10		µg/L	1	5/31/2017 10:05:00 PM
Isopropylbenzene	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	5/31/2017 10:05:00 PM
Methylene Chloride	ND	3.0		µg/L	1	5/31/2017 10:05:00 PM
n-Butylbenzene	ND	3.0		µg/L	1	5/31/2017 10:05:00 PM
n-Propylbenzene	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
sec-Butylbenzene	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
Styrene	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
tert-Butylbenzene	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/31/2017 10:05:00 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
trans-1,2-DCE	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/31/2017 10:05:00 PM
Vinyl chloride	ND	1.0		µg/L	1	5/31/2017 10:05:00 PM
Xylenes, Total	ND	1.5		µg/L	1	5/31/2017 10:05:00 PM
Surr: 1,2-Dichloroethane-d4	98.7	70-130		%Rec	1	5/31/2017 10:05:00 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	5/31/2017 10:05:00 PM
Surr: Dibromofluoromethane	102	70-130		%Rec	1	5/31/2017 10:05:00 PM
Surr: Toluene-d8	103	70-130		%Rec	1	5/31/2017 10:05:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705E13

Date Reported: 6/2/2017

CLIENT: Earth Con

Client Sample ID: MW-26

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 5/24/2017 11:09:00 AM

Lab ID: 1705E13-010

Matrix: AQUEOUS

Received Date: 5/26/2017 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
Toluene	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
Ethylbenzene	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
Naphthalene	ND	2.0		µg/L	1	5/31/2017 10:29:00 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	5/31/2017 10:29:00 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	5/31/2017 10:29:00 PM
Acetone	ND	10		µg/L	1	5/31/2017 10:29:00 PM
Bromobenzene	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
Bromodichloromethane	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
Bromoform	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
Bromomethane	ND	3.0		µg/L	1	5/31/2017 10:29:00 PM
2-Butanone	ND	10		µg/L	1	5/31/2017 10:29:00 PM
Carbon disulfide	ND	10		µg/L	1	5/31/2017 10:29:00 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
Chlorobenzene	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
Chloroethane	ND	2.0		µg/L	1	5/31/2017 10:29:00 PM
Chloroform	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
Chloromethane	ND	3.0		µg/L	1	5/31/2017 10:29:00 PM
2-Chlorotoluene	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
4-Chlorotoluene	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
cis-1,2-DCE	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/31/2017 10:29:00 PM
Dibromochloromethane	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
Dibromomethane	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
1,1-Dichloroethane	9.1	1.0		µg/L	1	5/31/2017 10:29:00 PM
1,1-Dichloroethene	58	1.0		µg/L	1	5/31/2017 10:29:00 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	5/31/2017 10:29:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705E13

Date Reported: 6/2/2017

CLIENT: Earth Con

Client Sample ID: MW-26

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 5/24/2017 11:09:00 AM

Lab ID: 1705E13-010

Matrix: AQUEOUS

Received Date: 5/26/2017 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
2-Hexanone	ND	10		µg/L	1	5/31/2017 10:29:00 PM
Isopropylbenzene	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	5/31/2017 10:29:00 PM
Methylene Chloride	ND	3.0		µg/L	1	5/31/2017 10:29:00 PM
n-Butylbenzene	ND	3.0		µg/L	1	5/31/2017 10:29:00 PM
n-Propylbenzene	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
sec-Butylbenzene	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
Styrene	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
tert-Butylbenzene	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/31/2017 10:29:00 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
trans-1,2-DCE	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/31/2017 10:29:00 PM
Vinyl chloride	ND	1.0		µg/L	1	5/31/2017 10:29:00 PM
Xylenes, Total	ND	1.5		µg/L	1	5/31/2017 10:29:00 PM
Surr: 1,2-Dichloroethane-d4	99.6	70-130		%Rec	1	5/31/2017 10:29:00 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	5/31/2017 10:29:00 PM
Surr: Dibromofluoromethane	104	70-130		%Rec	1	5/31/2017 10:29:00 PM
Surr: Toluene-d8	102	70-130		%Rec	1	5/31/2017 10:29:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705E13

Date Reported: 6/2/2017

CLIENT: Earth Con

Client Sample ID: MW-26 Duplicate

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 5/24/2017 11:09:00 AM

Lab ID: 1705E13-011

Matrix: AQUEOUS

Received Date: 5/26/2017 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
Toluene	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
Ethylbenzene	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
Naphthalene	ND	2.0		µg/L	1	5/31/2017 10:53:00 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	5/31/2017 10:53:00 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	5/31/2017 10:53:00 PM
Acetone	ND	10		µg/L	1	5/31/2017 10:53:00 PM
Bromobenzene	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
Bromodichloromethane	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
Bromoform	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
Bromomethane	ND	3.0		µg/L	1	5/31/2017 10:53:00 PM
2-Butanone	ND	10		µg/L	1	5/31/2017 10:53:00 PM
Carbon disulfide	ND	10		µg/L	1	5/31/2017 10:53:00 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
Chlorobenzene	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
Chloroethane	ND	2.0		µg/L	1	5/31/2017 10:53:00 PM
Chloroform	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
Chloromethane	ND	3.0		µg/L	1	5/31/2017 10:53:00 PM
2-Chlorotoluene	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
4-Chlorotoluene	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
cis-1,2-DCE	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/31/2017 10:53:00 PM
Dibromochloromethane	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
Dibromomethane	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
1,1-Dichloroethane	9.1	1.0		µg/L	1	5/31/2017 10:53:00 PM
1,1-Dichloroethene	58	1.0		µg/L	1	5/31/2017 10:53:00 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	5/31/2017 10:53:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705E13

Date Reported: 6/2/2017

CLIENT: Earth Con

Client Sample ID: MW-26 Duplicate

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 5/24/2017 11:09:00 AM

Lab ID: 1705E13-011

Matrix: AQUEOUS

Received Date: 5/26/2017 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
2-Hexanone	ND	10		µg/L	1	5/31/2017 10:53:00 PM
Isopropylbenzene	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	5/31/2017 10:53:00 PM
Methylene Chloride	ND	3.0		µg/L	1	5/31/2017 10:53:00 PM
n-Butylbenzene	ND	3.0		µg/L	1	5/31/2017 10:53:00 PM
n-Propylbenzene	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
sec-Butylbenzene	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
Styrene	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
tert-Butylbenzene	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/31/2017 10:53:00 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
trans-1,2-DCE	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/31/2017 10:53:00 PM
Vinyl chloride	ND	1.0		µg/L	1	5/31/2017 10:53:00 PM
Xylenes, Total	ND	1.5		µg/L	1	5/31/2017 10:53:00 PM
Surr: 1,2-Dichloroethane-d4	97.8	70-130		%Rec	1	5/31/2017 10:53:00 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	5/31/2017 10:53:00 PM
Surr: Dibromofluoromethane	103	70-130		%Rec	1	5/31/2017 10:53:00 PM
Surr: Toluene-d8	103	70-130		%Rec	1	5/31/2017 10:53:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705E13

Date Reported: 6/2/2017

CLIENT: Earth Con

Client Sample ID: MW-20

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 5/24/2017 1:02:00 PM

Lab ID: 1705E13-012

Matrix: AQUEOUS

Received Date: 5/26/2017 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
Toluene	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
Ethylbenzene	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
Naphthalene	ND	2.0		µg/L	1	5/31/2017 11:16:00 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	5/31/2017 11:16:00 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	5/31/2017 11:16:00 PM
Acetone	ND	10		µg/L	1	5/31/2017 11:16:00 PM
Bromobenzene	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
Bromodichloromethane	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
Bromoform	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
Bromomethane	ND	3.0		µg/L	1	5/31/2017 11:16:00 PM
2-Butanone	ND	10		µg/L	1	5/31/2017 11:16:00 PM
Carbon disulfide	ND	10		µg/L	1	5/31/2017 11:16:00 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
Chlorobenzene	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
Chloroethane	ND	2.0		µg/L	1	5/31/2017 11:16:00 PM
Chloroform	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
Chloromethane	ND	3.0		µg/L	1	5/31/2017 11:16:00 PM
2-Chlorotoluene	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
4-Chlorotoluene	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
cis-1,2-DCE	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/31/2017 11:16:00 PM
Dibromochloromethane	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
Dibromomethane	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
1,1-Dichloroethane	9.5	1.0		µg/L	1	5/31/2017 11:16:00 PM
1,1-Dichloroethene	4.6	1.0		µg/L	1	5/31/2017 11:16:00 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	5/31/2017 11:16:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705E13

Date Reported: 6/2/2017

CLIENT: Earth Con

Client Sample ID: MW-20

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 5/24/2017 1:02:00 PM

Lab ID: 1705E13-012

Matrix: AQUEOUS

Received Date: 5/26/2017 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
2-Hexanone	ND	10		µg/L	1	5/31/2017 11:16:00 PM
Isopropylbenzene	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	5/31/2017 11:16:00 PM
Methylene Chloride	ND	3.0		µg/L	1	5/31/2017 11:16:00 PM
n-Butylbenzene	ND	3.0		µg/L	1	5/31/2017 11:16:00 PM
n-Propylbenzene	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
sec-Butylbenzene	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
Styrene	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
tert-Butylbenzene	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/31/2017 11:16:00 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
trans-1,2-DCE	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/31/2017 11:16:00 PM
Vinyl chloride	ND	1.0		µg/L	1	5/31/2017 11:16:00 PM
Xylenes, Total	ND	1.5		µg/L	1	5/31/2017 11:16:00 PM
Surr: 1,2-Dichloroethane-d4	98.5	70-130		%Rec	1	5/31/2017 11:16:00 PM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	5/31/2017 11:16:00 PM
Surr: Dibromofluoromethane	103	70-130		%Rec	1	5/31/2017 11:16:00 PM
Surr: Toluene-d8	102	70-130		%Rec	1	5/31/2017 11:16:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705E13

Date Reported: 6/2/2017

CLIENT: Earth Con

Client Sample ID: MW-20 Duplicate

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 5/24/2017 1:02:00 PM

Lab ID: 1705E13-013

Matrix: AQUEOUS

Received Date: 5/26/2017 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
Toluene	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
Ethylbenzene	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
Naphthalene	ND	2.0		µg/L	1	5/31/2017 11:40:00 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	5/31/2017 11:40:00 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	5/31/2017 11:40:00 PM
Acetone	ND	10		µg/L	1	5/31/2017 11:40:00 PM
Bromobenzene	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
Bromodichloromethane	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
Bromoform	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
Bromomethane	ND	3.0		µg/L	1	5/31/2017 11:40:00 PM
2-Butanone	ND	10		µg/L	1	5/31/2017 11:40:00 PM
Carbon disulfide	ND	10		µg/L	1	5/31/2017 11:40:00 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
Chlorobenzene	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
Chloroethane	ND	2.0		µg/L	1	5/31/2017 11:40:00 PM
Chloroform	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
Chloromethane	ND	3.0		µg/L	1	5/31/2017 11:40:00 PM
2-Chlorotoluene	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
4-Chlorotoluene	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
cis-1,2-DCE	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/31/2017 11:40:00 PM
Dibromochloromethane	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
Dibromomethane	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
1,1-Dichloroethane	9.8	1.0		µg/L	1	5/31/2017 11:40:00 PM
1,1-Dichloroethene	5.1	1.0		µg/L	1	5/31/2017 11:40:00 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	5/31/2017 11:40:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705E13

Date Reported: 6/2/2017

CLIENT: Earth Con

Client Sample ID: MW-20 Duplicate

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 5/24/2017 1:02:00 PM

Lab ID: 1705E13-013

Matrix: AQUEOUS

Received Date: 5/26/2017 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
2-Hexanone	ND	10		µg/L	1	5/31/2017 11:40:00 PM
Isopropylbenzene	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	5/31/2017 11:40:00 PM
Methylene Chloride	ND	3.0		µg/L	1	5/31/2017 11:40:00 PM
n-Butylbenzene	ND	3.0		µg/L	1	5/31/2017 11:40:00 PM
n-Propylbenzene	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
sec-Butylbenzene	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
Styrene	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
tert-Butylbenzene	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/31/2017 11:40:00 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
trans-1,2-DCE	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/31/2017 11:40:00 PM
Vinyl chloride	ND	1.0		µg/L	1	5/31/2017 11:40:00 PM
Xylenes, Total	ND	1.5		µg/L	1	5/31/2017 11:40:00 PM
Surr: 1,2-Dichloroethane-d4	99.7	70-130		%Rec	1	5/31/2017 11:40:00 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	5/31/2017 11:40:00 PM
Surr: Dibromofluoromethane	104	70-130		%Rec	1	5/31/2017 11:40:00 PM
Surr: Toluene-d8	102	70-130		%Rec	1	5/31/2017 11:40:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705E13

Date Reported: 6/2/2017

CLIENT: Earth Con

Client Sample ID: MW-12

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 5/24/2017 1:20:00 PM

Lab ID: 1705E13-014

Matrix: AQUEOUS

Received Date: 5/26/2017 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	1100	50		µg/L	50	6/1/2017 4:50:00 PM
Toluene	1400	50		µg/L	50	6/1/2017 4:50:00 PM
Ethylbenzene	150	50		µg/L	50	6/1/2017 4:50:00 PM
Xylenes, Total	2300	75		µg/L	50	6/1/2017 4:50:00 PM
Surr: 1,2-Dichloroethane-d4	94.8	70-130		%Rec	50	6/1/2017 4:50:00 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	50	6/1/2017 4:50:00 PM
Surr: Dibromofluoromethane	99.2	70-130		%Rec	50	6/1/2017 4:50:00 PM
Surr: Toluene-d8	102	70-130		%Rec	50	6/1/2017 4:50:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705E13

Date Reported: 6/2/2017

CLIENT: Earth Con

Client Sample ID: MW-(1B)

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 5/24/2017 1:40:00 PM

Lab ID: 1705E13-015

Matrix: AQUEOUS

Received Date: 5/26/2017 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	380	20	D	µg/L	20	6/1/2017 5:14:00 PM
Toluene	ND	20	D	µg/L	20	6/1/2017 5:14:00 PM
Ethylbenzene	ND	20	D	µg/L	20	6/1/2017 5:14:00 PM
Xylenes, Total	1600	30	D	µg/L	20	6/1/2017 5:14:00 PM
Surr: 1,2-Dichloroethane-d4	92.0	70-130	D	%Rec	20	6/1/2017 5:14:00 PM
Surr: 4-Bromofluorobenzene	104	70-130	D	%Rec	20	6/1/2017 5:14:00 PM
Surr: Dibromofluoromethane	99.5	70-130	D	%Rec	20	6/1/2017 5:14:00 PM
Surr: Toluene-d8	103	70-130	D	%Rec	20	6/1/2017 5:14:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705E13

Date Reported: 6/2/2017

CLIENT: Earth Con

Client Sample ID: MPE-13

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 5/24/2017 2:30:00 PM

Lab ID: 1705E13-016

Matrix: AQUEOUS

Received Date: 5/26/2017 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	5.0		µg/L	5	6/1/2017 1:39:00 AM
Toluene	ND	5.0		µg/L	5	6/1/2017 1:39:00 AM
Ethylbenzene	ND	5.0		µg/L	5	6/1/2017 1:39:00 AM
Xylenes, Total	ND	7.5		µg/L	5	6/1/2017 1:39:00 AM
Surr: 1,2-Dichloroethane-d4	97.8	70-130		%Rec	5	6/1/2017 1:39:00 AM
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	5	6/1/2017 1:39:00 AM
Surr: Dibromofluoromethane	102	70-130		%Rec	5	6/1/2017 1:39:00 AM
Surr: Toluene-d8	104	70-130		%Rec	5	6/1/2017 1:39:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705E13

Date Reported: 6/2/2017

CLIENT: Earth Con

Client Sample ID: TRIP BLANK

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 5/24/2017 3:15:00 PM

Lab ID: 1705E13-017

Matrix: AQUEOUS

Received Date: 5/26/2017 10:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	1.0		µg/L	1	6/1/2017 2:02:00 AM
Toluene	ND	1.0		µg/L	1	6/1/2017 2:02:00 AM
Ethylbenzene	ND	1.0		µg/L	1	6/1/2017 2:02:00 AM
Xylenes, Total	ND	1.5		µg/L	1	6/1/2017 2:02:00 AM
Surr: 1,2-Dichloroethane-d4	98.0	70-130		%Rec	1	6/1/2017 2:02:00 AM
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	6/1/2017 2:02:00 AM
Surr: Dibromofluoromethane	104	70-130		%Rec	1	6/1/2017 2:02:00 AM
Surr: Toluene-d8	103	70-130		%Rec	1	6/1/2017 2:02:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705E13

02-Jun-17

Client: Earth Con
Project: Earth Con Consultants Inc TWP Roswell Station

Sample ID 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260: Volatiles Short List							
Client ID: LCSW	Batch ID: SL43148		RunNo: 43148							
Prep Date:	Analysis Date: 5/31/2017		SeqNo: 1359647		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID rb2	SampType: MBLK		TestCode: EPA Method 8260: Volatiles Short List							
Client ID: PBW	Batch ID: SL43148		RunNo: 43148							
Prep Date:	Analysis Date: 5/31/2017		SeqNo: 1359649		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.0	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260: Volatiles Short List							
Client ID: LCSW	Batch ID: R43196		RunNo: 43196							
Prep Date:	Analysis Date: 6/1/2017		SeqNo: 1360075		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.0	70	130			
Toluene	20	1.0	20.00	0	99.6	70	130			
Ethylbenzene	20	1.0	20.00	0	101	70	130			
Xylenes, Total	60	1.5	60.00	0	100	70	130			
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.4	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID rb	SampType: MBLK		TestCode: EPA Method 8260: Volatiles Short List							
Client ID: PBW	Batch ID: R43196		RunNo: 43196							
Prep Date:	Analysis Date: 6/1/2017		SeqNo: 1360076		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705E13

02-Jun-17

Client: Earth Con

Project: Earth Con Consultants Inc TWP Roswell Station

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260: Volatiles Short List					
Client ID:	PBW	Batch ID:	R43196	RunNo:	43196					
Prep Date:		Analysis Date:	6/1/2017	SeqNo:	1360076	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.2	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID	1705e13-002ams	SampType:	MS	TestCode:	EPA Method 8260: Volatiles Short List					
Client ID:	MW-34	Batch ID:	R43196	RunNo:	43196					
Prep Date:		Analysis Date:	6/1/2017	SeqNo:	1360079	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0.1840	99.4	70	130			
Toluene	20	1.0	20.00	0	100	70	130			
Ethylbenzene	20	1.0	20.00	0	102	70	130			
Xylenes, Total	60	1.5	60.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	9.6		10.00		95.5	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID	1705e13-002amsd	SampType:	MSD	TestCode:	EPA Method 8260: Volatiles Short List					
Client ID:	MW-34	Batch ID:	R43196	RunNo:	43196					
Prep Date:		Analysis Date:	6/1/2017	SeqNo:	1360080	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0.1840	98.2	70	130	1.28	20	
Toluene	19	1.0	20.00	0	97.1	70	130	3.14	20	
Ethylbenzene	20	1.0	20.00	0	98.6	70	130	3.65	0	
Xylenes, Total	59	1.5	60.00	0	97.7	70	130	3.07	0	
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.1	70	130	0	0	
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130	0	0	
Surr: Dibromofluoromethane	11		10.00		106	70	130	0	0	
Surr: Toluene-d8	10		10.00		103	70	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705E13

02-Jun-17

Client: Earth Con

Project: Earth Con Consultants Inc TWP Roswell Station

Sample ID	100ng lcs2		SampType: LCS		TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW		Batch ID: A43148		RunNo: 43148					
Prep Date:			Analysis Date: 5/31/2017		SeqNo: 1359859		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	21	1.0	20.00	0	105	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	114	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	105	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID	rb2	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: A43148			RunNo: 43148					
Prep Date:		Analysis Date: 5/31/2017			SeqNo: 1359860		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705E13

02-Jun-17

Client: Earth Con

Project: Earth Con Consultants Inc TWP Roswell Station

Sample ID	rb2	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	A43148	RunNo:	43148					
Prep Date:		Analysis Date:	5/31/2017	SeqNo:	1359860	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705E13

02-Jun-17

Client: Earth Con

Project: Earth Con Consultants Inc TWP Roswell Station

Sample ID	rb2		SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW		Batch ID: A43148		RunNo: 43148					
Prep Date:			Analysis Date: 5/31/2017		SeqNo: 1359860		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.0	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID	100ng lcs		SampType: LCS4		TestCode: EPA Method 8260B: VOLATILES					
Client ID:	BatchQC		Batch ID: W43196		RunNo: 43196					
Prep Date:			Analysis Date: 6/1/2017		SeqNo: 1359867		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.4	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: W43196			RunNo: 43196					
Prep Date:		Analysis Date: 6/1/2017			SeqNo: 1360078		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.2	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: EARTH CON

Work Order Number: 1705E13

RcptNo: 1

Received By: Andy Jansson

5/26/2017 10:30:00 AM

Completed By: Ashley Gallegos

5/26/2017 2:01:32 PM

Reviewed By:

5/26/17

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? UPS

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐
- # of preserved bottles checked for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:		Date	
By Whom:		Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 22, 2017

JD Haines

Earth Con

14405 Walters Rd Ste 700

Houston, TX

TEL: (317) 450-6126

FAX

RE: Earth Con TWP Roswell Station 9

OrderNo.: 1706A43

Dear JD Haines:

Hall Environmental Analysis Laboratory received 7 sample(s) on 6/20/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1706A43**

Date Reported: **6/22/2017**

CLIENT: Earth Con

Client Sample ID: MW-41

Project: Earth Con TWP Roswell Station 9

Collection Date: 6/16/2017 10:11:00 AM

Lab ID: 1706A43-001

Matrix: AQUEOUS

Received Date: 6/20/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
Toluene	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
Ethylbenzene	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
Naphthalene	ND	2.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
1-Methylnaphthalene	ND	4.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
2-Methylnaphthalene	ND	4.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
Acetone	ND	10		µg/L	1	6/20/2017 9:01:52 PM	W43666
Bromobenzene	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
Bromodichloromethane	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
Bromoform	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
Bromomethane	ND	3.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
2-Butanone	ND	10		µg/L	1	6/20/2017 9:01:52 PM	W43666
Carbon disulfide	ND	10		µg/L	1	6/20/2017 9:01:52 PM	W43666
Carbon Tetrachloride	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
Chlorobenzene	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
Chloroethane	ND	2.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
Chloroform	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
Chloromethane	ND	3.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
2-Chlorotoluene	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
4-Chlorotoluene	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
cis-1,2-DCE	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
Dibromochloromethane	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
Dibromomethane	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
1,1-Dichloroethane	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
1,1-Dichloroethene	1.2	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
1,2-Dichloropropane	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
1,3-Dichloropropane	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
2,2-Dichloropropane	ND	2.0		µg/L	1	6/20/2017 9:01:52 PM	W43666

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A43

Date Reported: 6/22/2017

CLIENT: Earth Con

Client Sample ID: MW-41

Project: Earth Con TWP Roswell Station 9

Collection Date: 6/16/2017 10:11:00 AM

Lab ID: 1706A43-001

Matrix: AQUEOUS

Received Date: 6/20/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
Hexachlorobutadiene	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
2-Hexanone	ND	10		µg/L	1	6/20/2017 9:01:52 PM	W43666
Isopropylbenzene	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
4-Isopropyltoluene	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
4-Methyl-2-pentanone	ND	10		µg/L	1	6/20/2017 9:01:52 PM	W43666
Methylene Chloride	ND	3.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
n-Butylbenzene	ND	3.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
n-Propylbenzene	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
sec-Butylbenzene	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
Styrene	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
tert-Butylbenzene	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
trans-1,2-DCE	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
Trichlorofluoromethane	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
Vinyl chloride	ND	1.0		µg/L	1	6/20/2017 9:01:52 PM	W43666
Xylenes, Total	ND	1.5		µg/L	1	6/20/2017 9:01:52 PM	W43666
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	6/20/2017 9:01:52 PM	W43666
Surr: 4-Bromofluorobenzene	92.4	70-130		%Rec	1	6/20/2017 9:01:52 PM	W43666
Surr: Dibromofluoromethane	103	70-130		%Rec	1	6/20/2017 9:01:52 PM	W43666
Surr: Toluene-d8	103	70-130		%Rec	1	6/20/2017 9:01:52 PM	W43666

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1706A43**

Date Reported: **6/22/2017**

CLIENT: Earth Con

Client Sample ID: MW-40

Project: Earth Con TWP Roswell Station 9

Collection Date: 6/16/2017 10:30:00 AM

Lab ID: 1706A43-002

Matrix: AQUEOUS

Received Date: 6/20/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
Toluene	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
Ethylbenzene	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
Naphthalene	ND	2.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
1-Methylnaphthalene	ND	4.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
2-Methylnaphthalene	ND	4.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
Acetone	ND	10		µg/L	1	6/20/2017 10:56:17 PM	W43666
Bromobenzene	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
Bromodichloromethane	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
Bromoform	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
Bromomethane	ND	3.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
2-Butanone	ND	10		µg/L	1	6/20/2017 10:56:17 PM	W43666
Carbon disulfide	ND	10		µg/L	1	6/20/2017 10:56:17 PM	W43666
Carbon Tetrachloride	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
Chlorobenzene	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
Chloroethane	ND	2.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
Chloroform	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
Chloromethane	ND	3.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
2-Chlorotoluene	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
4-Chlorotoluene	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
cis-1,2-DCE	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
Dibromochloromethane	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
Dibromomethane	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
1,1-Dichloroethane	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
1,1-Dichloroethene	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
1,2-Dichloropropane	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
1,3-Dichloropropane	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
2,2-Dichloropropane	ND	2.0		µg/L	1	6/20/2017 10:56:17 PM	W43666

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1706A43**

Date Reported: **6/22/2017**

CLIENT: Earth Con

Client Sample ID: MW-40

Project: Earth Con TWP Roswell Station 9

Collection Date: 6/16/2017 10:30:00 AM

Lab ID: 1706A43-002

Matrix: AQUEOUS

Received Date: 6/20/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
Hexachlorobutadiene	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
2-Hexanone	ND	10		µg/L	1	6/20/2017 10:56:17 PM	W43666
Isopropylbenzene	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
4-Isopropyltoluene	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
4-Methyl-2-pentanone	ND	10		µg/L	1	6/20/2017 10:56:17 PM	W43666
Methylene Chloride	ND	3.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
n-Butylbenzene	ND	3.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
n-Propylbenzene	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
sec-Butylbenzene	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
Styrene	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
tert-Butylbenzene	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
trans-1,2-DCE	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
Trichlorofluoromethane	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
Vinyl chloride	ND	1.0		µg/L	1	6/20/2017 10:56:17 PM	W43666
Xylenes, Total	ND	1.5		µg/L	1	6/20/2017 10:56:17 PM	W43666
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	6/20/2017 10:56:17 PM	W43666
Surr: 4-Bromofluorobenzene	98.7	70-130		%Rec	1	6/20/2017 10:56:17 PM	W43666
Surr: Dibromofluoromethane	103	70-130		%Rec	1	6/20/2017 10:56:17 PM	W43666
Surr: Toluene-d8	99.8	70-130		%Rec	1	6/20/2017 10:56:17 PM	W43666

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A43

Date Reported: 6/22/2017

CLIENT: Earth Con

Client Sample ID: MW-42

Project: Earth Con TWP Roswell Station 9

Collection Date: 6/16/2017 10:35:00 AM

Lab ID: 1706A43-003

Matrix: AQUEOUS

Received Date: 6/20/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
Toluene	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
Ethylbenzene	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
Naphthalene	ND	2.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
1-Methylnaphthalene	ND	4.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
2-Methylnaphthalene	ND	4.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
Acetone	ND	10		µg/L	1	6/20/2017 11:24:49 PM	W43666
Bromobenzene	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
Bromodichloromethane	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
Bromoform	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
Bromomethane	ND	3.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
2-Butanone	ND	10		µg/L	1	6/20/2017 11:24:49 PM	W43666
Carbon disulfide	ND	10		µg/L	1	6/20/2017 11:24:49 PM	W43666
Carbon Tetrachloride	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
Chlorobenzene	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
Chloroethane	ND	2.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
Chloroform	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
Chloromethane	ND	3.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
2-Chlorotoluene	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
4-Chlorotoluene	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
cis-1,2-DCE	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
Dibromochloromethane	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
Dibromomethane	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
1,1-Dichloroethane	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
1,1-Dichloroethene	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
1,2-Dichloropropane	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
1,3-Dichloropropane	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
2,2-Dichloropropane	ND	2.0		µg/L	1	6/20/2017 11:24:49 PM	W43666

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1706A43**

Date Reported: **6/22/2017**

CLIENT: Earth Con

Client Sample ID: MW-42

Project: Earth Con TWP Roswell Station 9

Collection Date: 6/16/2017 10:35:00 AM

Lab ID: 1706A43-003

Matrix: AQUEOUS

Received Date: 6/20/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
Hexachlorobutadiene	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
2-Hexanone	ND	10		µg/L	1	6/20/2017 11:24:49 PM	W43666
Isopropylbenzene	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
4-Isopropyltoluene	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
4-Methyl-2-pentanone	ND	10		µg/L	1	6/20/2017 11:24:49 PM	W43666
Methylene Chloride	ND	3.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
n-Butylbenzene	ND	3.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
n-Propylbenzene	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
sec-Butylbenzene	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
Styrene	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
tert-Butylbenzene	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
trans-1,2-DCE	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
Trichlorofluoromethane	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
Vinyl chloride	ND	1.0		µg/L	1	6/20/2017 11:24:49 PM	W43666
Xylenes, Total	ND	1.5		µg/L	1	6/20/2017 11:24:49 PM	W43666
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	6/20/2017 11:24:49 PM	W43666
Surr: 4-Bromofluorobenzene	94.3	70-130		%Rec	1	6/20/2017 11:24:49 PM	W43666
Surr: Dibromofluoromethane	101	70-130		%Rec	1	6/20/2017 11:24:49 PM	W43666
Surr: Toluene-d8	101	70-130		%Rec	1	6/20/2017 11:24:49 PM	W43666

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1706A43**

Date Reported: **6/22/2017**

CLIENT: Earth Con

Client Sample ID: MW-39

Project: Earth Con TWP Roswell Station 9

Collection Date: 6/16/2017 11:15:00 AM

Lab ID: 1706A43-004

Matrix: AQUEOUS

Received Date: 6/20/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
Toluene	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
Ethylbenzene	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
Naphthalene	ND	2.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
1-Methylnaphthalene	ND	4.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
2-Methylnaphthalene	ND	4.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
Acetone	ND	10		µg/L	1	6/20/2017 11:53:16 PM	W43666
Bromobenzene	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
Bromodichloromethane	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
Bromoform	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
Bromomethane	ND	3.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
2-Butanone	ND	10		µg/L	1	6/20/2017 11:53:16 PM	W43666
Carbon disulfide	ND	10		µg/L	1	6/20/2017 11:53:16 PM	W43666
Carbon Tetrachloride	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
Chlorobenzene	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
Chloroethane	ND	2.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
Chloroform	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
Chloromethane	ND	3.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
2-Chlorotoluene	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
4-Chlorotoluene	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
cis-1,2-DCE	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
Dibromochloromethane	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
Dibromomethane	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
1,1-Dichloroethane	3.3	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
1,1-Dichloroethene	29	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
1,2-Dichloropropane	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
1,3-Dichloropropane	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
2,2-Dichloropropane	ND	2.0		µg/L	1	6/20/2017 11:53:16 PM	W43666

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1706A43**

Date Reported: **6/22/2017**

CLIENT: Earth Con

Client Sample ID: MW-39

Project: Earth Con TWP Roswell Station 9

Collection Date: 6/16/2017 11:15:00 AM

Lab ID: 1706A43-004

Matrix: AQUEOUS

Received Date: 6/20/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
Hexachlorobutadiene	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
2-Hexanone	ND	10		µg/L	1	6/20/2017 11:53:16 PM	W43666
Isopropylbenzene	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
4-Isopropyltoluene	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
4-Methyl-2-pentanone	ND	10		µg/L	1	6/20/2017 11:53:16 PM	W43666
Methylene Chloride	ND	3.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
n-Butylbenzene	ND	3.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
n-Propylbenzene	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
sec-Butylbenzene	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
Styrene	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
tert-Butylbenzene	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
trans-1,2-DCE	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
Trichlorofluoromethane	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
Vinyl chloride	ND	1.0		µg/L	1	6/20/2017 11:53:16 PM	W43666
Xylenes, Total	ND	1.5		µg/L	1	6/20/2017 11:53:16 PM	W43666
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	6/20/2017 11:53:16 PM	W43666
Surr: 4-Bromofluorobenzene	98.4	70-130		%Rec	1	6/20/2017 11:53:16 PM	W43666
Surr: Dibromofluoromethane	102	70-130		%Rec	1	6/20/2017 11:53:16 PM	W43666
Surr: Toluene-d8	102	70-130		%Rec	1	6/20/2017 11:53:16 PM	W43666

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1706A43**

Date Reported: **6/22/2017**

CLIENT: Earth Con

Client Sample ID: MPE-39

Project: Earth Con TWP Roswell Station 9

Collection Date: 6/16/2017 1:30:00 PM

Lab ID: 1706A43-005

Matrix: AQUEOUS

Received Date: 6/20/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: DJF
Benzene	2600	50		µg/L	50	6/21/2017 2:00:05 PM	W43706
Toluene	1500	50		µg/L	50	6/21/2017 2:00:05 PM	W43706
Ethylbenzene	120	5.0		µg/L	5	6/21/2017 12:21:51 AM	SL43666
Xylenes, Total	1100	75		µg/L	50	6/21/2017 2:00:05 PM	W43706
Surr: 1,2-Dichloroethane-d4	96.2	70-130		%Rec	5	6/21/2017 12:21:51 AM	SL43666
Surr: 4-Bromofluorobenzene	95.9	70-130		%Rec	5	6/21/2017 12:21:51 AM	SL43666
Surr: Dibromofluoromethane	97.4	70-130		%Rec	5	6/21/2017 12:21:51 AM	SL43666
Surr: Toluene-d8	103	70-130		%Rec	5	6/21/2017 12:21:51 AM	SL43666

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A43

Date Reported: 6/22/2017

CLIENT: Earth Con

Client Sample ID: Field Blank

Project: Earth Con TWP Roswell Station 9

Collection Date: 6/19/2017 2:30:00 PM

Lab ID: 1706A43-006

Matrix: AQUEOUS

Received Date: 6/20/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
Toluene	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
Ethylbenzene	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
Naphthalene	ND	2.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
1-Methylnaphthalene	ND	4.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
2-Methylnaphthalene	ND	4.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
Acetone	41	10		µg/L	1	6/21/2017 1:19:03 AM	W43666
Bromobenzene	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
Bromodichloromethane	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
Bromoform	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
Bromomethane	ND	3.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
2-Butanone	ND	10		µg/L	1	6/21/2017 1:19:03 AM	W43666
Carbon disulfide	ND	10		µg/L	1	6/21/2017 1:19:03 AM	W43666
Carbon Tetrachloride	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
Chlorobenzene	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
Chloroethane	ND	2.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
Chloroform	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
Chloromethane	ND	3.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
2-Chlorotoluene	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
4-Chlorotoluene	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
cis-1,2-DCE	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
Dibromochloromethane	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
Dibromomethane	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
1,1-Dichloroethane	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
1,1-Dichloroethene	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
1,2-Dichloropropane	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
1,3-Dichloropropane	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
2,2-Dichloropropane	ND	2.0		µg/L	1	6/21/2017 1:19:03 AM	W43666

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A43

Date Reported: 6/22/2017

CLIENT: Earth Con

Client Sample ID: Field Blank

Project: Earth Con TWP Roswell Station 9

Collection Date: 6/19/2017 2:30:00 PM

Lab ID: 1706A43-006

Matrix: AQUEOUS

Received Date: 6/20/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: DJF			
1,1-Dichloropropene	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
Hexachlorobutadiene	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
2-Hexanone	ND	10		µg/L	1	6/21/2017 1:19:03 AM	W43666
Isopropylbenzene	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
4-Isopropyltoluene	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
4-Methyl-2-pentanone	ND	10		µg/L	1	6/21/2017 1:19:03 AM	W43666
Methylene Chloride	ND	3.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
n-Butylbenzene	ND	3.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
n-Propylbenzene	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
sec-Butylbenzene	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
Styrene	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
tert-Butylbenzene	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
trans-1,2-DCE	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
Trichlorofluoromethane	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
Vinyl chloride	ND	1.0		µg/L	1	6/21/2017 1:19:03 AM	W43666
Xylenes, Total	ND	1.5		µg/L	1	6/21/2017 1:19:03 AM	W43666
Surr: 1,2-Dichloroethane-d4	99.4	70-130		%Rec	1	6/21/2017 1:19:03 AM	W43666
Surr: 4-Bromofluorobenzene	94.4	70-130		%Rec	1	6/21/2017 1:19:03 AM	W43666
Surr: Dibromofluoromethane	98.9	70-130		%Rec	1	6/21/2017 1:19:03 AM	W43666
Surr: Toluene-d8	100	70-130		%Rec	1	6/21/2017 1:19:03 AM	W43666

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A43

Date Reported: 6/22/2017

CLIENT: Earth Con

Client Sample ID: Trip Blank

Project: Earth Con TWP Roswell Station 9

Collection Date:

Lab ID: 1706A43-007

Matrix: AQUEOUS

Received Date: 6/20/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
Toluene	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
Ethylbenzene	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
Naphthalene	ND	2.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
1-Methylnaphthalene	ND	4.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
2-Methylnaphthalene	ND	4.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
Acetone	ND	10		µg/L	1	6/21/2017 1:47:46 AM	W43666
Bromobenzene	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
Bromodichloromethane	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
Bromoform	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
Bromomethane	ND	3.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
2-Butanone	ND	10		µg/L	1	6/21/2017 1:47:46 AM	W43666
Carbon disulfide	ND	10		µg/L	1	6/21/2017 1:47:46 AM	W43666
Carbon Tetrachloride	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
Chlorobenzene	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
Chloroethane	ND	2.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
Chloroform	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
Chloromethane	ND	3.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
2-Chlorotoluene	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
4-Chlorotoluene	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
cis-1,2-DCE	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
Dibromochloromethane	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
Dibromomethane	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
1,1-Dichloroethane	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
1,1-Dichloroethene	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
1,2-Dichloropropane	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
1,3-Dichloropropane	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
2,2-Dichloropropane	ND	2.0		µg/L	1	6/21/2017 1:47:46 AM	W43666

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706A43

Date Reported: 6/22/2017

CLIENT: Earth Con

Client Sample ID: Trip Blank

Project: Earth Con TWP Roswell Station 9

Collection Date:

Lab ID: 1706A43-007

Matrix: AQUEOUS

Received Date: 6/20/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
Hexachlorobutadiene	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
2-Hexanone	ND	10		µg/L	1	6/21/2017 1:47:46 AM	W43666
Isopropylbenzene	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
4-Isopropyltoluene	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
4-Methyl-2-pentanone	ND	10		µg/L	1	6/21/2017 1:47:46 AM	W43666
Methylene Chloride	ND	3.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
n-Butylbenzene	ND	3.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
n-Propylbenzene	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
sec-Butylbenzene	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
Styrene	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
tert-Butylbenzene	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
trans-1,2-DCE	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
Trichlorofluoromethane	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
Vinyl chloride	ND	1.0		µg/L	1	6/21/2017 1:47:46 AM	W43666
Xylenes, Total	ND	1.5		µg/L	1	6/21/2017 1:47:46 AM	W43666
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	6/21/2017 1:47:46 AM	W43666
Surr: 4-Bromofluorobenzene	92.8	70-130		%Rec	1	6/21/2017 1:47:46 AM	W43666
Surr: Dibromofluoromethane	100	70-130		%Rec	1	6/21/2017 1:47:46 AM	W43666
Surr: Toluene-d8	101	70-130		%Rec	1	6/21/2017 1:47:46 AM	W43666

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1706A43

22-Jun-17

Client: Earth Con

Project: Earth Con TWP Roswell Station 9

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260: Volatiles Short List					
Client ID:	PBW	Batch ID:	SL43666	RunNo:	43666					
Prep Date:		Analysis Date:	6/20/2017	SeqNo:	1375552	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene	ND	1.0								
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.6	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.9		10.00		99.1	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260: Volatiles Short List					
Client ID:	LCSW	Batch ID:	SL43666	RunNo:	43666					
Prep Date:		Analysis Date:	6/20/2017	SeqNo:	1375559	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.9	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260: Volatiles Short List					
Client ID:	PBW	Batch ID:	W43706	RunNo:	43706					
Prep Date:		Analysis Date:	6/21/2017	SeqNo:	1376674	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		94.4	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260: Volatiles Short List					
Client ID:	LCSW	Batch ID:	W43706	RunNo:	43706					
Prep Date:		Analysis Date:	6/21/2017	SeqNo:	1376675	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	115	70	130			
Toluene	20	1.0	20.00	0	100	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.6	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1706A43

22-Jun-17

Client: Earth Con

Project: Earth Con TWP Roswell Station 9

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: W43666			RunNo: 43666					
Prep Date:		Analysis Date: 6/20/2017			SeqNo: 1375484	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1706A43

22-Jun-17

Client: Earth Con
Project: Earth Con TWP Roswell Station 9

Sample ID rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: W43666			RunNo: 43666						
Prep Date:	Analysis Date: 6/20/2017			SeqNo: 1375484		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.6	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.9		10.00		99.1	70	130			

Sample ID 100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: W43666			RunNo: 43666						
Prep Date:	Analysis Date: 6/20/2017			SeqNo: 1375485		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	109	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Chlorobenzene	21	1.0	20.00	0	106	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1706A43

22-Jun-17

Client: Earth Con

Project: Earth Con TWP Roswell Station 9

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: W43666			RunNo: 43666					
Prep Date:		Analysis Date: 6/20/2017			SeqNo: 1375485		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23	1.0	20.00	0	115	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	98.6	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.9	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: **EARTH CON**

Work Order Number: **1706A43**

ReptNo: **1**

Received By: **Sophia Campuzano** 6/20/2017 9:30:00 AM

Completed By: **Anne Thorne** 6/20/2017 11:16:58 AM

Reviewed By: *[Signature]* 6/20/17

[Signature]

[Signature]

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? UPS

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☒ # of preserved bottles checked for pH: _____
(<2 or >12 unless noted)
12. Does paperwork match bottle labels? Yes ☒ No ☐ Adjusted? _____
(Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met? Yes ☒ No ☐ Checked by: _____
(If no, notify customer for authorization.)

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks: _____

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.7	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

November 28, 2017

JD Haines

Earth Con

14405 Walters Rd Ste 700

Houston, TX

TEL: (317) 450-6126

FAX

RE: Earth Con Consultants Inc TWP Roswell Station 9

OrderNo.: 1711932

Dear JD Haines:

Hall Environmental Analysis Laboratory received 31 sample(s) on 11/17/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-37

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/14/2017 9:23:00 AM

Lab ID: 1711932-001

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	1.0		µg/L	1	11/20/2017 10:44:34 AM	R47232
Toluene	ND	1.0		µg/L	1	11/20/2017 10:44:34 AM	R47232
Ethylbenzene	ND	1.0		µg/L	1	11/20/2017 10:44:34 AM	R47232
Xylenes, Total	ND	2.0		µg/L	1	11/20/2017 10:44:34 AM	R47232
Surr: 4-Bromofluorobenzene	121	72.5-140		%Rec	1	11/20/2017 10:44:34 AM	R47232

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-34

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/14/2017 10:09:00 AM

Lab ID: 1711932-002

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	1.0		µg/L	1	11/20/2017 11:56:15 AM	R47232
Toluene	ND	1.0		µg/L	1	11/20/2017 11:56:15 AM	R47232
Ethylbenzene	ND	1.0		µg/L	1	11/20/2017 11:56:15 AM	R47232
Xylenes, Total	ND	2.0		µg/L	1	11/20/2017 11:56:15 AM	R47232
Surr: 4-Bromofluorobenzene	121	72.5-140		%Rec	1	11/20/2017 11:56:15 AM	R47232

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-34 Duplicate

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/14/2017 10:09:00 AM

Lab ID: 1711932-003

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	1.0		µg/L	1	11/20/2017 12:20:14 PM	R47232
Toluene	ND	1.0		µg/L	1	11/20/2017 12:20:14 PM	R47232
Ethylbenzene	ND	1.0		µg/L	1	11/20/2017 12:20:14 PM	R47232
Xylenes, Total	ND	2.0		µg/L	1	11/20/2017 12:20:14 PM	R47232
Surr: 4-Bromofluorobenzene	120	72.5-140		%Rec	1	11/20/2017 12:20:14 PM	R47232

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-35

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/14/2017 11:42:00 AM

Lab ID: 1711932-004

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	1.0		µg/L	1	11/20/2017 12:44:13 PM	R47232
Toluene	ND	1.0		µg/L	1	11/20/2017 12:44:13 PM	R47232
Ethylbenzene	ND	1.0		µg/L	1	11/20/2017 12:44:13 PM	R47232
Xylenes, Total	ND	2.0		µg/L	1	11/20/2017 12:44:13 PM	R47232
Surr: 4-Bromofluorobenzene	120	72.5-140		%Rec	1	11/20/2017 12:44:13 PM	R47232

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-32

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/14/2017 12:30:00 PM

Lab ID: 1711932-005

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	1.0		µg/L	1	11/20/2017 1:08:15 PM	R47232
Toluene	ND	1.0		µg/L	1	11/20/2017 1:08:15 PM	R47232
Ethylbenzene	ND	1.0		µg/L	1	11/20/2017 1:08:15 PM	R47232
Xylenes, Total	ND	2.0		µg/L	1	11/20/2017 1:08:15 PM	R47232
Surr: 4-Bromofluorobenzene	121	72.5-140		%Rec	1	11/20/2017 1:08:15 PM	R47232

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-29

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/14/2017 12:55:00 PM

Lab ID: 1711932-006

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	1.0		µg/L	1	11/20/2017 1:32:15 PM	R47232
Toluene	ND	1.0		µg/L	1	11/20/2017 1:32:15 PM	R47232
Ethylbenzene	ND	1.0		µg/L	1	11/20/2017 1:32:15 PM	R47232
Xylenes, Total	ND	2.0		µg/L	1	11/20/2017 1:32:15 PM	R47232
Surr: 4-Bromofluorobenzene	118	72.5-140		%Rec	1	11/20/2017 1:32:15 PM	R47232

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-27

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/14/2017 1:41:00 PM

Lab ID: 1711932-007

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	82	25	D	µg/L	50	11/20/2017 9:57:00 AM	R47232
Toluene	ND	25	D	µg/L	50	11/20/2017 9:57:00 AM	R47232
Ethylbenzene	ND	25	D	µg/L	50	11/20/2017 9:57:00 AM	R47232
Xylenes, Total	91	50	D	µg/L	50	11/20/2017 9:57:00 AM	R47232
Surr: 4-Bromofluorobenzene	128	72.5-140	D	%Rec	50	11/20/2017 9:57:00 AM	R47232

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-21

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/14/2017 3:01:00 PM

Lab ID: 1711932-008

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	1.0		µg/L	1	11/20/2017 1:56:25 PM	R47232
Toluene	ND	1.0		µg/L	1	11/20/2017 1:56:25 PM	R47232
Ethylbenzene	ND	1.0		µg/L	1	11/20/2017 1:56:25 PM	R47232
Xylenes, Total	ND	2.0		µg/L	1	11/20/2017 1:56:25 PM	R47232
Surr: 4-Bromofluorobenzene	118	72.5-140		%Rec	1	11/20/2017 1:56:25 PM	R47232

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-21 Duplicate

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/14/2017 3:01:00 PM

Lab ID: 1711932-009

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	1.0		µg/L	1	11/20/2017 2:20:30 PM	R47232
Toluene	ND	1.0		µg/L	1	11/20/2017 2:20:30 PM	R47232
Ethylbenzene	ND	1.0		µg/L	1	11/20/2017 2:20:30 PM	R47232
Xylenes, Total	ND	2.0		µg/L	1	11/20/2017 2:20:30 PM	R47232
Surr: 4-Bromofluorobenzene	122	72.5-140		%Rec	1	11/20/2017 2:20:30 PM	R47232

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: Field Blank

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/14/2017 3:30:00 PM

Lab ID: 1711932-010

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
Toluene	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
Ethylbenzene	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
Naphthalene	ND	2.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
1-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
2-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
Acetone	14	10		µg/L	1	11/22/2017 3:28:00 AM	B47278
Bromobenzene	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
Bromodichloromethane	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
Bromoform	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
Bromomethane	ND	3.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
2-Butanone	ND	10		µg/L	1	11/22/2017 3:28:00 AM	B47278
Carbon disulfide	ND	10		µg/L	1	11/22/2017 3:28:00 AM	B47278
Carbon Tetrachloride	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
Chlorobenzene	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
Chloroethane	ND	2.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
Chloroform	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
Chloromethane	ND	3.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
2-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
4-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
cis-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
Dibromochloromethane	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
Dibromomethane	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
1,1-Dichloroethane	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
1,1-Dichloroethene	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
1,2-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
1,3-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
2,2-Dichloropropane	ND	2.0		µg/L	1	11/22/2017 3:28:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: Field Blank

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/14/2017 3:30:00 PM

Lab ID: 1711932-010

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
Hexachlorobutadiene	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
2-Hexanone	ND	10		µg/L	1	11/22/2017 3:28:00 AM	B47278
Isopropylbenzene	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
4-Isopropyltoluene	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
4-Methyl-2-pentanone	ND	10		µg/L	1	11/22/2017 3:28:00 AM	B47278
Methylene Chloride	ND	3.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
n-Butylbenzene	ND	3.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
n-Propylbenzene	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
sec-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
Styrene	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
tert-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
trans-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
Trichlorofluoromethane	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
Vinyl chloride	ND	1.0		µg/L	1	11/22/2017 3:28:00 AM	B47278
Xylenes, Total	ND	1.5		µg/L	1	11/22/2017 3:28:00 AM	B47278
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	11/22/2017 3:28:00 AM	B47278
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	11/22/2017 3:28:00 AM	B47278
Surr: Dibromofluoromethane	107	70-130		%Rec	1	11/22/2017 3:28:00 AM	B47278
Surr: Toluene-d8	97.8	70-130		%Rec	1	11/22/2017 3:28:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-29 Equipment Rinsate

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/14/2017 12:55:00 PM

Lab ID: 1711932-011

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	1.0		µg/L	1	11/20/2017 2:44:39 PM	R47232
Toluene	2.6	1.0		µg/L	1	11/20/2017 2:44:39 PM	R47232
Ethylbenzene	ND	1.0		µg/L	1	11/20/2017 2:44:39 PM	R47232
Xylenes, Total	ND	2.0		µg/L	1	11/20/2017 2:44:39 PM	R47232
Surr: 4-Bromofluorobenzene	122	72.5-140		%Rec	1	11/20/2017 2:44:39 PM	R47232

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-16

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/15/2017 10:35:00 AM

Lab ID: 1711932-013

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	87	10		µg/L	10	11/20/2017 4:43:16 PM	R47232
Toluene	12	10		µg/L	10	11/20/2017 4:43:16 PM	R47232
Ethylbenzene	95	10		µg/L	10	11/20/2017 4:43:16 PM	R47232
Xylenes, Total	1500	20		µg/L	10	11/20/2017 4:43:16 PM	R47232
Surr: 4-Bromofluorobenzene	138	72.5-140		%Rec	10	11/20/2017 4:43:16 PM	R47232

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-16 Equipment Rinsate

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/15/2017 10:35:00 AM

Lab ID: 1711932-014

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	1.0		µg/L	1	11/20/2017 5:30:52 PM	R47232
Toluene	ND	1.0		µg/L	1	11/20/2017 5:30:52 PM	R47232
Ethylbenzene	ND	1.0		µg/L	1	11/20/2017 5:30:52 PM	R47232
Xylenes, Total	ND	2.0		µg/L	1	11/20/2017 5:30:52 PM	R47232
Surr: 4-Bromofluorobenzene	119	72.5-140		%Rec	1	11/20/2017 5:30:52 PM	R47232

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-14

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/15/2017 11:39:00 AM

Lab ID: 1711932-015

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	1.0		µg/L	1	11/20/2017 5:54:38 PM	R47232
Toluene	ND	1.0		µg/L	1	11/20/2017 5:54:38 PM	R47232
Ethylbenzene	ND	1.0		µg/L	1	11/20/2017 5:54:38 PM	R47232
Xylenes, Total	ND	2.0		µg/L	1	11/20/2017 5:54:38 PM	R47232
Surr: 4-Bromofluorobenzene	120	72.5-140		%Rec	1	11/20/2017 5:54:38 PM	R47232

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-26

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/15/2017 12:40:00 PM

Lab ID: 1711932-016

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
Toluene	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
Ethylbenzene	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
Naphthalene	ND	2.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
1-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
2-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
Acetone	ND	10		µg/L	1	11/22/2017 3:51:00 AM	B47278
Bromobenzene	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
Bromodichloromethane	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
Bromoform	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
Bromomethane	ND	3.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
2-Butanone	ND	10		µg/L	1	11/22/2017 3:51:00 AM	B47278
Carbon disulfide	ND	10		µg/L	1	11/22/2017 3:51:00 AM	B47278
Carbon Tetrachloride	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
Chlorobenzene	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
Chloroethane	ND	2.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
Chloroform	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
Chloromethane	ND	3.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
2-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
4-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
cis-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
Dibromochloromethane	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
Dibromomethane	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
1,1-Dichloroethane	8.3	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
1,1-Dichloroethene	44	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
1,2-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
1,3-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
2,2-Dichloropropane	ND	2.0		µg/L	1	11/22/2017 3:51:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-26

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/15/2017 12:40:00 PM

Lab ID: 1711932-016

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
Hexachlorobutadiene	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
2-Hexanone	ND	10		µg/L	1	11/22/2017 3:51:00 AM	B47278
Isopropylbenzene	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
4-Isopropyltoluene	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
4-Methyl-2-pentanone	ND	10		µg/L	1	11/22/2017 3:51:00 AM	B47278
Methylene Chloride	ND	3.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
n-Butylbenzene	ND	3.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
n-Propylbenzene	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
sec-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
Styrene	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
tert-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
trans-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
Trichlorofluoromethane	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
Vinyl chloride	ND	1.0		µg/L	1	11/22/2017 3:51:00 AM	B47278
Xylenes, Total	ND	1.5		µg/L	1	11/22/2017 3:51:00 AM	B47278
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	11/22/2017 3:51:00 AM	B47278
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	11/22/2017 3:51:00 AM	B47278
Surr: Dibromofluoromethane	108	70-130		%Rec	1	11/22/2017 3:51:00 AM	B47278
Surr: Toluene-d8	96.8	70-130		%Rec	1	11/22/2017 3:51:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-26 Duplicate

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/15/2017 12:40:00 PM

Lab ID: 1711932-017

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
Toluene	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
Ethylbenzene	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
Naphthalene	ND	2.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
1-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
2-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
Acetone	ND	10		µg/L	1	11/22/2017 4:15:00 AM	B47278
Bromobenzene	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
Bromodichloromethane	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
Bromoform	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
Bromomethane	ND	3.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
2-Butanone	ND	10		µg/L	1	11/22/2017 4:15:00 AM	B47278
Carbon disulfide	ND	10		µg/L	1	11/22/2017 4:15:00 AM	B47278
Carbon Tetrachloride	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
Chlorobenzene	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
Chloroethane	ND	2.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
Chloroform	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
Chloromethane	ND	3.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
2-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
4-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
cis-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
Dibromochloromethane	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
Dibromomethane	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
1,1-Dichloroethane	8.3	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
1,1-Dichloroethene	45	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
1,2-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
1,3-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
2,2-Dichloropropane	ND	2.0		µg/L	1	11/22/2017 4:15:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-26 Duplicate

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/15/2017 12:40:00 PM

Lab ID: 1711932-017

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
Hexachlorobutadiene	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
2-Hexanone	ND	10		µg/L	1	11/22/2017 4:15:00 AM	B47278
Isopropylbenzene	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
4-Isopropyltoluene	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
4-Methyl-2-pentanone	ND	10		µg/L	1	11/22/2017 4:15:00 AM	B47278
Methylene Chloride	ND	3.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
n-Butylbenzene	ND	3.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
n-Propylbenzene	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
sec-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
Styrene	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
tert-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
trans-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
Trichlorofluoromethane	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
Vinyl chloride	ND	1.0		µg/L	1	11/22/2017 4:15:00 AM	B47278
Xylenes, Total	ND	1.5		µg/L	1	11/22/2017 4:15:00 AM	B47278
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	11/22/2017 4:15:00 AM	B47278
Surr: 4-Bromofluorobenzene	99.6	70-130		%Rec	1	11/22/2017 4:15:00 AM	B47278
Surr: Dibromofluoromethane	109	70-130		%Rec	1	11/22/2017 4:15:00 AM	B47278
Surr: Toluene-d8	96.1	70-130		%Rec	1	11/22/2017 4:15:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-20

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/15/2017 1:42:00 PM

Lab ID: 1711932-018

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
Toluene	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
Ethylbenzene	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
Naphthalene	ND	2.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
1-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
2-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
Acetone	ND	10		µg/L	1	11/22/2017 4:38:00 AM	B47278
Bromobenzene	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
Bromodichloromethane	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
Bromoform	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
Bromomethane	ND	3.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
2-Butanone	ND	10		µg/L	1	11/22/2017 4:38:00 AM	B47278
Carbon disulfide	ND	10		µg/L	1	11/22/2017 4:38:00 AM	B47278
Carbon Tetrachloride	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
Chlorobenzene	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
Chloroethane	ND	2.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
Chloroform	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
Chloromethane	ND	3.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
2-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
4-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
cis-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
Dibromochloromethane	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
Dibromomethane	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
1,1-Dichloroethane	5.5	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
1,1-Dichloroethene	7.3	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
1,2-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
1,3-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
2,2-Dichloropropane	ND	2.0		µg/L	1	11/22/2017 4:38:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-20

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/15/2017 1:42:00 PM

Lab ID: 1711932-018

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
Hexachlorobutadiene	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
2-Hexanone	ND	10		µg/L	1	11/22/2017 4:38:00 AM	B47278
Isopropylbenzene	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
4-Isopropyltoluene	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
4-Methyl-2-pentanone	ND	10		µg/L	1	11/22/2017 4:38:00 AM	B47278
Methylene Chloride	ND	3.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
n-Butylbenzene	ND	3.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
n-Propylbenzene	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
sec-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
Styrene	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
tert-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
trans-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
Trichlorofluoromethane	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
Vinyl chloride	ND	1.0		µg/L	1	11/22/2017 4:38:00 AM	B47278
Xylenes, Total	ND	1.5		µg/L	1	11/22/2017 4:38:00 AM	B47278
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	11/22/2017 4:38:00 AM	B47278
Surr: 4-Bromofluorobenzene	98.8	70-130		%Rec	1	11/22/2017 4:38:00 AM	B47278
Surr: Dibromofluoromethane	107	70-130		%Rec	1	11/22/2017 4:38:00 AM	B47278
Surr: Toluene-d8	97.7	70-130		%Rec	1	11/22/2017 4:38:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-22

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/15/2017 2:10:00 PM

Lab ID: 1711932-019

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Toluene	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Ethylbenzene	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Methyl tert-butyl ether (MTBE)	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
1,2,4-Trimethylbenzene	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
1,3,5-Trimethylbenzene	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
1,2-Dichloroethane (EDC)	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
1,2-Dibromoethane (EDB)	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Naphthalene	ND	2.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
1-Methylnaphthalene	ND	4.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
2-Methylnaphthalene	ND	4.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Acetone	ND	10	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Bromobenzene	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Bromodichloromethane	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Bromoform	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Bromomethane	ND	3.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
2-Butanone	ND	10	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Carbon disulfide	ND	10	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Carbon Tetrachloride	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Chlorobenzene	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Chloroethane	ND	2.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Chloroform	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Chloromethane	ND	3.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
2-Chlorotoluene	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
4-Chlorotoluene	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
cis-1,2-DCE	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
cis-1,3-Dichloropropene	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
1,2-Dibromo-3-chloropropane	ND	2.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Dibromochloromethane	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Dibromomethane	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
1,2-Dichlorobenzene	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
1,3-Dichlorobenzene	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
1,4-Dichlorobenzene	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Dichlorodifluoromethane	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
1,1-Dichloroethane	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
1,1-Dichloroethene	2.6	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
1,2-Dichloropropane	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
1,3-Dichloropropane	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
2,2-Dichloropropane	ND	2.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-22

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/15/2017 2:10:00 PM

Lab ID: 1711932-019

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Hexachlorobutadiene	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
2-Hexanone	ND	10	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Isopropylbenzene	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
4-Isopropyltoluene	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
4-Methyl-2-pentanone	ND	10	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Methylene Chloride	ND	3.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
n-Butylbenzene	ND	3.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
n-Propylbenzene	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
sec-Butylbenzene	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Styrene	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
tert-Butylbenzene	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
1,1,1,2-Tetrachloroethane	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
1,1,2,2-Tetrachloroethane	ND	2.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Tetrachloroethene (PCE)	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
trans-1,2-DCE	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
trans-1,3-Dichloropropene	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
1,2,3-Trichlorobenzene	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
1,2,4-Trichlorobenzene	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
1,1,1-Trichloroethane	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
1,1,2-Trichloroethane	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Trichloroethene (TCE)	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Trichlorofluoromethane	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
1,2,3-Trichloropropane	ND	2.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Vinyl chloride	ND	1.0	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Xylenes, Total	ND	1.5	P	µg/L	1	11/22/2017 5:01:00 AM	B47278
Surr: 1,2-Dichloroethane-d4	108	70-130	P	%Rec	1	11/22/2017 5:01:00 AM	B47278
Surr: 4-Bromofluorobenzene	98.7	70-130	P	%Rec	1	11/22/2017 5:01:00 AM	B47278
Surr: Dibromofluoromethane	109	70-130	P	%Rec	1	11/22/2017 5:01:00 AM	B47278
Surr: Toluene-d8	97.0	70-130	P	%Rec	1	11/22/2017 5:01:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: Field Blank

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/15/2017 4:15:00 PM

Lab ID: 1711932-021

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
Toluene	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
Ethylbenzene	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
Naphthalene	ND	2.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
1-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
2-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
Acetone	14	10		µg/L	1	11/22/2017 6:11:00 AM	B47278
Bromobenzene	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
Bromodichloromethane	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
Bromoform	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
Bromomethane	ND	3.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
2-Butanone	ND	10		µg/L	1	11/22/2017 6:11:00 AM	B47278
Carbon disulfide	ND	10		µg/L	1	11/22/2017 6:11:00 AM	B47278
Carbon Tetrachloride	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
Chlorobenzene	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
Chloroethane	ND	2.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
Chloroform	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
Chloromethane	ND	3.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
2-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
4-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
cis-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
Dibromochloromethane	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
Dibromomethane	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
1,1-Dichloroethane	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
1,1-Dichloroethene	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
1,2-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
1,3-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
2,2-Dichloropropane	ND	2.0		µg/L	1	11/22/2017 6:11:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: Field Blank

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/15/2017 4:15:00 PM

Lab ID: 1711932-021

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
Hexachlorobutadiene	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
2-Hexanone	ND	10		µg/L	1	11/22/2017 6:11:00 AM	B47278
Isopropylbenzene	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
4-Isopropyltoluene	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
4-Methyl-2-pentanone	ND	10		µg/L	1	11/22/2017 6:11:00 AM	B47278
Methylene Chloride	ND	3.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
n-Butylbenzene	ND	3.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
n-Propylbenzene	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
sec-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
Styrene	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
tert-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
trans-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
Trichlorofluoromethane	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
Vinyl chloride	ND	1.0		µg/L	1	11/22/2017 6:11:00 AM	B47278
Xylenes, Total	ND	1.5		µg/L	1	11/22/2017 6:11:00 AM	B47278
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	11/22/2017 6:11:00 AM	B47278
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	11/22/2017 6:11:00 AM	B47278
Surr: Dibromofluoromethane	106	70-130		%Rec	1	11/22/2017 6:11:00 AM	B47278
Surr: Toluene-d8	96.0	70-130		%Rec	1	11/22/2017 6:11:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-40

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/16/2017 8:45:00 AM

Lab ID: 1711932-022

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
Toluene	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
Ethylbenzene	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
Naphthalene	ND	2.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
1-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
2-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
Acetone	ND	10		µg/L	1	11/22/2017 6:34:00 AM	B47278
Bromobenzene	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
Bromodichloromethane	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
Bromoform	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
Bromomethane	ND	3.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
2-Butanone	ND	10		µg/L	1	11/22/2017 6:34:00 AM	B47278
Carbon disulfide	ND	10		µg/L	1	11/22/2017 6:34:00 AM	B47278
Carbon Tetrachloride	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
Chlorobenzene	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
Chloroethane	ND	2.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
Chloroform	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
Chloromethane	ND	3.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
2-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
4-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
cis-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
Dibromochloromethane	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
Dibromomethane	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
1,1-Dichloroethane	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
1,1-Dichloroethene	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
1,2-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
1,3-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
2,2-Dichloropropane	ND	2.0		µg/L	1	11/22/2017 6:34:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-40

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/16/2017 8:45:00 AM

Lab ID: 1711932-022

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
Hexachlorobutadiene	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
2-Hexanone	ND	10		µg/L	1	11/22/2017 6:34:00 AM	B47278
Isopropylbenzene	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
4-Isopropyltoluene	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
4-Methyl-2-pentanone	ND	10		µg/L	1	11/22/2017 6:34:00 AM	B47278
Methylene Chloride	ND	3.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
n-Butylbenzene	ND	3.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
n-Propylbenzene	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
sec-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
Styrene	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
tert-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
trans-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
Trichlorofluoromethane	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
Vinyl chloride	ND	1.0		µg/L	1	11/22/2017 6:34:00 AM	B47278
Xylenes, Total	ND	1.5		µg/L	1	11/22/2017 6:34:00 AM	B47278
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	11/22/2017 6:34:00 AM	B47278
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	11/22/2017 6:34:00 AM	B47278
Surr: Dibromofluoromethane	108	70-130		%Rec	1	11/22/2017 6:34:00 AM	B47278
Surr: Toluene-d8	97.3	70-130		%Rec	1	11/22/2017 6:34:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-40 Duplicate

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/16/2017 8:45:00 AM

Lab ID: 1711932-023

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
Toluene	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
Ethylbenzene	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
Naphthalene	ND	2.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
1-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
2-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
Acetone	ND	10		µg/L	1	11/22/2017 6:58:00 AM	B47278
Bromobenzene	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
Bromodichloromethane	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
Bromoform	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
Bromomethane	ND	3.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
2-Butanone	ND	10		µg/L	1	11/22/2017 6:58:00 AM	B47278
Carbon disulfide	ND	10		µg/L	1	11/22/2017 6:58:00 AM	B47278
Carbon Tetrachloride	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
Chlorobenzene	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
Chloroethane	ND	2.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
Chloroform	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
Chloromethane	ND	3.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
2-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
4-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
cis-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
Dibromochloromethane	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
Dibromomethane	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
1,1-Dichloroethane	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
1,1-Dichloroethene	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
1,2-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
1,3-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
2,2-Dichloropropane	ND	2.0		µg/L	1	11/22/2017 6:58:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-40 Duplicate

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/16/2017 8:45:00 AM

Lab ID: 1711932-023

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
Hexachlorobutadiene	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
2-Hexanone	ND	10		µg/L	1	11/22/2017 6:58:00 AM	B47278
Isopropylbenzene	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
4-Isopropyltoluene	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
4-Methyl-2-pentanone	ND	10		µg/L	1	11/22/2017 6:58:00 AM	B47278
Methylene Chloride	ND	3.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
n-Butylbenzene	ND	3.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
n-Propylbenzene	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
sec-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
Styrene	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
tert-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
trans-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
Trichlorofluoromethane	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
Vinyl chloride	ND	1.0		µg/L	1	11/22/2017 6:58:00 AM	B47278
Xylenes, Total	ND	1.5		µg/L	1	11/22/2017 6:58:00 AM	B47278
Surr: 1,2-Dichloroethane-d4	111	70-130		%Rec	1	11/22/2017 6:58:00 AM	B47278
Surr: 4-Bromofluorobenzene	98.0	70-130		%Rec	1	11/22/2017 6:58:00 AM	B47278
Surr: Dibromofluoromethane	109	70-130		%Rec	1	11/22/2017 6:58:00 AM	B47278
Surr: Toluene-d8	97.1	70-130		%Rec	1	11/22/2017 6:58:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-41

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/16/2017 9:36:00 AM

Lab ID: 1711932-024

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
Toluene	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
Ethylbenzene	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
Naphthalene	ND	2.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
1-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
2-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
Acetone	ND	10		µg/L	1	11/22/2017 7:22:00 AM	B47278
Bromobenzene	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
Bromodichloromethane	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
Bromoform	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
Bromomethane	ND	3.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
2-Butanone	ND	10		µg/L	1	11/22/2017 7:22:00 AM	B47278
Carbon disulfide	ND	10		µg/L	1	11/22/2017 7:22:00 AM	B47278
Carbon Tetrachloride	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
Chlorobenzene	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
Chloroethane	ND	2.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
Chloroform	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
Chloromethane	ND	3.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
2-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
4-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
cis-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
Dibromochloromethane	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
Dibromomethane	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
1,1-Dichloroethane	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
1,1-Dichloroethene	1.3	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
1,2-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
1,3-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
2,2-Dichloropropane	ND	2.0		µg/L	1	11/22/2017 7:22:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-41

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/16/2017 9:36:00 AM

Lab ID: 1711932-024

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
Hexachlorobutadiene	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
2-Hexanone	ND	10		µg/L	1	11/22/2017 7:22:00 AM	B47278
Isopropylbenzene	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
4-Isopropyltoluene	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
4-Methyl-2-pentanone	ND	10		µg/L	1	11/22/2017 7:22:00 AM	B47278
Methylene Chloride	ND	3.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
n-Butylbenzene	ND	3.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
n-Propylbenzene	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
sec-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
Styrene	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
tert-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
trans-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
Trichlorofluoromethane	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
Vinyl chloride	ND	1.0		µg/L	1	11/22/2017 7:22:00 AM	B47278
Xylenes, Total	ND	1.5		µg/L	1	11/22/2017 7:22:00 AM	B47278
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	11/22/2017 7:22:00 AM	B47278
Surr: 4-Bromofluorobenzene	98.4	70-130		%Rec	1	11/22/2017 7:22:00 AM	B47278
Surr: Dibromofluoromethane	106	70-130		%Rec	1	11/22/2017 7:22:00 AM	B47278
Surr: Toluene-d8	95.5	70-130		%Rec	1	11/22/2017 7:22:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-42

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/16/2017 10:18:00 AM

Lab ID: 1711932-025

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
Toluene	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
Ethylbenzene	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
Naphthalene	ND	2.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
1-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
2-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
Acetone	ND	10		µg/L	1	11/22/2017 7:45:00 AM	B47278
Bromobenzene	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
Bromodichloromethane	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
Bromoform	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
Bromomethane	ND	3.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
2-Butanone	ND	10		µg/L	1	11/22/2017 7:45:00 AM	B47278
Carbon disulfide	ND	10		µg/L	1	11/22/2017 7:45:00 AM	B47278
Carbon Tetrachloride	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
Chlorobenzene	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
Chloroethane	ND	2.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
Chloroform	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
Chloromethane	ND	3.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
2-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
4-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
cis-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
Dibromochloromethane	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
Dibromomethane	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
1,1-Dichloroethane	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
1,1-Dichloroethene	1.1	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
1,2-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
1,3-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
2,2-Dichloropropane	ND	2.0		µg/L	1	11/22/2017 7:45:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-42

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/16/2017 10:18:00 AM

Lab ID: 1711932-025

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
Hexachlorobutadiene	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
2-Hexanone	ND	10		µg/L	1	11/22/2017 7:45:00 AM	B47278
Isopropylbenzene	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
4-Isopropyltoluene	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
4-Methyl-2-pentanone	ND	10		µg/L	1	11/22/2017 7:45:00 AM	B47278
Methylene Chloride	ND	3.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
n-Butylbenzene	ND	3.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
n-Propylbenzene	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
sec-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
Styrene	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
tert-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
trans-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
Trichlorofluoromethane	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
Vinyl chloride	ND	1.0		µg/L	1	11/22/2017 7:45:00 AM	B47278
Xylenes, Total	ND	1.5		µg/L	1	11/22/2017 7:45:00 AM	B47278
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	11/22/2017 7:45:00 AM	B47278
Surr: 4-Bromofluorobenzene	98.4	70-130		%Rec	1	11/22/2017 7:45:00 AM	B47278
Surr: Dibromofluoromethane	109	70-130		%Rec	1	11/22/2017 7:45:00 AM	B47278
Surr: Toluene-d8	96.4	70-130		%Rec	1	11/22/2017 7:45:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-39

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/16/2017 11:05:00 AM

Lab ID: 1711932-026

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
Toluene	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
Ethylbenzene	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
Naphthalene	ND	2.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
1-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
2-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
Acetone	ND	10		µg/L	1	11/22/2017 8:09:00 AM	B47278
Bromobenzene	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
Bromodichloromethane	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
Bromoform	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
Bromomethane	ND	3.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
2-Butanone	ND	10		µg/L	1	11/22/2017 8:09:00 AM	B47278
Carbon disulfide	ND	10		µg/L	1	11/22/2017 8:09:00 AM	B47278
Carbon Tetrachloride	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
Chlorobenzene	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
Chloroethane	ND	2.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
Chloroform	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
Chloromethane	ND	3.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
2-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
4-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
cis-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
Dibromochloromethane	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
Dibromomethane	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
1,1-Dichloroethane	3.8	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
1,1-Dichloroethene	31	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
1,2-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
1,3-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
2,2-Dichloropropane	ND	2.0		µg/L	1	11/22/2017 8:09:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-39

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/16/2017 11:05:00 AM

Lab ID: 1711932-026

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
Hexachlorobutadiene	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
2-Hexanone	ND	10		µg/L	1	11/22/2017 8:09:00 AM	B47278
Isopropylbenzene	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
4-Isopropyltoluene	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
4-Methyl-2-pentanone	ND	10		µg/L	1	11/22/2017 8:09:00 AM	B47278
Methylene Chloride	ND	3.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
n-Butylbenzene	ND	3.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
n-Propylbenzene	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
sec-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
Styrene	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
tert-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
trans-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
Trichlorofluoromethane	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
Vinyl chloride	ND	1.0		µg/L	1	11/22/2017 8:09:00 AM	B47278
Xylenes, Total	ND	1.5		µg/L	1	11/22/2017 8:09:00 AM	B47278
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	11/22/2017 8:09:00 AM	B47278
Surr: 4-Bromofluorobenzene	98.1	70-130		%Rec	1	11/22/2017 8:09:00 AM	B47278
Surr: Dibromofluoromethane	108	70-130		%Rec	1	11/22/2017 8:09:00 AM	B47278
Surr: Toluene-d8	97.0	70-130		%Rec	1	11/22/2017 8:09:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MPE-27

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/16/2017 11:25:00 AM

Lab ID: 1711932-027

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES				Analyst: NSB			
Benzene	3900	200		µg/L	200	11/22/2017 10:31:00 AM	B47308
Toluene	7400	200		µg/L	200	11/22/2017 10:31:00 AM	B47308
Ethylbenzene	390	10		µg/L	10	11/20/2017 6:18:29 PM	R47232
Xylenes, Total	3400	400		µg/L	200	11/22/2017 10:31:00 AM	B47308
Surr: 4-Bromofluorobenzene	126	72.5-140		%Rec	200	11/22/2017 10:31:00 AM	B47308

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-13

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/16/2017 12:10:00 PM

Lab ID: 1711932-028

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	1.0		µg/L	1	11/20/2017 7:06:09 PM	R47232
Toluene	ND	1.0		µg/L	1	11/20/2017 7:06:09 PM	R47232
Ethylbenzene	ND	1.0		µg/L	1	11/20/2017 7:06:09 PM	R47232
Xylenes, Total	ND	2.0		µg/L	1	11/20/2017 7:06:09 PM	R47232
Surr: 4-Bromofluorobenzene	122	72.5-140		%Rec	1	11/20/2017 7:06:09 PM	R47232

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: MW-24D

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/16/2017 1:12:00 PM

Lab ID: 1711932-029

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	1.0		µg/L	1	11/20/2017 7:29:56 PM	R47232
Toluene	ND	1.0		µg/L	1	11/20/2017 7:29:56 PM	R47232
Ethylbenzene	ND	1.0		µg/L	1	11/20/2017 7:29:56 PM	R47232
Xylenes, Total	ND	2.0		µg/L	1	11/20/2017 7:29:56 PM	R47232
Surr: 4-Bromofluorobenzene	118	72.5-140		%Rec	1	11/20/2017 7:29:56 PM	R47232

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: ESP Equipment Rinsate

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/16/2017 1:30:00 PM

Lab ID: 1711932-030

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	1.0		µg/L	1	11/20/2017 7:53:42 PM	R47232
Toluene	1.1	1.0		µg/L	1	11/20/2017 7:53:42 PM	R47232
Ethylbenzene	ND	1.0		µg/L	1	11/20/2017 7:53:42 PM	R47232
Xylenes, Total	ND	2.0		µg/L	1	11/20/2017 7:53:42 PM	R47232
Surr: 4-Bromofluorobenzene	114	72.5-140		%Rec	1	11/20/2017 7:53:42 PM	R47232

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: Field Blank

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/16/2017 12:30:00 PM

Lab ID: 1711932-031

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
Toluene	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
Ethylbenzene	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
Naphthalene	ND	2.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
1-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
2-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
Acetone	18	10		µg/L	1	11/22/2017 8:32:00 AM	B47278
Bromobenzene	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
Bromodichloromethane	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
Bromoform	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
Bromomethane	ND	3.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
2-Butanone	ND	10		µg/L	1	11/22/2017 8:32:00 AM	B47278
Carbon disulfide	ND	10		µg/L	1	11/22/2017 8:32:00 AM	B47278
Carbon Tetrachloride	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
Chlorobenzene	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
Chloroethane	ND	2.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
Chloroform	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
Chloromethane	ND	3.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
2-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
4-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
cis-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
Dibromochloromethane	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
Dibromomethane	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
1,1-Dichloroethane	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
1,1-Dichloroethene	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
1,2-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
1,3-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
2,2-Dichloropropane	ND	2.0		µg/L	1	11/22/2017 8:32:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: Field Blank

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 11/16/2017 12:30:00 PM

Lab ID: 1711932-031

Matrix: AQUEOUS

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
Hexachlorobutadiene	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
2-Hexanone	ND	10		µg/L	1	11/22/2017 8:32:00 AM	B47278
Isopropylbenzene	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
4-Isopropyltoluene	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
4-Methyl-2-pentanone	ND	10		µg/L	1	11/22/2017 8:32:00 AM	B47278
Methylene Chloride	ND	3.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
n-Butylbenzene	ND	3.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
n-Propylbenzene	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
sec-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
Styrene	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
tert-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
trans-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
Trichlorofluoromethane	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
Vinyl chloride	ND	1.0		µg/L	1	11/22/2017 8:32:00 AM	B47278
Xylenes, Total	ND	1.5		µg/L	1	11/22/2017 8:32:00 AM	B47278
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	11/22/2017 8:32:00 AM	B47278
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	1	11/22/2017 8:32:00 AM	B47278
Surr: Dibromofluoromethane	106	70-130		%Rec	1	11/22/2017 8:32:00 AM	B47278
Surr: Toluene-d8	97.2	70-130		%Rec	1	11/22/2017 8:32:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: Trip Blank

Project: Earth Con Consultants Inc TWP Roswell

Collection Date:

Lab ID: 1711932-032

Matrix: TRIP BLANK

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
Toluene	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
Ethylbenzene	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
Naphthalene	ND	2.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
1-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
2-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
Acetone	ND	10		µg/L	1	11/22/2017 8:56:00 AM	B47278
Bromobenzene	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
Bromodichloromethane	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
Bromoform	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
Bromomethane	ND	3.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
2-Butanone	ND	10		µg/L	1	11/22/2017 8:56:00 AM	B47278
Carbon disulfide	ND	10		µg/L	1	11/22/2017 8:56:00 AM	B47278
Carbon Tetrachloride	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
Chlorobenzene	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
Chloroethane	ND	2.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
Chloroform	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
Chloromethane	ND	3.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
2-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
4-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
cis-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
Dibromochloromethane	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
Dibromomethane	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
1,1-Dichloroethane	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
1,1-Dichloroethene	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
1,2-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
1,3-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
2,2-Dichloropropane	ND	2.0		µg/L	1	11/22/2017 8:56:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: Trip Blank

Project: Earth Con Consultants Inc TWP Roswell

Collection Date:

Lab ID: 1711932-032

Matrix: TRIP BLANK

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
Hexachlorobutadiene	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
2-Hexanone	ND	10		µg/L	1	11/22/2017 8:56:00 AM	B47278
Isopropylbenzene	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
4-Isopropyltoluene	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
4-Methyl-2-pentanone	ND	10		µg/L	1	11/22/2017 8:56:00 AM	B47278
Methylene Chloride	ND	3.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
n-Butylbenzene	ND	3.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
n-Propylbenzene	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
sec-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
Styrene	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
tert-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
trans-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
Trichlorofluoromethane	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
Vinyl chloride	ND	1.0		µg/L	1	11/22/2017 8:56:00 AM	B47278
Xylenes, Total	ND	1.5		µg/L	1	11/22/2017 8:56:00 AM	B47278
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	11/22/2017 8:56:00 AM	B47278
Surr: 4-Bromofluorobenzene	97.8	70-130		%Rec	1	11/22/2017 8:56:00 AM	B47278
Surr: Dibromofluoromethane	108	70-130		%Rec	1	11/22/2017 8:56:00 AM	B47278
Surr: Toluene-d8	96.0	70-130		%Rec	1	11/22/2017 8:56:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: Trip Blank

Project: Earth Con Consultants Inc TWP Roswell

Collection Date:

Lab ID: 1711932-033

Matrix: TRIP BLANK

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
Toluene	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
Ethylbenzene	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
Naphthalene	ND	2.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
1-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
2-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
Acetone	ND	10		µg/L	1	11/22/2017 9:19:00 AM	B47278
Bromobenzene	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
Bromodichloromethane	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
Bromoform	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
Bromomethane	ND	3.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
2-Butanone	ND	10		µg/L	1	11/22/2017 9:19:00 AM	B47278
Carbon disulfide	ND	10		µg/L	1	11/22/2017 9:19:00 AM	B47278
Carbon Tetrachloride	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
Chlorobenzene	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
Chloroethane	ND	2.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
Chloroform	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
Chloromethane	ND	3.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
2-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
4-Chlorotoluene	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
cis-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
Dibromochloromethane	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
Dibromomethane	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
1,1-Dichloroethane	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
1,1-Dichloroethene	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
1,2-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
1,3-Dichloropropane	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
2,2-Dichloropropane	ND	2.0		µg/L	1	11/22/2017 9:19:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711932

Date Reported: 11/28/2017

CLIENT: Earth Con

Client Sample ID: Trip Blank

Project: Earth Con Consultants Inc TWP Roswell

Collection Date:

Lab ID: 1711932-033

Matrix: TRIP BLANK

Received Date: 11/17/2017 10:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
Hexachlorobutadiene	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
2-Hexanone	ND	10		µg/L	1	11/22/2017 9:19:00 AM	B47278
Isopropylbenzene	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
4-Isopropyltoluene	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
4-Methyl-2-pentanone	ND	10		µg/L	1	11/22/2017 9:19:00 AM	B47278
Methylene Chloride	ND	3.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
n-Butylbenzene	ND	3.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
n-Propylbenzene	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
sec-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
Styrene	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
tert-Butylbenzene	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
trans-1,2-DCE	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
Trichlorofluoromethane	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
Vinyl chloride	ND	1.0		µg/L	1	11/22/2017 9:19:00 AM	B47278
Xylenes, Total	ND	1.5		µg/L	1	11/22/2017 9:19:00 AM	B47278
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	11/22/2017 9:19:00 AM	B47278
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	11/22/2017 9:19:00 AM	B47278
Surr: Dibromofluoromethane	107	70-130		%Rec	1	11/22/2017 9:19:00 AM	B47278
Surr: Toluene-d8	97.2	70-130		%Rec	1	11/22/2017 9:19:00 AM	B47278

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1711932

28-Nov-17

Client: Earth Con

Project: Earth Con Consultants Inc TWP Roswell Station

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBW	Batch ID:	R47232	RunNo:	47232					
Prep Date:		Analysis Date:	11/20/2017	SeqNo:	1507028	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	24		20.00		120	72.5	140			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSW	Batch ID:	R47232	RunNo:	47232					
Prep Date:		Analysis Date:	11/20/2017	SeqNo:	1507029	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	91.7	73.9	120			
Toluene	19	1.0	20.00	0	97.0	77.3	117			
Ethylbenzene	19	1.0	20.00	0	96.1	78.8	119			
Xylenes, Total	58	2.0	60.00	0	96.0	76.9	121			
Surr: 4-Bromofluorobenzene	25		20.00		126	72.5	140			

Sample ID	1711932-001AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	MW-37	Batch ID:	R47232	RunNo:	47232					
Prep Date:		Analysis Date:	11/20/2017	SeqNo:	1507031	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.3	75	121			
Toluene	20	1.0	20.00	0	100	78.1	119			
Ethylbenzene	20	1.0	20.00	0	99.8	78.8	125			
Xylenes, Total	60	2.0	60.00	0	101	76.4	128			
Surr: 4-Bromofluorobenzene	25		20.00		125	72.5	140			

Sample ID	1711932-001AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	MW-37	Batch ID:	R47232	RunNo:	47232					
Prep Date:		Analysis Date:	11/20/2017	SeqNo:	1507032	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	75	121	4.48	20	
Toluene	21	1.0	20.00	0	104	78.1	119	3.92	20	
Ethylbenzene	20	1.0	20.00	0	101	78.8	125	0.975	20	
Xylenes, Total	60	2.0	60.00	0	100	76.4	128	0.512	20	
Surr: 4-Bromofluorobenzene	25		20.00		126	72.5	140	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1711932

28-Nov-17

Client: Earth Con

Project: Earth Con Consultants Inc TWP Roswell Station

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBW	Batch ID:	B47308	RunNo:	47308					
Prep Date:		Analysis Date:	11/22/2017	SeqNo:	1509471	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	24		20.00		119	72.5	140			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSW	Batch ID:	B47308	RunNo:	47308					
Prep Date:		Analysis Date:	11/22/2017	SeqNo:	1509472	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	91.8	73.9	120			
Toluene	19	1.0	20.00	0	92.9	77.3	117			
Xylenes, Total	55	2.0	60.00	0	92.2	76.9	121			
Surr: 4-Bromofluorobenzene	24		20.00		120	72.5	140			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1711932

28-Nov-17

Client: Earth Con

Project: Earth Con Consultants Inc TWP Roswell Station

Sample ID	100ng lcs		SampType:	LCS		TestCode:	EPA Method 8260B: VOLATILES			
Client ID:	LCSW		Batch ID:	R47278		RunNo:	47278			
Prep Date:			Analysis Date:	11/21/2017		SeqNo:	1508105	Units:	%Rec	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	11		10.00		111	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	9.8		10.00		97.5	70	130			

Sample ID	rb		SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES			
Client ID:	PBW		Batch ID:	R47278		RunNo:	47278			
Prep Date:			Analysis Date:	11/21/2017		SeqNo:	1508106	Units:	%Rec	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	11		10.00		109	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	9.5		10.00		95.1	70	130			

Sample ID	100ng lcs2		SampType:	LCS		TestCode:	EPA Method 8260B: VOLATILES			
Client ID:	LCSW		Batch ID:	B47278		RunNo:	47278			
Prep Date:			Analysis Date:	11/22/2017		SeqNo:	1508234	Units:	µg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	19	1.0	20.00	0	93.6	70	130			
Chlorobenzene	19	1.0	20.00	0	95.1	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	107	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	99.7	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		109	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	9.8		10.00		97.6	70	130			

Sample ID	rb2		SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES			
Client ID:	PBW		Batch ID:	B47278		RunNo:	47278			
Prep Date:			Analysis Date:	11/22/2017		SeqNo:	1508235	Units:	µg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1711932

28-Nov-17

Client: Earth Con

Project: Earth Con Consultants Inc TWP Roswell Station

Sample ID	rb2	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	B47278	RunNo:	47278					
Prep Date:		Analysis Date:	11/22/2017	SeqNo:	1508235	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1711932

28-Nov-17

Client: Earth Con

Project: Earth Con Consultants Inc TWP Roswell Station

Sample ID rb2	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: B47278			RunNo: 47278						
Prep Date:	Analysis Date: 11/22/2017			SeqNo: 1508235		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.7	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	9.8		10.00		97.5	70	130			

Sample ID 1711932-019ams	SampType: MS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: MW-22	Batch ID: B47278			RunNo: 47278						
Prep Date:	Analysis Date: 11/22/2017			SeqNo: 1508241		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0.07600	108	70	130			P
Toluene	20	1.0	20.00	0.1340	101	70	130			P
Chlorobenzene	21	1.0	20.00	0	103	70	130			P
1,1-Dichloroethene	25	1.0	20.00	2.632	114	70	130			P
Trichloroethene (TCE)	21	1.0	20.00	0	104	70	130			P
Surr: 1,2-Dichloroethane-d4	11		10.00		108	70	130			P
Surr: 4-Bromofluorobenzene	10		10.00		99.5	70	130			P
Surr: Dibromofluoromethane	11		10.00		109	70	130			P

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1711932

28-Nov-17

Client: Earth Con

Project: Earth Con Consultants Inc TWP Roswell Station

Sample ID	1711932-019ams	SampType:	MS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	MW-22	Batch ID:	B47278	RunNo:	47278					
Prep Date:		Analysis Date:	11/22/2017	SeqNo:	1508241	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Toluene-d8	9.7		10.00		97.1	70	130			P

Sample ID	1711932-019amsd	SampType:	MSD	TestCode: EPA Method 8260B: VOLATILES						
Client ID:	MW-22	Batch ID:	B47278	RunNo: 47278						
Prep Date:		Analysis Date:	11/22/2017	SeqNo: 1508242		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0.07600	102	70	130	5.80	20	P
Toluene	19	1.0	20.00	0.1340	93.8	70	130	6.87	20	P
Chlorobenzene	19	1.0	20.00	0	97.1	70	130	5.65	20	P
1,1-Dichloroethene	24	1.0	20.00	2.632	105	70	130	7.48	20	P
Trichloroethene (TCE)	20	1.0	20.00	0	99.4	70	130	4.59	20	P
Surr: 1,2-Dichloroethane-d4	11		10.00		108	70	130	0	0	P
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130	0	0	P
Surr: Dibromofluoromethane	11		10.00		108	70	130	0	0	P
Surr: Toluene-d8	9.6		10.00		96.2	70	130	0	0	P

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: **EARTH CON**

Work Order Number: 1711932

RcptNo: 1

Received By: **Dennis Suazo** 11/17/2017 10:10:00 AM

Completed By: **Michelle Garcia** 11/17/2017 11:19:22 AM

Reviewed By: **ENM** 11/17/17

Michelle Garcia

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? UPS

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☒ # of preserved bottles checked for pH: _____
(<2 or >12 unless noted)
12. Does paperwork match bottle labels? Yes ☒ No ☐ Adjusted? _____
(Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met? Yes ☒ No ☐ Checked by: _____
(If no, notify customer for authorization.)

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:	Date:
By Whom:	Via: <input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	
Client Instructions:	

17. Additional remarks: MW-21 - one VOA broken upon arrival 11/17/17

18. Cooler Information MW-29, MW-19, MW-22, Field Blank - had air bubbles in all 3 VOCs. 11/17

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.3	Good	Yes			

Chain-of-Custody Record

Client: EarthCon Consultants, Inc.
 ATTN: Rachel Andrews
 Mailing Address: 1880 West Oak Parkway Bldg. 100
Suite 106, Marietta, GA. 30062
 Phone #: 770.973.2100

email: Starnese.earthcon.com
 QA/QC Package: Randrow@aearthcon.com
☒ Standard ☐ Level 4 (Full Validation)
☐ NELAP ☐ Other _____
☐ EDD (Type) _____

Date	Time	Matrix	Sample Request ID
11/15/17	10:35	H ₂ O	MW-16
11/15/17	10:35		MW-16 Equipment Rinse
11/15/17	11:39		MW-14
11/15/17	12:40		MW-26
11/15/17	12:40		MW-26 Duplicate
11/15/17	13:42		MW-20
11/15/17	14:10		MW-22
11/15/17	14:10		MW-22 MS/MSD
11/15/17	16:15		Field Blank
11/16/17	0845		MW-40
11/16/17	0845		MW-40 Duplicate
11/16/17	0936		MW-41

Relinquished by: [Signature] Date: 11/16/17 Time: 16:00
 Relinquished by: [Signature] Date: 11/16/17 Time: 16:00

Turn-Around Time: ☒ Standard ☐ Rush
 Project Name: EarthCon Consultants Inc.
TWP Roswell Station 9
 Project #: 02.2012.0037.00
5W Monitoring 2017

Project Manager: J.D. Haines, PE
 Sampler: CM Barnhill, PE
 On Ice: ☒ Yes ☐ No
 Sample Temperature: 5.4-1.1 (CF) = 4.3

Container Type and #	Preservative Type	HEAL No.
<u>300mL VOA's</u>	<u>HCL</u>	<u>1711932</u>
		<u>-013</u>
		<u>-014</u>
		<u>-015</u>
		<u>-016</u>
		<u>-017</u>
		<u>-018</u>
		<u>-019</u>
		<u>-020 m</u>
		<u>-021</u>
		<u>-022</u>
		<u>-023</u>
		<u>-024</u>

Received by: [Signature] Date: 11/17/17 Time: 1010
 Received by: _____ Date: _____ Time: _____



HALL ENVIRONMENTAL ANALYSIS LABORATORY
 www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request										
<input checked="" type="checkbox"/> BTEX + MTBE + TMB'S (8021)	<input checked="" type="checkbox"/> BTEX + MTBE + TPH (Gas only)	<input type="checkbox"/> TPH 8015B (GRO / DRO / MRO)	<input type="checkbox"/> TPH (Method 418.1)	<input type="checkbox"/> EDB (Method 504.1)	<input type="checkbox"/> PAH's (8310 or 8270 SIMS)	<input type="checkbox"/> RCRA 8 Metals	<input type="checkbox"/> Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	<input type="checkbox"/> 8081 Pesticides / 8082 PCB's	<input checked="" type="checkbox"/> 8260B (VOA) Full List	<input type="checkbox"/> 8270 (Semi-VOA)

Remarks: Any Questions Please Call CMD
at 505.626.1615 or
Rachel Andrews
770.973.2100

1 page of 2

Appendix D

Analytical Data Packages – SVE and Groundwater Treatment System Sampling



17-Apr-2017

Rachel Andrews
EarthCon
188 West Oak Parkway
Suite 106
Marietta, GA 30062

Tel: (678) 569-2892
Fax: (770) 973-7395

Re: TWP Roswell Station #9

Work Order: **1704041**

Dear Rachel,

ALS Environmental received 1 sample on 03-Apr-2017 11:06 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 14.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Shawn Smythe

Electronically approved by: Chris Gibson

Shawn Smythe
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, Ohio 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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Environmental

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

Date: 17-Apr-17

Client: EarthCon
Project: TWP Roswell Station #9
Work Order: 1704041

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1704041-01	TWP STATION 9 EAST BAKER FURNACE	Air		3/27/2017	4/3/2017 11:06	<input type="checkbox"/>

ALS Environmental

Date: 17-Apr-17

Client: EarthCon
Project: TWP Roswell Station #9
Work Order: 1704041

Case Narrative

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Results relate only to the items tested and are not blank corrected unless indicated.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

ALS Environmental

Date: 17-Apr-17

Client: EarthCon

Project: TWP Roswell Station #9

Work Order: 1704041

Sample ID: TWP STATION 9 EAST BAKER FURNACE

Lab ID: 1704041-01

Collection Date: 3/27/2017

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TO-15 BY GC/MS			ETO-15		Analyst: MRJ	
1,1,1-Trichloroethane	ND		20	ppbv	40	4/15/2017 10:10 AM
1,1,2,2-Tetrachloroethane	ND		20	ppbv	40	4/15/2017 10:10 AM
1,1,2-Trichloroethane	ND		20	ppbv	40	4/15/2017 10:10 AM
1,1-Dichloroethane	ND		20	ppbv	40	4/15/2017 10:10 AM
1,1-Dichloroethene	ND		20	ppbv	40	4/15/2017 10:10 AM
1,2,4-Trichlorobenzene	ND		20	ppbv	40	4/15/2017 10:10 AM
1,2,4-Trimethylbenzene	ND		20	ppbv	40	4/15/2017 10:10 AM
1,2-Dibromoethane	ND		20	ppbv	40	4/15/2017 10:10 AM
1,2-Dichlorobenzene	ND		20	ppbv	40	4/15/2017 10:10 AM
1,2-Dichloroethane	ND		20	ppbv	40	4/15/2017 10:10 AM
1,2-Dichloropropane	ND		20	ppbv	40	4/15/2017 10:10 AM
1,3,5-Trimethylbenzene	ND		20	ppbv	40	4/15/2017 10:10 AM
1,3-Butadiene	ND		20	ppbv	40	4/15/2017 10:10 AM
1,3-Dichlorobenzene	ND		20	ppbv	40	4/15/2017 10:10 AM
1,4-Dichlorobenzene	ND		20	ppbv	40	4/15/2017 10:10 AM
1,4-Dioxane	ND		40	ppbv	40	4/15/2017 10:10 AM
2-Butanone	ND		20	ppbv	40	4/15/2017 10:10 AM
2-Hexanone	ND		20	ppbv	40	4/15/2017 10:10 AM
2-Propanol	ND		40	ppbv	40	4/15/2017 10:10 AM
4-Ethyltoluene	ND		20	ppbv	40	4/15/2017 10:10 AM
4-Methyl-2-pentanone	ND		20	ppbv	40	4/15/2017 10:10 AM
Acetone	ND		40	ppbv	40	4/15/2017 10:10 AM
Benzene	57		20	ppbv	40	4/15/2017 10:10 AM
Benzyl chloride	ND		20	ppbv	40	4/15/2017 10:10 AM
Bromodichloromethane	ND		20	ppbv	40	4/15/2017 10:10 AM
Bromoform	ND		20	ppbv	40	4/15/2017 10:10 AM
Bromomethane	ND		20	ppbv	40	4/15/2017 10:10 AM
Carbon disulfide	ND		20	ppbv	40	4/15/2017 10:10 AM
Carbon tetrachloride	ND		20	ppbv	40	4/15/2017 10:10 AM
Chlorobenzene	ND		20	ppbv	40	4/15/2017 10:10 AM
Chloroethane	ND		20	ppbv	40	4/15/2017 10:10 AM
Chloroform	ND		8.0	ppbv	40	4/15/2017 10:10 AM
Chloromethane	ND		20	ppbv	40	4/15/2017 10:10 AM
cis-1,2-Dichloroethene	ND		20	ppbv	40	4/15/2017 10:10 AM
cis-1,3-Dichloropropene	ND		20	ppbv	40	4/15/2017 10:10 AM
Cumene	ND		20	ppbv	40	4/15/2017 10:10 AM
Cyclohexane	2,000		250	ppbv	500	4/15/2017 03:21 AM
Dibromochloromethane	ND		20	ppbv	40	4/15/2017 10:10 AM
Dichlorodifluoromethane	ND		20	ppbv	40	4/15/2017 10:10 AM

Note:

ALS Environmental

Date: 17-Apr-17

Client: EarthCon

Project: TWP Roswell Station #9

Work Order: 1704041

Sample ID: TWP STATION 9 EAST BAKER FURNACE

Lab ID: 1704041-01

Collection Date: 3/27/2017

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Ethyl acetate	ND		20	ppbv	40	4/15/2017 10:10 AM
Ethylbenzene	ND		20	ppbv	40	4/15/2017 10:10 AM
Freon 113	ND		20	ppbv	40	4/15/2017 10:10 AM
Freon 114	ND		20	ppbv	40	4/15/2017 10:10 AM
Heptane	1,500		250	ppbv	500	4/15/2017 03:21 AM
Hexachlorobutadiene	ND		20	ppbv	40	4/15/2017 10:10 AM
Hexane	3,200		250	ppbv	500	4/15/2017 03:21 AM
m,p-Xylene	34		20	ppbv	40	4/15/2017 10:10 AM
Methylene chloride	ND		20	ppbv	40	4/15/2017 10:10 AM
MTBE	ND		20	ppbv	40	4/15/2017 10:10 AM
Naphthalene	ND		8.0	ppbv	40	4/15/2017 10:10 AM
o-Xylene	ND		20	ppbv	40	4/15/2017 10:10 AM
Propene	ND		20	ppbv	40	4/15/2017 10:10 AM
Styrene	ND		20	ppbv	40	4/15/2017 10:10 AM
Tetrachloroethene	ND		20	ppbv	40	4/15/2017 10:10 AM
Tetrahydrofuran	ND		20	ppbv	40	4/15/2017 10:10 AM
Toluene	66		20	ppbv	40	4/15/2017 10:10 AM
trans-1,2-Dichloroethene	ND		20	ppbv	40	4/15/2017 10:10 AM
trans-1,3-Dichloropropene	ND		20	ppbv	40	4/15/2017 10:10 AM
Trichloroethene	ND		8.0	ppbv	40	4/15/2017 10:10 AM
Trichlorofluoromethane	ND		20	ppbv	40	4/15/2017 10:10 AM
Vinyl acetate	ND		20	ppbv	40	4/15/2017 10:10 AM
Vinyl chloride	ND		20	ppbv	40	4/15/2017 10:10 AM
Surr: Bromofluorobenzene	94.1		60-140	%REC	40	4/15/2017 10:10 AM
TO-15 BY GC/MS			ETO-15		Analyst: MRJ	
1,1,1-Trichloroethane	ND		109	µg/m3	40	4/15/2017 10:10 AM
1,1,2,2-Tetrachloroethane	ND		137	µg/m3	40	4/15/2017 10:10 AM
1,1,2-Trichloroethane	ND		109	µg/m3	40	4/15/2017 10:10 AM
1,1-Dichloroethane	ND		80.9	µg/m3	40	4/15/2017 10:10 AM
1,1-Dichloroethene	ND		79.3	µg/m3	40	4/15/2017 10:10 AM
1,2,4-Trichlorobenzene	ND		148	µg/m3	40	4/15/2017 10:10 AM
1,2,4-Trimethylbenzene	ND		98.3	µg/m3	40	4/15/2017 10:10 AM
1,2-Dibromoethane	ND		154	µg/m3	40	4/15/2017 10:10 AM
1,2-Dichlorobenzene	ND		120	µg/m3	40	4/15/2017 10:10 AM
1,2-Dichloroethane	ND		80.9	µg/m3	40	4/15/2017 10:10 AM
1,2-Dichloropropane	ND		92.4	µg/m3	40	4/15/2017 10:10 AM
1,3,5-Trimethylbenzene	ND		98.3	µg/m3	40	4/15/2017 10:10 AM
1,3-Butadiene	ND		44.2	µg/m3	40	4/15/2017 10:10 AM
1,3-Dichlorobenzene	ND		120	µg/m3	40	4/15/2017 10:10 AM
1,4-Dichlorobenzene	ND		120	µg/m3	40	4/15/2017 10:10 AM

Note:

ALS Environmental

Date: 17-Apr-17

Client: EarthCon

Project: TWP Roswell Station #9

Work Order: 1704041

Sample ID: TWP STATION 9 EAST BAKER FURNACE

Lab ID: 1704041-01

Collection Date: 3/27/2017

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,4-Dioxane	ND		144	µg/m3	40	4/15/2017 10:10 AM
2-Butanone	ND		59.0	µg/m3	40	4/15/2017 10:10 AM
2-Hexanone	ND		81.9	µg/m3	40	4/15/2017 10:10 AM
2-Propanol	ND		98.3	µg/m3	40	4/15/2017 10:10 AM
4-Ethyltoluene	ND		98.3	µg/m3	40	4/15/2017 10:10 AM
4-Methyl-2-pentanone	ND		81.9	µg/m3	40	4/15/2017 10:10 AM
Acetone	ND		95.0	µg/m3	40	4/15/2017 10:10 AM
Benzene	181		63.9	µg/m3	40	4/15/2017 10:10 AM
Benzyl chloride	ND		104	µg/m3	40	4/15/2017 10:10 AM
Bromodichloromethane	ND		134	µg/m3	40	4/15/2017 10:10 AM
Bromoform	ND		207	µg/m3	40	4/15/2017 10:10 AM
Bromomethane	ND		77.7	µg/m3	40	4/15/2017 10:10 AM
Carbon disulfide	ND		62.3	µg/m3	40	4/15/2017 10:10 AM
Carbon tetrachloride	ND		126	µg/m3	40	4/15/2017 10:10 AM
Chlorobenzene	ND		92.1	µg/m3	40	4/15/2017 10:10 AM
Chloroethane	ND		52.8	µg/m3	40	4/15/2017 10:10 AM
Chloroform	ND		39.1	µg/m3	40	4/15/2017 10:10 AM
Chloromethane	ND		41.3	µg/m3	40	4/15/2017 10:10 AM
cis-1,2-Dichloroethene	ND		79.3	µg/m3	40	4/15/2017 10:10 AM
cis-1,3-Dichloropropene	ND		90.8	µg/m3	40	4/15/2017 10:10 AM
Cumene	ND		98.3	µg/m3	40	4/15/2017 10:10 AM
Cyclohexane	6,830		861	µg/m3	500	4/15/2017 03:21 AM
Dibromochloromethane	ND		170	µg/m3	40	4/15/2017 10:10 AM
Dichlorodifluoromethane	ND		98.9	µg/m3	40	4/15/2017 10:10 AM
Ethyl acetate	ND		72.1	µg/m3	40	4/15/2017 10:10 AM
Ethylbenzene	ND		86.8	µg/m3	40	4/15/2017 10:10 AM
Freon 113	ND		153	µg/m3	40	4/15/2017 10:10 AM
Freon 114	ND		140	µg/m3	40	4/15/2017 10:10 AM
Heptane	6,210		1,020	µg/m3	500	4/15/2017 03:21 AM
Hexachlorobutadiene	ND		213	µg/m3	40	4/15/2017 10:10 AM
Hexane	11,100		881	µg/m3	500	4/15/2017 03:21 AM
m,p-Xylene	148		86.8	µg/m3	40	4/15/2017 10:10 AM
Methylene chloride	ND		69.5	µg/m3	40	4/15/2017 10:10 AM
MTBE	ND		72.1	µg/m3	40	4/15/2017 10:10 AM
Naphthalene	ND		41.9	µg/m3	40	4/15/2017 10:10 AM
o-Xylene	ND		86.8	µg/m3	40	4/15/2017 10:10 AM
Propene	ND		34.4	µg/m3	40	4/15/2017 10:10 AM
Styrene	ND		85.2	µg/m3	40	4/15/2017 10:10 AM
Tetrachloroethene	ND		136	µg/m3	40	4/15/2017 10:10 AM
Tetrahydrofuran	ND		59.0	µg/m3	40	4/15/2017 10:10 AM

Note:

ALS Environmental

Date: 17-Apr-17

Client: EarthCon

Project: TWP Roswell Station #9

Work Order: 1704041

Sample ID: TWP STATION 9 EAST BAKER FURNACE

Lab ID: 1704041-01

Collection Date: 3/27/2017

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Toluene	249		75.4	µg/m3	40	4/15/2017 10:10 AM
trans-1,2-Dichloroethene	ND		79.3	µg/m3	40	4/15/2017 10:10 AM
trans-1,3-Dichloropropene	ND		90.8	µg/m3	40	4/15/2017 10:10 AM
Trichloroethene	ND		43.0	µg/m3	40	4/15/2017 10:10 AM
Trichlorofluoromethane	ND		112	µg/m3	40	4/15/2017 10:10 AM
Vinyl acetate	ND		70.4	µg/m3	40	4/15/2017 10:10 AM
Vinyl chloride	ND		51.1	µg/m3	40	4/15/2017 10:10 AM
Surr: Bromofluorobenzene	3,760	S	60-140	%REC	40	4/15/2017 10:10 AM

Note:



ALS Laboratory Group
4388 Glendale-Milford Rd
Cincinnati, OH 45242
Ph: 513-733-5336
Fax: 513-733-5347
www.alsglobal.com

TVOC **

Client: Earthcon
Client Sample ID: TWP Roswell Sta 9 West Baker Furnace
ALS Sample # 1704041-01A
Method: EPA TO-15

		Estimated Concentration	Units
	TVOC**	7176	PPBV
	TVOC**	24397	ug/m3

**TVOC calculation based on response factor and molecular weight of hexane.

***Results should be considered estimated.

ALS Environmental

Date: 17-Apr-17

Client: EarthCon

QC BATCH REPORT

Work Order: 1704041

Project: TWP Roswell Station #9

Batch ID: **R139438**

Instrument ID **VMS4**

Method: **ETO-15**

mbk		Sample ID: MBLK-R139438			Units: ppbv		Analysis Date: 4/14/2017 02:40 PM			
Client ID:		Run ID: VMS4_170414A			SeqNo: 1481067		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	0.50								
1,1,2,2-Tetrachloroethane	ND	0.50								
1,1,2-Trichloroethane	ND	0.50								
1,1-Dichloroethane	ND	0.50								
1,1-Dichloroethene	ND	0.50								
1,2,4-Trichlorobenzene	ND	0.50								
1,2,4-Trimethylbenzene	ND	0.50								
1,2-Dibromoethane	ND	0.50								
1,2-Dichlorobenzene	ND	0.50								
1,2-Dichloroethane	ND	0.50								
1,2-Dichloropropane	ND	0.50								
1,3,5-Trimethylbenzene	ND	0.50								
1,3-Butadiene	ND	0.50								
1,3-Dichlorobenzene	ND	0.50								
1,4-Dichlorobenzene	ND	0.50								
1,4-Dioxane	ND	1.0								
2-Butanone	ND	0.50								
2-Hexanone	ND	0.50								
2-Propanol	ND	1.0								
4-Ethyltoluene	ND	0.50								
4-Methyl-2-pentanone	ND	0.50								
Acetone	ND	1.0								
Benzene	ND	0.50								
Benzyl chloride	ND	0.50								
Bromodichloromethane	ND	0.50								
Bromoform	ND	0.50								
Bromomethane	ND	0.50								
Carbon disulfide	ND	0.50								
Carbon tetrachloride	ND	0.50								
Chlorobenzene	ND	0.50								
Chloroethane	ND	0.50								
Chloroform	ND	0.20								
Chloromethane	ND	0.50								
cis-1,2-Dichloroethene	ND	0.50								
cis-1,3-Dichloropropene	ND	0.50								
Cumene	ND	0.50								
Cyclohexane	ND	0.50								
Dibromochloromethane	ND	0.50								
Dichlorodifluoromethane	ND	0.50								
Ethyl acetate	ND	0.50								
Ethylbenzene	ND	0.50								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: EarthCon
Work Order: 1704041
Project: TWP Roswell Station #9

QC BATCH REPORT

Batch ID: R139438	Instrument ID VMS4	Method: ETO-15					
Freon 113	ND	0.50					
Freon 114	ND	0.50					
Heptane	ND	0.50					
Hexachlorobutadiene	ND	0.50					
Hexane	ND	0.50					
m,p-Xylene	ND	0.50					
Methylene chloride	ND	0.50					
MTBE	ND	0.50					
Naphthalene	ND	0.20					
o-Xylene	ND	0.50					
Propene	ND	0.50					
Styrene	ND	0.50					
Tetrachloroethene	ND	0.50					
Tetrahydrofuran	ND	0.50					
Toluene	ND	0.50					
trans-1,2-Dichloroethene	ND	0.50					
trans-1,3-Dichloropropene	ND	0.50					
Trichloroethene	ND	0.20					
Trichlorofluoromethane	ND	0.50					
Vinyl acetate	ND	0.50					
Vinyl chloride	ND	0.50					
Surr: Bromofluorobenzene	10.31	0	10	0	103	60-140	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: EarthCon
Work Order: 1704041
Project: TWP Roswell Station #9

QC BATCH REPORT

Batch ID: **R139438** Instrument ID **VMS4** Method: **ETO-15**

ics		Sample ID: LCS-R139438			Units: ppbv		Analysis Date: 4/14/2017 01:56 PM			
Client ID:		Run ID: VMS4_170414A			SeqNo: 1481066		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	9.22	0.50	10	0	92.2	58.8-163		0		
1,1,2,2-Tetrachloroethane	7.95	0.50	10	0	79.5	60-140		0		
1,1,2-Trichloroethane	8.62	0.50	10	0	86.2	60-140		0		
1,1-Dichloroethane	9.28	0.50	10	0	92.8	60-140		0		
1,1-Dichloroethene	9.3	0.50	10	0	93	60-140		0		
1,2,4-Trichlorobenzene	6.36	0.50	10	0	63.6	49.3-150		0		
1,2,4-Trimethylbenzene	7.91	0.50	10	0	79.1	50.1-162		0		
1,2-Dibromoethane	8.76	0.50	10	0	87.6	60-140		0		
1,2-Dichlorobenzene	7.63	0.50	10	0	76.3	41.9-141		0		
1,2-Dichloroethane	9.27	0.50	10	0	92.7	60-140		0		
1,2-Dichloropropane	8.77	0.50	10	0	87.7	60-140		0		
1,3,5-Trimethylbenzene	7.94	0.50	10	0	79.4	60-140		0		
1,3-Butadiene	8.18	0.50	10	0	81.8	50.6-140		0		
1,3-Dichlorobenzene	7.79	0.50	10	0	77.9	60-140		0		
1,4-Dichlorobenzene	7.62	0.50	10	0	76.2	55.1-145		0		
1,4-Dioxane	6.96	1.0	10	0	69.6	60-140		0		
2-Butanone	9.08	0.50	10	0	90.8	60-140		0		
2-Hexanone	7.53	0.50	10	0	75.3	56.2-162		0		
2-Propanol	8.82	1.0	10	0	88.2	60-140		0		
4-Ethyltoluene	7.98	0.50	10	0	79.8	60-140		0		
4-Methyl-2-pentanone	8.23	0.50	10	0	82.3	60-140		0		
Acetone	8.72	1.0	10	0	87.2	60-140		0		
Benzene	8.94	0.50	10	0	89.4	60-140		0		
Benzyl chloride	7.7	0.50	10	0	77	31.9-174		0		
Bromodichloromethane	8.96	0.50	10	0	89.6	60-140		0		
Bromoform	8.4	0.50	10	0	84	60-140		0		
Bromomethane	8.73	0.50	10	0	87.3	60-140		0		
Carbon disulfide	9.27	0.50	10	0	92.7	60-140		0		
Carbon tetrachloride	9.38	0.50	10	0	93.8	60-140		0		
Chlorobenzene	8.03	0.50	10	0	80.3	60-140		0		
Chloroethane	9.54	0.50	10	0	95.4	60-140		0		
Chloroform	9.21	0.20	10	0	92.1	60-140		0		
Chloromethane	8.68	0.50	10	0	86.8	60-140		0		
cis-1,2-Dichloroethene	9.2	0.50	10	0	92	60-140		0		
cis-1,3-Dichloropropene	8.76	0.50	10	0	87.6	60-140		0		
Cumene	8.11	0.50	10	0	81.1	60-140		0		
Cyclohexane	9.2	0.50	10	0	92	60-140		0		
Dibromochloromethane	9.06	0.50	10	0	90.6	60-140		0		
Dichlorodifluoromethane	9.51	0.50	10	0	95.1	60-140		0		
Ethyl acetate	9.2	0.50	10	0	92	60-140		0		
Ethylbenzene	7.99	0.50	10	0	79.9	60-140		0		
Freon 113	9.38	0.50	10	0	93.8	60-140		0		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: EarthCon
Work Order: 1704041
Project: TWP Roswell Station #9

QC BATCH REPORT

Batch ID: R139438	Instrument ID VMS4		Method: ETO-15					
Freon 114	9.45	0.50	10	0	94.5	60-140	0	
Heptane	9	0.50	10	0	90	60-140	0	
Hexachlorobutadiene	7.17	0.50	10	0	71.7	60-140	0	
Hexane	9.23	0.50	10	0	92.3	60-140	0	
m,p-Xylene	15.98	0.50	20	0	79.9	60-140	0	
Methylene chloride	8.6	0.50	10	0	86	60-140	0	
MTBE	9.08	0.50	10	0	90.8	60.8-151	0	
Naphthalene	6.11	0.20	10	0	61.1	53.1-152	0	
o-Xylene	7.97	0.50	10	0	79.7	60-140	0	
Propene	8.15	0.50	10	0	81.5	34.4-139	0	
Styrene	8.05	0.50	10	0	80.5	60-140	0	
Tetrachloroethene	8.73	0.50	10	0	87.3	60-140	0	
Tetrahydrofuran	8.76	0.50	10	0	87.6	60-140	0	
Toluene	8.5	0.50	10	0	85	60-140	0	
trans-1,2-Dichloroethene	8.91	0.50	10	0	89.1	60-140	0	
trans-1,3-Dichloropropene	8.79	0.50	10	0	87.9	60-140	0	
Trichloroethene	8.73	0.20	10	0	87.3	60-140	0	
Trichlorofluoromethane	9.37	0.50	10	0	93.7	60-140	0	
Vinyl acetate	8.99	0.50	10	0	89.9	48.4-145	0	
Vinyl chloride	8.96	0.50	10	0	89.6	60-140	0	
Surr: Bromofluorobenzene	9.51	0	10	0	95.1	60-140	0	

The following samples were analyzed in this batch:

1704041-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 17-Apr-17

Client: EarthCon
Project: TWP Roswell Station #9
WorkOrder: 1704041

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/m3	
ppbv	

Sample Receipt Checklist

Client Name: **EARTHCON-MARIETTA**

Date/Time Received: **03-Apr-17 11:06**

Work Order: **1704041**

Received by: **SNH**

Checklist completed by **J an Wilcox**

03-Apr-17

Reviewed by: **Chris Gibson**

17-Apr-17

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **FedEx**

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Present ☒

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace?

Yes ☐

No ☐

No VOA vials submitted ☒

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

pH adjusted?

Yes ☐

No ☐

N/A ☒

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



30-Jun-2017

Rachel Andrews
EarthCon
188 West Oak Parkway
Suite 106
Marietta, GA 30062

Tel: (678) 569-2892
Fax: (770) 973-7395

Re: TWP ROSWELL STATION 9; 02.20120037.00

Work Order: **1706563**

Dear Rachel,

ALS Environmental received 2 samples on 16-Jun-2017 02:53 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 18.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Shawn Smythe

Electronically approved by: Shawn Smythe

Shawn Smythe
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, Ohio 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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Environmental

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: EarthCon
Project: TWP ROSWELL STATION 9; 02.20120037.00
Work Order: 1706563

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1706563-01	WEST BAKER FURNACE	Air		6/13/2017 09:36	6/16/2017 14:53	<input type="checkbox"/>
1706563-02	EAST BAKER FURNACE	Air		6/13/2017 09:45	6/16/2017 14:53	<input type="checkbox"/>

Client: EarthCon
Project: TWP ROSWELL STATION 9; 02.20120037.00
Work Order: 1706563

Case Narrative

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Results relate only to the items tested and are not blank corrected unless indicated.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

ALS Environmental

Date: 30-Jun-17

Client: EarthCon

Project: TWP ROSWELL STATION 9; 02.20120037.00

Work Order: 1706563

Sample ID: WEST BAKER FURNACE

Lab ID: 1706563-01

Collection Date: 6/13/2017 09:36 AM

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TO-15 BY GC/MS			ETO-15		Analyst: MRJ	
1,1,1-Trichloroethane	ND		20	ppbv	40	6/30/2017 12:40 AM
1,1,2,2-Tetrachloroethane	ND		20	ppbv	40	6/30/2017 12:40 AM
1,1,2-Trichloroethane	ND		20	ppbv	40	6/30/2017 12:40 AM
1,1-Dichloroethane	ND		20	ppbv	40	6/30/2017 12:40 AM
1,1-Dichloroethene	ND		20	ppbv	40	6/30/2017 12:40 AM
1,2,4-Trichlorobenzene	ND		20	ppbv	40	6/30/2017 12:40 AM
1,2,4-Trimethylbenzene	28		20	ppbv	40	6/30/2017 12:40 AM
1,2-Dibromoethane	ND		20	ppbv	40	6/30/2017 12:40 AM
1,2-Dichlorobenzene	ND		20	ppbv	40	6/30/2017 12:40 AM
1,2-Dichloroethane	ND		20	ppbv	40	6/30/2017 12:40 AM
1,2-Dichloropropane	ND		20	ppbv	40	6/30/2017 12:40 AM
1,3,5-Trimethylbenzene	32		20	ppbv	40	6/30/2017 12:40 AM
1,3-Butadiene	ND		20	ppbv	40	6/30/2017 12:40 AM
1,3-Dichlorobenzene	ND		20	ppbv	40	6/30/2017 12:40 AM
1,4-Dichlorobenzene	ND		20	ppbv	40	6/30/2017 12:40 AM
1,4-Dioxane	ND		40	ppbv	40	6/30/2017 12:40 AM
2-Butanone	ND		20	ppbv	40	6/30/2017 12:40 AM
2-Hexanone	ND		20	ppbv	40	6/30/2017 12:40 AM
2-Propanol	ND		40	ppbv	40	6/30/2017 12:40 AM
4-Ethyltoluene	ND		20	ppbv	40	6/30/2017 12:40 AM
4-Methyl-2-pentanone	ND		20	ppbv	40	6/30/2017 12:40 AM
Acetone	ND		40	ppbv	40	6/30/2017 12:40 AM
Benzene	420		20	ppbv	40	6/30/2017 12:40 AM
Benzyl chloride	ND		20	ppbv	40	6/30/2017 12:40 AM
Bromodichloromethane	ND		20	ppbv	40	6/30/2017 12:40 AM
Bromoform	ND		20	ppbv	40	6/30/2017 12:40 AM
Bromomethane	ND		20	ppbv	40	6/30/2017 12:40 AM
Carbon disulfide	ND		20	ppbv	40	6/30/2017 12:40 AM
Carbon tetrachloride	ND		20	ppbv	40	6/30/2017 12:40 AM
Chlorobenzene	ND		20	ppbv	40	6/30/2017 12:40 AM
Chloroethane	ND		20	ppbv	40	6/30/2017 12:40 AM
Chloroform	ND		8.0	ppbv	40	6/30/2017 12:40 AM
Chloromethane	ND		20	ppbv	40	6/30/2017 12:40 AM
cis-1,2-Dichloroethene	ND		20	ppbv	40	6/30/2017 12:40 AM
cis-1,3-Dichloropropene	ND		20	ppbv	40	6/30/2017 12:40 AM
Cumene	ND		20	ppbv	40	6/30/2017 12:40 AM
Cyclohexane	14,000		1,000	ppbv	2000	6/30/2017 08:55 AM
Dibromochloromethane	ND		20	ppbv	40	6/30/2017 12:40 AM
Dichlorodifluoromethane	ND		20	ppbv	40	6/30/2017 12:40 AM

Note:

ALS Environmental

Date: 30-Jun-17

Client: EarthCon

Project: TWP ROSWELL STATION 9; 02.20120037.00

Work Order: 1706563

Sample ID: WEST BAKER FURNACE

Lab ID: 1706563-01

Collection Date: 6/13/2017 09:36 AM

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Ethyl acetate	ND		20	ppbv	40	6/30/2017 12:40 AM
Ethylbenzene	31		20	ppbv	40	6/30/2017 12:40 AM
Freon 113	ND		20	ppbv	40	6/30/2017 12:40 AM
Freon 114	ND		20	ppbv	40	6/30/2017 12:40 AM
Heptane	10,000		1,000	ppbv	2000	6/30/2017 08:55 AM
Hexachlorobutadiene	ND		20	ppbv	40	6/30/2017 12:40 AM
Hexane	27,000		1,000	ppbv	2000	6/30/2017 08:55 AM
m,p-Xylene	280		20	ppbv	40	6/30/2017 12:40 AM
Methylene chloride	34		20	ppbv	40	6/30/2017 12:40 AM
MTBE	ND		20	ppbv	40	6/30/2017 12:40 AM
Naphthalene	ND		8.0	ppbv	40	6/30/2017 12:40 AM
o-Xylene	63		20	ppbv	40	6/30/2017 12:40 AM
Propene	ND		20	ppbv	40	6/30/2017 12:40 AM
Styrene	ND		20	ppbv	40	6/30/2017 12:40 AM
Tetrachloroethene	ND		20	ppbv	40	6/30/2017 12:40 AM
Tetrahydrofuran	ND		20	ppbv	40	6/30/2017 12:40 AM
Toluene	390		20	ppbv	40	6/30/2017 12:40 AM
trans-1,2-Dichloroethene	ND		20	ppbv	40	6/30/2017 12:40 AM
trans-1,3-Dichloropropene	ND		20	ppbv	40	6/30/2017 12:40 AM
Trichloroethene	ND		8.0	ppbv	40	6/30/2017 12:40 AM
Trichlorofluoromethane	ND		20	ppbv	40	6/30/2017 12:40 AM
Vinyl acetate	ND		20	ppbv	40	6/30/2017 12:40 AM
Vinyl chloride	ND		20	ppbv	40	6/30/2017 12:40 AM
<i>Surr: Bromofluorobenzene</i>	83.2		60-140	%REC	40	6/30/2017 12:40 AM
TO-15 BY GC/MS			ETO-15		Analyst: MRJ	
1,1,1-Trichloroethane	ND		109	µg/m3	40	6/30/2017 12:40 AM
1,1,2,2-Tetrachloroethane	ND		137	µg/m3	40	6/30/2017 12:40 AM
1,1,2-Trichloroethane	ND		109	µg/m3	40	6/30/2017 12:40 AM
1,1-Dichloroethane	ND		80.9	µg/m3	40	6/30/2017 12:40 AM
1,1-Dichloroethene	ND		79.3	µg/m3	40	6/30/2017 12:40 AM
1,2,4-Trichlorobenzene	ND		148	µg/m3	40	6/30/2017 12:40 AM
1,2,4-Trimethylbenzene	138		98.3	µg/m3	40	6/30/2017 12:40 AM
1,2-Dibromoethane	ND		154	µg/m3	40	6/30/2017 12:40 AM
1,2-Dichlorobenzene	ND		120	µg/m3	40	6/30/2017 12:40 AM
1,2-Dichloroethane	ND		80.9	µg/m3	40	6/30/2017 12:40 AM
1,2-Dichloropropane	ND		92.4	µg/m3	40	6/30/2017 12:40 AM
1,3,5-Trimethylbenzene	159		98.3	µg/m3	40	6/30/2017 12:40 AM
1,3-Butadiene	ND		44.2	µg/m3	40	6/30/2017 12:40 AM
1,3-Dichlorobenzene	ND		120	µg/m3	40	6/30/2017 12:40 AM
1,4-Dichlorobenzene	ND		120	µg/m3	40	6/30/2017 12:40 AM

Note:

ALS Environmental

Date: 30-Jun-17

Client: EarthCon

Project: TWP ROSWELL STATION 9; 02.20120037.00

Work Order: 1706563

Sample ID: WEST BAKER FURNACE

Lab ID: 1706563-01

Collection Date: 6/13/2017 09:36 AM

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,4-Dioxane	ND		144	µg/m3	40	6/30/2017 12:40 AM
2-Butanone	ND		59.0	µg/m3	40	6/30/2017 12:40 AM
2-Hexanone	ND		81.9	µg/m3	40	6/30/2017 12:40 AM
2-Propanol	ND		98.3	µg/m3	40	6/30/2017 12:40 AM
4-Ethyltoluene	ND		98.3	µg/m3	40	6/30/2017 12:40 AM
4-Methyl-2-pentanone	ND		81.9	µg/m3	40	6/30/2017 12:40 AM
Acetone	ND		95.0	µg/m3	40	6/30/2017 12:40 AM
Benzene	1,350		63.9	µg/m3	40	6/30/2017 12:40 AM
Benzyl chloride	ND		104	µg/m3	40	6/30/2017 12:40 AM
Bromodichloromethane	ND		134	µg/m3	40	6/30/2017 12:40 AM
Bromoform	ND		207	µg/m3	40	6/30/2017 12:40 AM
Bromomethane	ND		77.7	µg/m3	40	6/30/2017 12:40 AM
Carbon disulfide	ND		62.3	µg/m3	40	6/30/2017 12:40 AM
Carbon tetrachloride	ND		126	µg/m3	40	6/30/2017 12:40 AM
Chlorobenzene	ND		92.1	µg/m3	40	6/30/2017 12:40 AM
Chloroethane	ND		52.8	µg/m3	40	6/30/2017 12:40 AM
Chloroform	ND		39.1	µg/m3	40	6/30/2017 12:40 AM
Chloromethane	ND		41.3	µg/m3	40	6/30/2017 12:40 AM
cis-1,2-Dichloroethene	ND		79.3	µg/m3	40	6/30/2017 12:40 AM
cis-1,3-Dichloropropene	ND		90.8	µg/m3	40	6/30/2017 12:40 AM
Cumene	ND		98.3	µg/m3	40	6/30/2017 12:40 AM
Cyclohexane	48,600		3,440	µg/m3	2000	6/30/2017 08:55 AM
Dibromochloromethane	ND		170	µg/m3	40	6/30/2017 12:40 AM
Dichlorodifluoromethane	ND		98.9	µg/m3	40	6/30/2017 12:40 AM
Ethyl acetate	ND		72.1	µg/m3	40	6/30/2017 12:40 AM
Ethylbenzene	135		86.8	µg/m3	40	6/30/2017 12:40 AM
Freon 113	ND		153	µg/m3	40	6/30/2017 12:40 AM
Freon 114	ND		140	µg/m3	40	6/30/2017 12:40 AM
Heptane	41,700		4,100	µg/m3	2000	6/30/2017 08:55 AM
Hexachlorobutadiene	ND		213	µg/m3	40	6/30/2017 12:40 AM
Hexane	94,000		3,520	µg/m3	2000	6/30/2017 08:55 AM
m,p-Xylene	1,200		86.8	µg/m3	40	6/30/2017 12:40 AM
Methylene chloride	117		69.5	µg/m3	40	6/30/2017 12:40 AM
MTBE	ND		72.1	µg/m3	40	6/30/2017 12:40 AM
Naphthalene	ND		41.9	µg/m3	40	6/30/2017 12:40 AM
o-Xylene	273		86.8	µg/m3	40	6/30/2017 12:40 AM
Propene	ND		34.4	µg/m3	40	6/30/2017 12:40 AM
Styrene	ND		85.2	µg/m3	40	6/30/2017 12:40 AM
Tetrachloroethene	ND		136	µg/m3	40	6/30/2017 12:40 AM
Tetrahydrofuran	ND		59.0	µg/m3	40	6/30/2017 12:40 AM

Note:

ALS Environmental

Date: 30-Jun-17

Client: EarthCon

Project: TWP ROSWELL STATION 9; 02.20120037.00

Work Order: 1706563

Sample ID: WEST BAKER FURNACE

Lab ID: 1706563-01

Collection Date: 6/13/2017 09:36 AM

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Toluene	1,450		75.4	µg/m3	40	6/30/2017 12:40 AM
trans-1,2-Dichloroethene	ND		79.3	µg/m3	40	6/30/2017 12:40 AM
trans-1,3-Dichloropropene	ND		90.8	µg/m3	40	6/30/2017 12:40 AM
Trichloroethene	ND		43.0	µg/m3	40	6/30/2017 12:40 AM
Trichlorofluoromethane	ND		112	µg/m3	40	6/30/2017 12:40 AM
Vinyl acetate	ND		70.4	µg/m3	40	6/30/2017 12:40 AM
Vinyl chloride	ND		51.1	µg/m3	40	6/30/2017 12:40 AM
Surr: Bromofluorobenzene	83.2		60-140	%REC	40	6/30/2017 12:40 AM

Note:

ALS Environmental

Date: 30-Jun-17

Client: EarthCon

Project: TWP ROSWELL STATION 9; 02.20120037.00

Work Order: 1706563

Sample ID: EAST BAKER FURNACE

Lab ID: 1706563-02

Collection Date: 6/13/2017 09:45 AM

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TO-15 BY GC/MS			ETO-15		Analyst: MRJ	
1,1,1-Trichloroethane	ND		20	ppbv	40	6/30/2017 01:25 AM
1,1,2,2-Tetrachloroethane	ND		20	ppbv	40	6/30/2017 01:25 AM
1,1,2-Trichloroethane	ND		20	ppbv	40	6/30/2017 01:25 AM
1,1-Dichloroethane	ND		20	ppbv	40	6/30/2017 01:25 AM
1,1-Dichloroethene	ND		20	ppbv	40	6/30/2017 01:25 AM
1,2,4-Trichlorobenzene	ND		20	ppbv	40	6/30/2017 01:25 AM
1,2,4-Trimethylbenzene	ND		20	ppbv	40	6/30/2017 01:25 AM
1,2-Dibromoethane	ND		20	ppbv	40	6/30/2017 01:25 AM
1,2-Dichlorobenzene	ND		20	ppbv	40	6/30/2017 01:25 AM
1,2-Dichloroethane	ND		20	ppbv	40	6/30/2017 01:25 AM
1,2-Dichloropropane	ND		20	ppbv	40	6/30/2017 01:25 AM
1,3,5-Trimethylbenzene	ND		20	ppbv	40	6/30/2017 01:25 AM
1,3-Butadiene	ND		20	ppbv	40	6/30/2017 01:25 AM
1,3-Dichlorobenzene	ND		20	ppbv	40	6/30/2017 01:25 AM
1,4-Dichlorobenzene	ND		20	ppbv	40	6/30/2017 01:25 AM
1,4-Dioxane	ND		40	ppbv	40	6/30/2017 01:25 AM
2-Butanone	ND		20	ppbv	40	6/30/2017 01:25 AM
2-Hexanone	ND		20	ppbv	40	6/30/2017 01:25 AM
2-Propanol	ND		40	ppbv	40	6/30/2017 01:25 AM
4-Ethyltoluene	ND		20	ppbv	40	6/30/2017 01:25 AM
4-Methyl-2-pentanone	ND		20	ppbv	40	6/30/2017 01:25 AM
Acetone	ND		40	ppbv	40	6/30/2017 01:25 AM
Benzene	210		20	ppbv	40	6/30/2017 01:25 AM
Benzyl chloride	ND		20	ppbv	40	6/30/2017 01:25 AM
Bromodichloromethane	ND		20	ppbv	40	6/30/2017 01:25 AM
Bromoform	ND		20	ppbv	40	6/30/2017 01:25 AM
Bromomethane	ND		20	ppbv	40	6/30/2017 01:25 AM
Carbon disulfide	ND		20	ppbv	40	6/30/2017 01:25 AM
Carbon tetrachloride	ND		20	ppbv	40	6/30/2017 01:25 AM
Chlorobenzene	ND		20	ppbv	40	6/30/2017 01:25 AM
Chloroethane	ND		20	ppbv	40	6/30/2017 01:25 AM
Chloroform	ND		8.0	ppbv	40	6/30/2017 01:25 AM
Chloromethane	ND		20	ppbv	40	6/30/2017 01:25 AM
cis-1,2-Dichloroethene	ND		20	ppbv	40	6/30/2017 01:25 AM
cis-1,3-Dichloropropene	ND		20	ppbv	40	6/30/2017 01:25 AM
Cumene	ND		20	ppbv	40	6/30/2017 01:25 AM
Cyclohexane	8,200		1,000	ppbv	2000	6/30/2017 09:50 AM
Dibromochloromethane	ND		20	ppbv	40	6/30/2017 01:25 AM
Dichlorodifluoromethane	ND		20	ppbv	40	6/30/2017 01:25 AM

Note:

ALS Environmental

Date: 30-Jun-17

Client: EarthCon

Project: TWP ROSWELL STATION 9; 02.20120037.00

Work Order: 1706563

Sample ID: EAST BAKER FURNACE

Lab ID: 1706563-02

Collection Date: 6/13/2017 09:45 AM

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Ethyl acetate	ND		20	ppbv	40	6/30/2017 01:25 AM
Ethylbenzene	ND		20	ppbv	40	6/30/2017 01:25 AM
Freon 113	ND		20	ppbv	40	6/30/2017 01:25 AM
Freon 114	ND		20	ppbv	40	6/30/2017 01:25 AM
Heptane	6,100		1,000	ppbv	2000	6/30/2017 09:50 AM
Hexachlorobutadiene	ND		20	ppbv	40	6/30/2017 01:25 AM
Hexane	16,000		1,000	ppbv	2000	6/30/2017 09:50 AM
m,p-Xylene	130		20	ppbv	40	6/30/2017 01:25 AM
Methylene chloride	ND		20	ppbv	40	6/30/2017 01:25 AM
MTBE	ND		20	ppbv	40	6/30/2017 01:25 AM
Naphthalene	ND		8.0	ppbv	40	6/30/2017 01:25 AM
o-Xylene	31		20	ppbv	40	6/30/2017 01:25 AM
Propene	ND		20	ppbv	40	6/30/2017 01:25 AM
Styrene	ND		20	ppbv	40	6/30/2017 01:25 AM
Tetrachloroethene	ND		20	ppbv	40	6/30/2017 01:25 AM
Tetrahydrofuran	ND		20	ppbv	40	6/30/2017 01:25 AM
Toluene	200		20	ppbv	40	6/30/2017 01:25 AM
trans-1,2-Dichloroethene	ND		20	ppbv	40	6/30/2017 01:25 AM
trans-1,3-Dichloropropene	ND		20	ppbv	40	6/30/2017 01:25 AM
Trichloroethene	ND		8.0	ppbv	40	6/30/2017 01:25 AM
Trichlorofluoromethane	ND		20	ppbv	40	6/30/2017 01:25 AM
Vinyl acetate	ND		20	ppbv	40	6/30/2017 01:25 AM
Vinyl chloride	ND		20	ppbv	40	6/30/2017 01:25 AM
<i>Surr: Bromofluorobenzene</i>	83.6		60-140	%REC	40	6/30/2017 01:25 AM
TO-15 BY GC/MS			ETO-15		Analyst: MRJ	
1,1,1-Trichloroethane	ND		109	µg/m3	40	6/30/2017 01:25 AM
1,1,2,2-Tetrachloroethane	ND		137	µg/m3	40	6/30/2017 01:25 AM
1,1,2-Trichloroethane	ND		109	µg/m3	40	6/30/2017 01:25 AM
1,1-Dichloroethane	ND		80.9	µg/m3	40	6/30/2017 01:25 AM
1,1-Dichloroethene	ND		79.3	µg/m3	40	6/30/2017 01:25 AM
1,2,4-Trichlorobenzene	ND		148	µg/m3	40	6/30/2017 01:25 AM
1,2,4-Trimethylbenzene	ND		98.3	µg/m3	40	6/30/2017 01:25 AM
1,2-Dibromoethane	ND		154	µg/m3	40	6/30/2017 01:25 AM
1,2-Dichlorobenzene	ND		120	µg/m3	40	6/30/2017 01:25 AM
1,2-Dichloroethane	ND		80.9	µg/m3	40	6/30/2017 01:25 AM
1,2-Dichloropropane	ND		92.4	µg/m3	40	6/30/2017 01:25 AM
1,3,5-Trimethylbenzene	ND		98.3	µg/m3	40	6/30/2017 01:25 AM
1,3-Butadiene	ND		44.2	µg/m3	40	6/30/2017 01:25 AM
1,3-Dichlorobenzene	ND		120	µg/m3	40	6/30/2017 01:25 AM
1,4-Dichlorobenzene	ND		120	µg/m3	40	6/30/2017 01:25 AM

Note:

ALS Environmental

Date: 30-Jun-17

Client: EarthCon

Project: TWP ROSWELL STATION 9; 02.20120037.00

Work Order: 1706563

Sample ID: EAST BAKER FURNACE

Lab ID: 1706563-02

Collection Date: 6/13/2017 09:45 AM

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,4-Dioxane	ND		144	µg/m3	40	6/30/2017 01:25 AM
2-Butanone	ND		59.0	µg/m3	40	6/30/2017 01:25 AM
2-Hexanone	ND		81.9	µg/m3	40	6/30/2017 01:25 AM
2-Propanol	ND		98.3	µg/m3	40	6/30/2017 01:25 AM
4-Ethyltoluene	ND		98.3	µg/m3	40	6/30/2017 01:25 AM
4-Methyl-2-pentanone	ND		81.9	µg/m3	40	6/30/2017 01:25 AM
Acetone	ND		95.0	µg/m3	40	6/30/2017 01:25 AM
Benzene	677		63.9	µg/m3	40	6/30/2017 01:25 AM
Benzyl chloride	ND		104	µg/m3	40	6/30/2017 01:25 AM
Bromodichloromethane	ND		134	µg/m3	40	6/30/2017 01:25 AM
Bromoform	ND		207	µg/m3	40	6/30/2017 01:25 AM
Bromomethane	ND		77.7	µg/m3	40	6/30/2017 01:25 AM
Carbon disulfide	ND		62.3	µg/m3	40	6/30/2017 01:25 AM
Carbon tetrachloride	ND		126	µg/m3	40	6/30/2017 01:25 AM
Chlorobenzene	ND		92.1	µg/m3	40	6/30/2017 01:25 AM
Chloroethane	ND		52.8	µg/m3	40	6/30/2017 01:25 AM
Chloroform	ND		39.1	µg/m3	40	6/30/2017 01:25 AM
Chloromethane	ND		41.3	µg/m3	40	6/30/2017 01:25 AM
cis-1,2-Dichloroethene	ND		79.3	µg/m3	40	6/30/2017 01:25 AM
cis-1,3-Dichloropropene	ND		90.8	µg/m3	40	6/30/2017 01:25 AM
Cumene	ND		98.3	µg/m3	40	6/30/2017 01:25 AM
Cyclohexane	28,100		3,440	µg/m3	2000	6/30/2017 09:50 AM
Dibromochloromethane	ND		170	µg/m3	40	6/30/2017 01:25 AM
Dichlorodifluoromethane	ND		98.9	µg/m3	40	6/30/2017 01:25 AM
Ethyl acetate	ND		72.1	µg/m3	40	6/30/2017 01:25 AM
Ethylbenzene	ND		86.8	µg/m3	40	6/30/2017 01:25 AM
Freon 113	ND		153	µg/m3	40	6/30/2017 01:25 AM
Freon 114	ND		140	µg/m3	40	6/30/2017 01:25 AM
Heptane	24,900		4,100	µg/m3	2000	6/30/2017 09:50 AM
Hexachlorobutadiene	ND		213	µg/m3	40	6/30/2017 01:25 AM
Hexane	55,300		3,520	µg/m3	2000	6/30/2017 09:50 AM
m,p-Xylene	582		86.8	µg/m3	40	6/30/2017 01:25 AM
Methylene chloride	ND		69.5	µg/m3	40	6/30/2017 01:25 AM
MTBE	ND		72.1	µg/m3	40	6/30/2017 01:25 AM
Naphthalene	ND		41.9	µg/m3	40	6/30/2017 01:25 AM
o-Xylene	134		86.8	µg/m3	40	6/30/2017 01:25 AM
Propene	ND		34.4	µg/m3	40	6/30/2017 01:25 AM
Styrene	ND		85.2	µg/m3	40	6/30/2017 01:25 AM
Tetrachloroethene	ND		136	µg/m3	40	6/30/2017 01:25 AM
Tetrahydrofuran	ND		59.0	µg/m3	40	6/30/2017 01:25 AM

Note:

ALS Environmental

Date: 30-Jun-17

Client: EarthCon

Project: TWP ROSWELL STATION 9; 02.20120037.00

Work Order: 1706563

Sample ID: EAST BAKER FURNACE

Lab ID: 1706563-02

Collection Date: 6/13/2017 09:45 AM

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Toluene	755		75.4	µg/m3	40	6/30/2017 01:25 AM
trans-1,2-Dichloroethene	ND		79.3	µg/m3	40	6/30/2017 01:25 AM
trans-1,3-Dichloropropene	ND		90.8	µg/m3	40	6/30/2017 01:25 AM
Trichloroethene	ND		43.0	µg/m3	40	6/30/2017 01:25 AM
Trichlorofluoromethane	ND		112	µg/m3	40	6/30/2017 01:25 AM
Vinyl acetate	ND		70.4	µg/m3	40	6/30/2017 01:25 AM
Vinyl chloride	ND		51.1	µg/m3	40	6/30/2017 01:25 AM
Surr: Bromofluorobenzene	83.6		60-140	%REC	40	6/30/2017 01:25 AM

Note:



ALS Laboratory Group
4388 Glendale-Milford Rd
Cincinnati, OH 45242
Ph: 513-733-5336
Fax: 513-733-5347
www.alsglobal.com

TVOC **

Client: Earthcon
Client Sample ID: TWP Roswell Sta 9 West Baker Furnace
ALS Sample # 1706563-01A
Method: EPA TO-15

		Estimated Concentration	Units
	TVOC**	84437	PPBV
	TVOC**	297585	ug/m3

Client: Earthcon
Client Sample ID: TWP Roswell Sta 9 East Baker Furnace
ALS Sample # 1706563-02A
Method: EPA TO-15

		Estimated Concentration	Units
	TVOC**	47472	PPBV
	TVOC**	167307	ug/m3

**TVOC calculation based on response factor and molecular weight of hexane.

***Results should be considered estimated.

ALS Environmental

Date: 30-Jun-17

Client: EarthCon

QC BATCH REPORT

Work Order: 1706563

Project: TWP ROSWELL STATION 9; 02.20120037.00

Batch ID: R142029

Instrument ID: VMS4

Method: ETO-15

mbk		Sample ID: MBLK-R142029			Units: ppbv		Analysis Date: 6/29/2017 02:47 PM			
Client ID:		Run ID: VMS4_170629A			SeqNo: 1536902		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	0.50								
1,1,2,2-Tetrachloroethane	ND	0.50								
1,1,2-Trichloroethane	ND	0.50								
1,1-Dichloroethane	ND	0.50								
1,1-Dichloroethene	ND	0.50								
1,2,4-Trichlorobenzene	ND	0.50								
1,2,4-Trimethylbenzene	ND	0.50								
1,2-Dibromoethane	ND	0.50								
1,2-Dichlorobenzene	ND	0.50								
1,2-Dichloroethane	ND	0.50								
1,2-Dichloropropane	ND	0.50								
1,3,5-Trimethylbenzene	ND	0.50								
1,3-Butadiene	ND	0.50								
1,3-Dichlorobenzene	ND	0.50								
1,4-Dichlorobenzene	ND	0.50								
1,4-Dioxane	ND	1.0								
2-Butanone	ND	0.50								
2-Hexanone	ND	0.50								
2-Propanol	ND	1.0								
4-Ethyltoluene	ND	0.50								
4-Methyl-2-pentanone	ND	0.50								
Acetone	ND	1.0								
Benzene	ND	0.50								
Benzyl chloride	ND	0.50								
Bromodichloromethane	ND	0.50								
Bromoform	ND	0.50								
Bromomethane	ND	0.50								
Carbon disulfide	ND	0.50								
Carbon tetrachloride	ND	0.50								
Chlorobenzene	ND	0.50								
Chloroethane	ND	0.50								
Chloroform	ND	0.20								
Chloromethane	ND	0.50								
cis-1,2-Dichloroethene	ND	0.50								
cis-1,3-Dichloropropene	ND	0.50								
Cumene	ND	0.50								
Cyclohexane	ND	0.50								
Dibromochloromethane	ND	0.50								
Dichlorodifluoromethane	ND	0.50								
Ethyl acetate	ND	0.50								
Ethylbenzene	ND	0.50								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: EarthCon
Work Order: 1706563
Project: TWP ROSWELL STATION 9; 02.20120037.00

QC BATCH REPORT

Batch ID: R142029		Instrument ID: VMS4		Method: ETO-15	
Freon 113	ND	0.50			
Freon 114	ND	0.50			
Heptane	ND	0.50			
Hexachlorobutadiene	ND	0.50			
Hexane	ND	0.50			
m,p-Xylene	ND	0.50			
Methylene chloride	ND	0.50			
MTBE	ND	0.50			
Naphthalene	ND	0.20			
o-Xylene	ND	0.50			
Propene	ND	0.50			
Styrene	ND	0.50			
Tetrachloroethene	ND	0.50			
Tetrahydrofuran	ND	0.50			
Toluene	ND	0.50			
trans-1,2-Dichloroethene	ND	0.50			
trans-1,3-Dichloropropene	ND	0.50			
Trichloroethene	ND	0.20			
Trichlorofluoromethane	ND	0.50			
Vinyl acetate	ND	0.50			
Vinyl chloride	ND	0.50			
Surr: Bromofluorobenzene	8.31	0	10	0	83.1 60-140 0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: EarthCon
 Work Order: 1706563
 Project: TWP ROSWELL STATION 9; 02.20120037.00

QC BATCH REPORT

Batch ID: R142029 Instrument ID: VMS4 Method: ETO-15

ics Sample ID: ics-R142029		Units: ppbv					Analysis Date: 6/29/2017 02:03 PM			
Client ID:		Run ID: VMS4_170629A			SeqNo: 1536901		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	9.25	0.50	10	0	92.5	58.8-163	0			
1,1,2,2-Tetrachloroethane	8.09	0.50	10	0	80.9	60-140	0			
1,1,2-Trichloroethane	9.42	0.50	10	0	94.2	60-140	0			
1,1-Dichloroethane	10.01	0.50	10	0	100	60-140	0			
1,1-Dichloroethene	9.89	0.50	10	0	98.9	60-140	0			
1,2,4-Trichlorobenzene	7.52	0.50	10	0	75.2	49.3-150	0			
1,2,4-Trimethylbenzene	7.88	0.50	10	0	78.8	50.1-162	0			
1,2-Dibromoethane	9.43	0.50	10	0	94.3	60-140	0			
1,2-Dichlorobenzene	7.79	0.50	10	0	77.9	41.9-141	0			
1,2-Dichloroethane	9.55	0.50	10	0	95.5	60-140	0			
1,2-Dichloropropane	9.69	0.50	10	0	96.9	60-140	0			
1,3,5-Trimethylbenzene	7.88	0.50	10	0	78.8	60-140	0			
1,3-Butadiene	9.72	0.50	10	0	97.2	50.6-140	0			
1,3-Dichlorobenzene	7.87	0.50	10	0	78.7	60-140	0			
1,4-Dichlorobenzene	7.86	0.50	10	0	78.6	55.1-145	0			
1,4-Dioxane	9.25	1.0	10	0	92.5	60-140	0			
2-Butanone	11.31	0.50	10	0	113	60-140	0			
2-Hexanone	11.78	0.50	10	0	118	56.2-162	0			
2-Propanol	10.38	1.0	10	0	104	60-140	0			
4-Ethyltoluene	8.09	0.50	10	0	80.9	60-140	0			
4-Methyl-2-pentanone	11.54	0.50	10	0	115	60-140	0			
Acetone	10.02	1.0	10	0	100	60-140	0			
Benzene	9.87	0.50	10	0	98.7	60-140	0			
Benzyl chloride	8.49	0.50	10	0	84.9	31.9-174	0			
Bromodichloromethane	9.3	0.50	10	0	93	60-140	0			
Bromoform	8.08	0.50	10	0	80.8	60-140	0			
Bromomethane	10.13	0.50	10	0	101	60-140	0			
Carbon disulfide	10.05	0.50	10	0	100	60-140	0			
Carbon tetrachloride	9.25	0.50	10	0	92.5	60-140	0			
Chlorobenzene	7.84	0.50	10	0	78.4	60-140	0			
Chloroethane	11.3	0.50	10	0	113	60-140	0			
Chloroform	9.58	0.20	10	0	95.8	60-140	0			
Chloromethane	10.16	0.50	10	0	102	60-140	0			
cis-1,2-Dichloroethene	10.44	0.50	10	0	104	60-140	0			
cis-1,3-Dichloropropene	9.16	0.50	10	0	91.6	60-140	0			
Cumene	7.83	0.50	10	0	78.3	60-140	0			
Cyclohexane	9.98	0.50	10	0	99.8	60-140	0			
Dibromochloromethane	9.38	0.50	10	0	93.8	60-140	0			
Dichlorodifluoromethane	9.34	0.50	10	0	93.4	60-140	0			
Ethyl acetate	10.42	0.50	10	0	104	60-140	0			
Ethylbenzene	7.91	0.50	10	0	79.1	60-140	0			
Freon 113	11.91	0.50	10	0	119	60-140	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: EarthCon
Work Order: 1706563
Project: TWP ROSWELL STATION 9; 02.20120037.00

QC BATCH REPORT

Batch ID: R142029		Instrument ID: VMS4		Method: ETO-15			
Freon 114	9.84	0.50	10	0	98.4	60-140	0
Heptane	10.25	0.50	10	0	102	60-140	0
Hexachlorobutadiene	7.35	0.50	10	0	73.5	60-140	0
Hexane	10.25	0.50	10	0	102	60-140	0
m,p-Xylene	15.85	0.50	20	0	79.2	60-140	0
Methylene chloride	9.63	0.50	10	0	96.3	60-140	0
MTBE	10	0.50	10	0	100	60.8-151	0
Naphthalene	7.54	0.20	10	0	75.4	53.1-152	0
o-Xylene	7.9	0.50	10	0	79	60-140	0
Propene	10.31	0.50	10	0	103	34.4-139	0
Styrene	8.2	0.50	10	0	82	60-140	0
Tetrachloroethene	10.99	0.50	10	0	110	60-140	0
Tetrahydrofuran	11.11	0.50	10	0	111	60-140	0
Toluene	9.33	0.50	10	0	93.3	60-140	0
trans-1,2-Dichloroethene	10.36	0.50	10	0	104	60-140	0
trans-1,3-Dichloropropene	9.04	0.50	10	0	90.4	60-140	0
Trichloroethene	9.49	0.20	10	0	94.9	60-140	0
Trichlorofluoromethane	9.29	0.50	10	0	92.9	60-140	0
Vinyl acetate	11	0.50	10	0	110	48.4-145	0
Vinyl chloride	9.75	0.50	10	0	97.5	60-140	0
Surr: Bromofluorobenzene	8.29	0	10	0	82.9	60-140	0

The following samples were analyzed in this batch:

1706563-01A	1706563-02A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 30-Jun-17

Client: EarthCon
Project: TWP ROSWELL STATION 9; 02.20120037.00
WorkOrder: 1706563

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/m3	
ppbv	

Sample Receipt Checklist

Client Name: **EARTHCON-MARIETTA**

Date/Time Received: **16-Jun-17 14:53**

Work Order: **1706563**

Received by: **SNH**

Checklist completed by: **Stephanie Harrington**

20-Jun-17

Reviewed by: **Shawn Smythe**

27-Jun-17

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **FedEx**

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Present ☒

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace?

Yes ☐

No ☐

No VOA vials submitted ☒

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

pH adjusted?

Yes ☐

No ☐

N/A ☒

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



05-Sep-2017

Rachel Andrews
EarthCon
188 West Oak Parkway
Suite 106
Marietta, GA 30062

Tel: (678) 569-2892
Fax: (770) 973-7395

Re: TWP Roswell Station #9; 02.20120037.00

Work Order: **1708538**

Dear Rachel,

ALS Environmental received 2 samples on 15-Aug-2017 12:29 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 19.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Shawn Smythe

Electronically approved by: Shawn Smythe

Shawn Smythe
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, Ohio 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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Environmental

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RIGHT SOLUTIONS RIGHT PARTNER

Client: EarthCon
Project: TWP Roswell Station #9; 02.20120037.00
Work Order: 1708538

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1708538-01	TWP Roswell West Baker Furnaces	Air		8/10/2017 10:00	8/15/2017 12:29	<input type="checkbox"/>
1708538-02	TWP Roswell East Baker Furnace	Air		8/10/2017 10:05	8/15/2017 12:29	<input type="checkbox"/>

Client: EarthCon
Project: TWP Roswell Station #9; 02.20120037.00
Work Order: 1708538

Case Narrative

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Results relate only to the items tested and are not blank corrected unless indicated.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

ALS Environmental

Date: 05-Sep-17

Client: EarthCon

Project: TWP Roswell Station #9; 02.20120037.00

Work Order: 1708538

Sample ID: TWP Roswell West Baker Furnaces

Lab ID: 1708538-01

Collection Date: 8/10/2017 10:00 AM

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TO-15 BY GC/MS			ETO-15		Analyst: MRJ	
1,1,1-Trichloroethane	ND		10	ppbv	20	8/28/2017 07:07 PM
1,1,2,2-Tetrachloroethane	ND		10	ppbv	20	8/28/2017 07:07 PM
1,1,2-Trichloroethane	ND		10	ppbv	20	8/28/2017 07:07 PM
1,1-Dichloroethane	ND		10	ppbv	20	8/28/2017 07:07 PM
1,1-Dichloroethene	ND		10	ppbv	20	8/28/2017 07:07 PM
1,2,4-Trichlorobenzene	ND		10	ppbv	20	8/28/2017 07:07 PM
1,2,4-Trimethylbenzene	60		10	ppbv	20	8/28/2017 07:07 PM
1,2-Dibromoethane	ND		10	ppbv	20	8/28/2017 07:07 PM
1,2-Dichlorobenzene	ND		10	ppbv	20	8/28/2017 07:07 PM
1,2-Dichloroethane	ND		10	ppbv	20	8/28/2017 07:07 PM
1,2-Dichloropropane	ND		10	ppbv	20	8/28/2017 07:07 PM
1,3,5-Trimethylbenzene	73		10	ppbv	20	8/28/2017 07:07 PM
1,3-Butadiene	ND		10	ppbv	20	8/28/2017 07:07 PM
1,3-Dichlorobenzene	ND		10	ppbv	20	8/28/2017 07:07 PM
1,4-Dichlorobenzene	ND		10	ppbv	20	8/28/2017 07:07 PM
1,4-Dioxane	ND		20	ppbv	20	8/28/2017 07:07 PM
2-Butanone	ND		10	ppbv	20	8/28/2017 07:07 PM
2-Hexanone	ND		10	ppbv	20	8/28/2017 07:07 PM
2-Propanol	ND		20	ppbv	20	8/28/2017 07:07 PM
4-Ethyltoluene	21		10	ppbv	20	8/28/2017 07:07 PM
4-Methyl-2-pentanone	ND		10	ppbv	20	8/28/2017 07:07 PM
Acetone	ND		20	ppbv	20	8/28/2017 07:07 PM
Benzene	1,000		500	ppbv	1000	8/29/2017 07:36 PM
Benzyl chloride	ND		10	ppbv	20	8/28/2017 07:07 PM
Bromodichloromethane	ND		10	ppbv	20	8/28/2017 07:07 PM
Bromoform	ND		10	ppbv	20	8/28/2017 07:07 PM
Bromomethane	ND		10	ppbv	20	8/28/2017 07:07 PM
Carbon disulfide	ND		10	ppbv	20	8/28/2017 07:07 PM
Carbon tetrachloride	ND		10	ppbv	20	8/28/2017 07:07 PM
Chlorobenzene	ND		10	ppbv	20	8/28/2017 07:07 PM
Chloroethane	ND		10	ppbv	20	8/28/2017 07:07 PM
Chloroform	ND		4.0	ppbv	20	8/28/2017 07:07 PM
Chloromethane	ND		10	ppbv	20	8/28/2017 07:07 PM
cis-1,2-Dichloroethene	ND		10	ppbv	20	8/28/2017 07:07 PM
cis-1,3-Dichloropropene	ND		10	ppbv	20	8/28/2017 07:07 PM
Cumene	ND		10	ppbv	20	8/28/2017 07:07 PM
Cyclohexane	33,000	E	500	ppbv	1000	8/29/2017 07:36 PM
Dibromochloromethane	ND		10	ppbv	20	8/28/2017 07:07 PM
Dichlorodifluoromethane	ND		10	ppbv	20	8/28/2017 07:07 PM

Note:

ALS Environmental

Date: 05-Sep-17

Client: EarthCon

Project: TWP Roswell Station #9; 02.20120037.00

Work Order: 1708538

Sample ID: TWP Roswell West Baker Furnaces

Lab ID: 1708538-01

Collection Date: 8/10/2017 10:00 AM

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Ethyl acetate	ND		10	ppbv	20	8/28/2017 07:07 PM
Ethylbenzene	99		10	ppbv	20	8/28/2017 07:07 PM
Freon 113	ND		10	ppbv	20	8/28/2017 07:07 PM
Freon 114	ND		10	ppbv	20	8/28/2017 07:07 PM
Heptane	27,000	E	500	ppbv	1000	8/29/2017 07:36 PM
Hexachlorobutadiene	ND		10	ppbv	20	8/28/2017 07:07 PM
Hexane	66,000		2,500	ppbv	5000	8/30/2017 08:18 AM
m,p-Xylene	860		10	ppbv	20	8/28/2017 07:07 PM
Methylene chloride	ND		10	ppbv	20	8/28/2017 07:07 PM
MTBE	ND		10	ppbv	20	8/28/2017 07:07 PM
Naphthalene	ND		4.0	ppbv	20	8/28/2017 07:07 PM
o-Xylene	220		10	ppbv	20	8/28/2017 07:07 PM
Propene	ND		10	ppbv	20	8/28/2017 07:07 PM
Styrene	ND		10	ppbv	20	8/28/2017 07:07 PM
Tetrachloroethene	ND		10	ppbv	20	8/28/2017 07:07 PM
Tetrahydrofuran	ND		10	ppbv	20	8/28/2017 07:07 PM
Toluene	940		500	ppbv	1000	8/29/2017 07:36 PM
trans-1,2-Dichloroethene	ND		10	ppbv	20	8/28/2017 07:07 PM
trans-1,3-Dichloropropene	ND		10	ppbv	20	8/28/2017 07:07 PM
Trichloroethene	ND		4.0	ppbv	20	8/28/2017 07:07 PM
Trichlorofluoromethane	ND		10	ppbv	20	8/28/2017 07:07 PM
Vinyl acetate	ND		10	ppbv	20	8/28/2017 07:07 PM
Vinyl chloride	ND		10	ppbv	20	8/28/2017 07:07 PM
Surr: Bromofluorobenzene	102		60-140	%REC	20	8/28/2017 07:07 PM
TO-15 BY GC/MS			ETO-15		Analyst: MRJ	
1,1,1-Trichloroethane	ND		54.6	µg/m3	20	8/28/2017 07:07 PM
1,1,2,2-Tetrachloroethane	ND		68.6	µg/m3	20	8/28/2017 07:07 PM
1,1,2-Trichloroethane	ND		54.6	µg/m3	20	8/28/2017 07:07 PM
1,1-Dichloroethane	ND		40.5	µg/m3	20	8/28/2017 07:07 PM
1,1-Dichloroethene	ND		39.6	µg/m3	20	8/28/2017 07:07 PM
1,2,4-Trichlorobenzene	ND		74.2	µg/m3	20	8/28/2017 07:07 PM
1,2,4-Trimethylbenzene	296		49.2	µg/m3	20	8/28/2017 07:07 PM
1,2-Dibromoethane	ND		76.8	µg/m3	20	8/28/2017 07:07 PM
1,2-Dichlorobenzene	ND		60.1	µg/m3	20	8/28/2017 07:07 PM
1,2-Dichloroethane	ND		40.5	µg/m3	20	8/28/2017 07:07 PM
1,2-Dichloropropane	ND		46.2	µg/m3	20	8/28/2017 07:07 PM
1,3,5-Trimethylbenzene	360		49.2	µg/m3	20	8/28/2017 07:07 PM
1,3-Butadiene	ND		22.1	µg/m3	20	8/28/2017 07:07 PM
1,3-Dichlorobenzene	ND		60.1	µg/m3	20	8/28/2017 07:07 PM
1,4-Dichlorobenzene	ND		60.1	µg/m3	20	8/28/2017 07:07 PM

Note:

ALS Environmental

Date: 05-Sep-17

Client: EarthCon

Project: TWP Roswell Station #9; 02.20120037.00

Work Order: 1708538

Sample ID: TWP Roswell West Baker Furnaces

Lab ID: 1708538-01

Collection Date: 8/10/2017 10:00 AM

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,4-Dioxane	ND		72.1	µg/m3	20	8/28/2017 07:07 PM
2-Butanone	ND		29.5	µg/m3	20	8/28/2017 07:07 PM
2-Hexanone	ND		41.0	µg/m3	20	8/28/2017 07:07 PM
2-Propanol	ND		49.2	µg/m3	20	8/28/2017 07:07 PM
4-Ethyltoluene	104		49.2	µg/m3	20	8/28/2017 07:07 PM
4-Methyl-2-pentanone	ND		41.0	µg/m3	20	8/28/2017 07:07 PM
Acetone	ND		47.5	µg/m3	20	8/28/2017 07:07 PM
Benzene	3,260		1,600	µg/m3	1000	8/29/2017 07:36 PM
Benzyl chloride	ND		51.8	µg/m3	20	8/28/2017 07:07 PM
Bromodichloromethane	ND		67.0	µg/m3	20	8/28/2017 07:07 PM
Bromoform	ND		103	µg/m3	20	8/28/2017 07:07 PM
Bromomethane	ND		38.8	µg/m3	20	8/28/2017 07:07 PM
Carbon disulfide	ND		31.1	µg/m3	20	8/28/2017 07:07 PM
Carbon tetrachloride	ND		62.9	µg/m3	20	8/28/2017 07:07 PM
Chlorobenzene	ND		46.0	µg/m3	20	8/28/2017 07:07 PM
Chloroethane	ND		26.4	µg/m3	20	8/28/2017 07:07 PM
Chloroform	ND		19.5	µg/m3	20	8/28/2017 07:07 PM
Chloromethane	ND		20.6	µg/m3	20	8/28/2017 07:07 PM
cis-1,2-Dichloroethene	ND		39.6	µg/m3	20	8/28/2017 07:07 PM
cis-1,3-Dichloropropene	ND		45.4	µg/m3	20	8/28/2017 07:07 PM
Cumene	ND		49.2	µg/m3	20	8/28/2017 07:07 PM
Cyclohexane	115,000	E	1,720	µg/m3	1000	8/29/2017 07:36 PM
Dibromochloromethane	ND		85.2	µg/m3	20	8/28/2017 07:07 PM
Dichlorodifluoromethane	ND		49.5	µg/m3	20	8/28/2017 07:07 PM
Ethyl acetate	ND		36.0	µg/m3	20	8/28/2017 07:07 PM
Ethylbenzene	432		43.4	µg/m3	20	8/28/2017 07:07 PM
Freon 113	ND		76.6	µg/m3	20	8/28/2017 07:07 PM
Freon 114	ND		69.9	µg/m3	20	8/28/2017 07:07 PM
Heptane	112,000	E	2,050	µg/m3	1000	8/29/2017 07:36 PM
Hexachlorobutadiene	ND		107	µg/m3	20	8/28/2017 07:07 PM
Hexane	231,000		8,810	µg/m3	5000	8/30/2017 08:18 AM
m,p-Xylene	3,720		43.4	µg/m3	20	8/28/2017 07:07 PM
Methylene chloride	ND		34.7	µg/m3	20	8/28/2017 07:07 PM
MTBE	ND		36.1	µg/m3	20	8/28/2017 07:07 PM
Naphthalene	ND		21.0	µg/m3	20	8/28/2017 07:07 PM
o-Xylene	938		43.4	µg/m3	20	8/28/2017 07:07 PM
Propene	ND		17.2	µg/m3	20	8/28/2017 07:07 PM
Styrene	ND		42.6	µg/m3	20	8/28/2017 07:07 PM
Tetrachloroethene	ND		67.8	µg/m3	20	8/28/2017 07:07 PM
Tetrahydrofuran	ND		29.5	µg/m3	20	8/28/2017 07:07 PM

Note:

ALS Environmental

Date: 05-Sep-17

Client: EarthCon

Project: TWP Roswell Station #9; 02.20120037.00

Work Order: 1708538

Sample ID: TWP Roswell West Baker Furnaces

Lab ID: 1708538-01

Collection Date: 8/10/2017 10:00 AM

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Toluene	3,540		1,880	µg/m3	1000	8/29/2017 07:36 PM
trans-1,2-Dichloroethene	ND		39.6	µg/m3	20	8/28/2017 07:07 PM
trans-1,3-Dichloropropene	ND		45.4	µg/m3	20	8/28/2017 07:07 PM
Trichloroethene	ND		21.5	µg/m3	20	8/28/2017 07:07 PM
Trichlorofluoromethane	ND		56.2	µg/m3	20	8/28/2017 07:07 PM
Vinyl acetate	ND		35.2	µg/m3	20	8/28/2017 07:07 PM
Vinyl chloride	ND		25.6	µg/m3	20	8/28/2017 07:07 PM
Surr: Bromofluorobenzene	102		60-140	%REC	20	8/28/2017 07:07 PM

Note:

ALS Environmental

Date: 05-Sep-17

Client: EarthCon

Project: TWP Roswell Station #9; 02.20120037.00

Work Order: 1708538

Sample ID: TWP Roswell East Baker Furnace

Lab ID: 1708538-02

Collection Date: 8/10/2017 10:05 AM

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TO-15 BY GC/MS			ETO-15		Analyst: MRJ	
1,1,1-Trichloroethane	ND		10	ppbv	20	8/28/2017 07:53 PM
1,1,2,2-Tetrachloroethane	ND		10	ppbv	20	8/28/2017 07:53 PM
1,1,2-Trichloroethane	ND		10	ppbv	20	8/28/2017 07:53 PM
1,1-Dichloroethane	ND		10	ppbv	20	8/28/2017 07:53 PM
1,1-Dichloroethene	ND		10	ppbv	20	8/28/2017 07:53 PM
1,2,4-Trichlorobenzene	ND		10	ppbv	20	8/28/2017 07:53 PM
1,2,4-Trimethylbenzene	54		10	ppbv	20	8/28/2017 07:53 PM
1,2-Dibromoethane	ND		10	ppbv	20	8/28/2017 07:53 PM
1,2-Dichlorobenzene	ND		10	ppbv	20	8/28/2017 07:53 PM
1,2-Dichloroethane	ND		10	ppbv	20	8/28/2017 07:53 PM
1,2-Dichloropropane	ND		10	ppbv	20	8/28/2017 07:53 PM
1,3,5-Trimethylbenzene	66		10	ppbv	20	8/28/2017 07:53 PM
1,3-Butadiene	ND		10	ppbv	20	8/28/2017 07:53 PM
1,3-Dichlorobenzene	ND		10	ppbv	20	8/28/2017 07:53 PM
1,4-Dichlorobenzene	ND		10	ppbv	20	8/28/2017 07:53 PM
1,4-Dioxane	ND		20	ppbv	20	8/28/2017 07:53 PM
2-Butanone	ND		10	ppbv	20	8/28/2017 07:53 PM
2-Hexanone	ND		10	ppbv	20	8/28/2017 07:53 PM
2-Propanol	ND		20	ppbv	20	8/28/2017 07:53 PM
4-Ethyltoluene	18		10	ppbv	20	8/28/2017 07:53 PM
4-Methyl-2-pentanone	ND		10	ppbv	20	8/28/2017 07:53 PM
Acetone	ND		20	ppbv	20	8/28/2017 07:53 PM
Benzene	800		500	ppbv	1000	8/29/2017 08:21 PM
Benzyl chloride	ND		10	ppbv	20	8/28/2017 07:53 PM
Bromodichloromethane	ND		10	ppbv	20	8/28/2017 07:53 PM
Bromoform	ND		10	ppbv	20	8/28/2017 07:53 PM
Bromomethane	ND		10	ppbv	20	8/28/2017 07:53 PM
Carbon disulfide	ND		10	ppbv	20	8/28/2017 07:53 PM
Carbon tetrachloride	ND		10	ppbv	20	8/28/2017 07:53 PM
Chlorobenzene	ND		10	ppbv	20	8/28/2017 07:53 PM
Chloroethane	ND		10	ppbv	20	8/28/2017 07:53 PM
Chloroform	ND		4.0	ppbv	20	8/28/2017 07:53 PM
Chloromethane	ND		10	ppbv	20	8/28/2017 07:53 PM
cis-1,2-Dichloroethene	ND		10	ppbv	20	8/28/2017 07:53 PM
cis-1,3-Dichloropropene	ND		10	ppbv	20	8/28/2017 07:53 PM
Cumene	ND		10	ppbv	20	8/28/2017 07:53 PM
Cyclohexane	24,000		2,500	ppbv	5000	8/30/2017 09:04 AM
Dibromochloromethane	ND		10	ppbv	20	8/28/2017 07:53 PM
Dichlorodifluoromethane	ND		10	ppbv	20	8/28/2017 07:53 PM

Note:

ALS Environmental

Date: 05-Sep-17

Client: EarthCon

Project: TWP Roswell Station #9; 02.20120037.00

Work Order: 1708538

Sample ID: TWP Roswell East Baker Furnace

Lab ID: 1708538-02

Collection Date: 8/10/2017 10:05 AM

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Ethyl acetate	ND		10	ppbv	20	8/28/2017 07:53 PM
Ethylbenzene	87		10	ppbv	20	8/28/2017 07:53 PM
Freon 113	ND		10	ppbv	20	8/28/2017 07:53 PM
Freon 114	ND		10	ppbv	20	8/28/2017 07:53 PM
Heptane	21,000		500	ppbv	1000	8/29/2017 08:21 PM
Hexachlorobutadiene	ND		10	ppbv	20	8/28/2017 07:53 PM
Hexane	49,000		2,500	ppbv	5000	8/30/2017 09:04 AM
m,p-Xylene	750		10	ppbv	20	8/28/2017 07:53 PM
Methylene chloride	ND		10	ppbv	20	8/28/2017 07:53 PM
MTBE	ND		10	ppbv	20	8/28/2017 07:53 PM
Naphthalene	ND		4.0	ppbv	20	8/28/2017 07:53 PM
o-Xylene	190		10	ppbv	20	8/28/2017 07:53 PM
Propene	ND		10	ppbv	20	8/28/2017 07:53 PM
Styrene	ND		10	ppbv	20	8/28/2017 07:53 PM
Tetrachloroethene	ND		10	ppbv	20	8/28/2017 07:53 PM
Tetrahydrofuran	ND		10	ppbv	20	8/28/2017 07:53 PM
Toluene	700		500	ppbv	1000	8/29/2017 08:21 PM
trans-1,2-Dichloroethene	ND		10	ppbv	20	8/28/2017 07:53 PM
trans-1,3-Dichloropropene	ND		10	ppbv	20	8/28/2017 07:53 PM
Trichloroethene	ND		4.0	ppbv	20	8/28/2017 07:53 PM
Trichlorofluoromethane	ND		10	ppbv	20	8/28/2017 07:53 PM
Vinyl acetate	ND		10	ppbv	20	8/28/2017 07:53 PM
Vinyl chloride	ND		10	ppbv	20	8/28/2017 07:53 PM
Surr: Bromofluorobenzene	102		60-140	%REC	20	8/28/2017 07:53 PM
TO-15 BY GC/MS			ETO-15		Analyst: MRJ	
1,1,1-Trichloroethane	ND		54.6	µg/m3	20	8/28/2017 07:53 PM
1,1,2,2-Tetrachloroethane	ND		68.6	µg/m3	20	8/28/2017 07:53 PM
1,1,2-Trichloroethane	ND		54.6	µg/m3	20	8/28/2017 07:53 PM
1,1-Dichloroethane	ND		40.5	µg/m3	20	8/28/2017 07:53 PM
1,1-Dichloroethene	ND		39.6	µg/m3	20	8/28/2017 07:53 PM
1,2,4-Trichlorobenzene	ND		74.2	µg/m3	20	8/28/2017 07:53 PM
1,2,4-Trimethylbenzene	267		49.2	µg/m3	20	8/28/2017 07:53 PM
1,2-Dibromoethane	ND		76.8	µg/m3	20	8/28/2017 07:53 PM
1,2-Dichlorobenzene	ND		60.1	µg/m3	20	8/28/2017 07:53 PM
1,2-Dichloroethane	ND		40.5	µg/m3	20	8/28/2017 07:53 PM
1,2-Dichloropropane	ND		46.2	µg/m3	20	8/28/2017 07:53 PM
1,3,5-Trimethylbenzene	325		49.2	µg/m3	20	8/28/2017 07:53 PM
1,3-Butadiene	ND		22.1	µg/m3	20	8/28/2017 07:53 PM
1,3-Dichlorobenzene	ND		60.1	µg/m3	20	8/28/2017 07:53 PM
1,4-Dichlorobenzene	ND		60.1	µg/m3	20	8/28/2017 07:53 PM

Note:

ALS Environmental

Date: 05-Sep-17

Client: EarthCon

Project: TWP Roswell Station #9; 02.20120037.00

Sample ID: TWP Roswell East Baker Furnace

Collection Date: 8/10/2017 10:05 AM

Work Order: 1708538

Lab ID: 1708538-02

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,4-Dioxane	ND		72.1	µg/m3	20	8/28/2017 07:53 PM
2-Butanone	ND		29.5	µg/m3	20	8/28/2017 07:53 PM
2-Hexanone	ND		41.0	µg/m3	20	8/28/2017 07:53 PM
2-Propanol	ND		49.2	µg/m3	20	8/28/2017 07:53 PM
4-Ethyltoluene	88.5		49.2	µg/m3	20	8/28/2017 07:53 PM
4-Methyl-2-pentanone	ND		41.0	µg/m3	20	8/28/2017 07:53 PM
Acetone	ND		47.5	µg/m3	20	8/28/2017 07:53 PM
Benzene	2,560		1,600	µg/m3	1000	8/29/2017 08:21 PM
Benzyl chloride	ND		51.8	µg/m3	20	8/28/2017 07:53 PM
Bromodichloromethane	ND		67.0	µg/m3	20	8/28/2017 07:53 PM
Bromoform	ND		103	µg/m3	20	8/28/2017 07:53 PM
Bromomethane	ND		38.8	µg/m3	20	8/28/2017 07:53 PM
Carbon disulfide	ND		31.1	µg/m3	20	8/28/2017 07:53 PM
Carbon tetrachloride	ND		62.9	µg/m3	20	8/28/2017 07:53 PM
Chlorobenzene	ND		46.0	µg/m3	20	8/28/2017 07:53 PM
Chloroethane	ND		26.4	µg/m3	20	8/28/2017 07:53 PM
Chloroform	ND		19.5	µg/m3	20	8/28/2017 07:53 PM
Chloromethane	ND		20.6	µg/m3	20	8/28/2017 07:53 PM
cis-1,2-Dichloroethene	ND		39.6	µg/m3	20	8/28/2017 07:53 PM
cis-1,3-Dichloropropene	ND		45.4	µg/m3	20	8/28/2017 07:53 PM
Cumene	ND		49.2	µg/m3	20	8/28/2017 07:53 PM
Cyclohexane	82,400		8,610	µg/m3	5000	8/30/2017 09:04 AM
Dibromochloromethane	ND		85.2	µg/m3	20	8/28/2017 07:53 PM
Dichlorodifluoromethane	ND		49.5	µg/m3	20	8/28/2017 07:53 PM
Ethyl acetate	ND		36.0	µg/m3	20	8/28/2017 07:53 PM
Ethylbenzene	376		43.4	µg/m3	20	8/28/2017 07:53 PM
Freon 113	ND		76.6	µg/m3	20	8/28/2017 07:53 PM
Freon 114	ND		69.9	µg/m3	20	8/28/2017 07:53 PM
Heptane	84,500		2,050	µg/m3	1000	8/29/2017 08:21 PM
Hexachlorobutadiene	ND		107	µg/m3	20	8/28/2017 07:53 PM
Hexane	172,000		8,810	µg/m3	5000	8/30/2017 09:04 AM
m,p-Xylene	3,240		43.4	µg/m3	20	8/28/2017 07:53 PM
Methylene chloride	ND		34.7	µg/m3	20	8/28/2017 07:53 PM
MTBE	ND		36.1	µg/m3	20	8/28/2017 07:53 PM
Naphthalene	ND		21.0	µg/m3	20	8/28/2017 07:53 PM
o-Xylene	809		43.4	µg/m3	20	8/28/2017 07:53 PM
Propene	ND		17.2	µg/m3	20	8/28/2017 07:53 PM
Styrene	ND		42.6	µg/m3	20	8/28/2017 07:53 PM
Tetrachloroethene	ND		67.8	µg/m3	20	8/28/2017 07:53 PM
Tetrahydrofuran	ND		29.5	µg/m3	20	8/28/2017 07:53 PM

Note:

ALS Environmental

Date: 05-Sep-17

Client: EarthCon

Project: TWP Roswell Station #9; 02.20120037.00

Work Order: 1708538

Sample ID: TWP Roswell East Baker Furnace

Lab ID: 1708538-02

Collection Date: 8/10/2017 10:05 AM

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Toluene	2,640		1,880	µg/m3	1000	8/29/2017 08:21 PM
trans-1,2-Dichloroethene	ND		39.6	µg/m3	20	8/28/2017 07:53 PM
trans-1,3-Dichloropropene	ND		45.4	µg/m3	20	8/28/2017 07:53 PM
Trichloroethene	ND		21.5	µg/m3	20	8/28/2017 07:53 PM
Trichlorofluoromethane	ND		56.2	µg/m3	20	8/28/2017 07:53 PM
Vinyl acetate	ND		35.2	µg/m3	20	8/28/2017 07:53 PM
Vinyl chloride	ND		25.6	µg/m3	20	8/28/2017 07:53 PM
Surr: Bromofluorobenzene	102		60-140	%REC	20	8/28/2017 07:53 PM

Note:



ALS Laboratory Group
4388 Glendale-Milford Rd
Cincinnati, OH 45242
Ph: 513-733-5336
Fax: 513-733-5347
www.alsglobal.com

TVOC **

Client: Earthcon
Client Sample ID: TWP Roswell West Baker Furnaces
ALS Sample # 1708538-01A
Method: EPA TO-15

		Estimated Concentration	Units
	TVOC**	224792	PPBV
	TVOC**	792243	ug/m3

Client: Earthcon
Client Sample ID: TWP Roswell East Baker Furnaces
ALS Sample # 1708538-02A
Method: EPA TO-15

		Estimated Concentration	Units
	TVOC**	164544	PPBV
	TVOC**	579910	ug/m3

**TVOC calculation based on response factor and molecular weight of hexane.

****Results should be considered estimated.

ALS Environmental

Date: 05-Sep-17

Client: EarthCon

QC BATCH REPORT

Work Order: 1708538

Project: TWP Roswell Station #9; 02.20120037.00

Batch ID: R144135

Instrument ID: VMS4

Method: ETO-15

mbk		Sample ID: MBLK-R144135			Units: ppbv		Analysis Date: 8/28/2017 03:54 PM			
Client ID:		Run ID: VMS4_170828A			SeqNo: 1582165		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	0.50								
1,1,2,2-Tetrachloroethane	ND	0.50								
1,1,2-Trichloroethane	ND	0.50								
1,1-Dichloroethane	ND	0.50								
1,1-Dichloroethene	ND	0.50								
1,2,4-Trichlorobenzene	ND	0.50								
1,2,4-Trimethylbenzene	ND	0.50								
1,2-Dibromoethane	ND	0.50								
1,2-Dichlorobenzene	ND	0.50								
1,2-Dichloroethane	ND	0.50								
1,2-Dichloropropane	ND	0.50								
1,3,5-Trimethylbenzene	ND	0.50								
1,3-Butadiene	ND	0.50								
1,3-Dichlorobenzene	ND	0.50								
1,4-Dichlorobenzene	ND	0.50								
1,4-Dioxane	ND	1.0								
2-Butanone	ND	0.50								
2-Hexanone	ND	0.50								
2-Propanol	ND	1.0								
4-Ethyltoluene	ND	0.50								
4-Methyl-2-pentanone	ND	0.50								
Acetone	ND	1.0								
Benzyl chloride	ND	0.50								
Bromodichloromethane	ND	0.50								
Bromoform	ND	0.50								
Bromomethane	ND	0.50								
Carbon disulfide	ND	0.50								
Carbon tetrachloride	ND	0.50								
Chlorobenzene	ND	0.50								
Chloroethane	ND	0.50								
Chloroform	ND	0.20								
Chloromethane	ND	0.50								
cis-1,2-Dichloroethene	ND	0.50								
cis-1,3-Dichloropropene	ND	0.50								
Cumene	ND	0.50								
Dibromochloromethane	ND	0.50								
Dichlorodifluoromethane	ND	0.50								
Ethyl acetate	ND	0.50								
Ethylbenzene	ND	0.50								
Freon 113	ND	0.50								
Freon 114	ND	0.50								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: EarthCon
Work Order: 1708538
Project: TWP Roswell Station #9; 02.20120037.00

QC BATCH REPORT

Batch ID: R144135		Instrument ID: VMS4		Method: ETO-15	
Hexachlorobutadiene	ND	0.50			
m,p-Xylene	ND	0.50			
Methylene chloride	ND	0.50			
MTBE	ND	0.50			
Naphthalene	ND	0.20			
o-Xylene	ND	0.50			
Propene	ND	0.50			
Styrene	ND	0.50			
Tetrachloroethene	ND	0.50			
Tetrahydrofuran	ND	0.50			
trans-1,2-Dichloroethene	ND	0.50			
trans-1,3-Dichloropropene	ND	0.50			
Trichloroethene	ND	0.20			
Trichlorofluoromethane	ND	0.50			
Vinyl acetate	ND	0.50			
Vinyl chloride	ND	0.50			
<i>Surr: Bromofluorobenzene</i>	10.14	0	10	0	101 60-140 0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: EarthCon
Work Order: 1708538
Project: TWP Roswell Station #9; 02.20120037.00

QC BATCH REPORT

Batch ID: **R144135** Instrument ID: **VMS4** Method: **ETO-15**

ics		Sample ID: LCS-R144135			Units: ppbv		Analysis Date: 8/28/2017 01:56 PM			
Client ID:		Run ID: VMS4_170828A			SeqNo: 1582164		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	10.24	0.50	10	0	102	58.8-163	0			
1,1,2,2-Tetrachloroethane	10.16	0.50	10	0	102	60-140	0			
1,1,2-Trichloroethane	9.7	0.50	10	0	97	60-140	0			
1,1-Dichloroethane	10.14	0.50	10	0	101	60-140	0			
1,1-Dichloroethene	10.42	0.50	10	0	104	60-140	0			
1,2,4-Trichlorobenzene	10.3	0.50	10	0	103	49.3-150	0			
1,2,4-Trimethylbenzene	9.9	0.50	10	0	99	50.1-162	0			
1,2-Dibromoethane	9.68	0.50	10	0	96.8	60-140	0			
1,2-Dichlorobenzene	9.52	0.50	10	0	95.2	41.9-141	0			
1,2-Dichloroethane	10.42	0.50	10	0	104	60-140	0			
1,2-Dichloropropane	9.73	0.50	10	0	97.3	60-140	0			
1,3,5-Trimethylbenzene	9.73	0.50	10	0	97.3	60-140	0			
1,3-Butadiene	10.61	0.50	10	0	106	50.6-140	0			
1,3-Dichlorobenzene	9.45	0.50	10	0	94.5	60-140	0			
1,4-Dichlorobenzene	9.39	0.50	10	0	93.9	55.1-145	0			
1,4-Dioxane	9.67	1.0	10	0	96.7	60-140	0			
2-Butanone	10.25	0.50	10	0	102	60-140	0			
2-Hexanone	10.69	0.50	10	0	107	56.2-162	0			
2-Propanol	8.63	1.0	10	0	86.3	60-140	0			
4-Ethyltoluene	9.86	0.50	10	0	98.6	60-140	0			
4-Methyl-2-pentanone	10.22	0.50	10	0	102	60-140	0			
Acetone	9.73	1.0	10	0	97.3	60-140	0			
Benzyl chloride	11	0.50	10	0	110	31.9-174	0			
Bromodichloromethane	10.44	0.50	10	0	104	60-140	0			
Bromoform	11	0.50	10	0	110	60-140	0			
Bromomethane	8.66	0.50	10	0	86.6	60-140	0			
Carbon disulfide	10.09	0.50	10	0	101	60-140	0			
Carbon tetrachloride	10.4	0.50	10	0	104	60-140	0			
Chlorobenzene	9.39	0.50	10	0	93.9	60-140	0			
Chloroethane	10.42	0.50	10	0	104	60-140	0			
Chloroform	10.16	0.20	10	0	102	60-140	0			
Chloromethane	8.81	0.50	10	0	88.1	60-140	0			
cis-1,2-Dichloroethene	10.15	0.50	10	0	102	60-140	0			
cis-1,3-Dichloropropene	10.08	0.50	10	0	101	60-140	0			
Cumene	9.61	0.50	10	0	96.1	60-140	0			
Dibromochloromethane	10.12	0.50	10	0	101	60-140	0			
Dichlorodifluoromethane	9.84	0.50	10	0	98.4	60-140	0			
Ethyl acetate	12.08	0.50	10	0	121	60-140	0			
Ethylbenzene	9.77	0.50	10	0	97.7	60-140	0			
Freon 113	10.04	0.50	10	0	100	60-140	0			
Freon 114	9.47	0.50	10	0	94.7	60-140	0			
Hexachlorobutadiene	10.69	0.50	10	0	107	60-140	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: EarthCon
Work Order: 1708538
Project: TWP Roswell Station #9; 02.20120037.00

QC BATCH REPORT

Batch ID: R144135		Instrument ID: VMS4		Method: ETO-15				
m,p-Xylene	19.71	0.50	20	0	98.6	60-140	0	
Methylene chloride	8.92	0.50	10	0	89.2	60-140	0	
MTBE	10.35	0.50	10	0	104	60.8-151	0	
Naphthalene	9.58	0.20	10	0	95.8	53.1-152	0	
o-Xylene	9.84	0.50	10	0	98.4	60-140	0	
Propene	8.86	0.50	10	0	88.6	34.4-139	0	
Styrene	9.82	0.50	10	0	98.2	60-140	0	
Tetrachloroethene	9.32	0.50	10	0	93.2	60-140	0	
Tetrahydrofuran	9.86	0.50	10	0	98.6	60-140	0	
trans-1,2-Dichloroethene	9.28	0.50	10	0	92.8	60-140	0	
trans-1,3-Dichloropropene	10.36	0.50	10	0	104	60-140	0	
Trichloroethene	9.68	0.20	10	0	96.8	60-140	0	
Trichlorofluoromethane	10.75	0.50	10	0	108	60-140	0	
Vinyl acetate	10.38	0.50	10	0	104	48.4-145	0	
Vinyl chloride	9.29	0.50	10	0	92.9	60-140	0	
Surr: Bromofluorobenzene	9.88	0	10	0	98.8	60-140	0	

The following samples were analyzed in this batch:

1708538-01A	1708538-02A
-------------	-------------

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: EarthCon
 Work Order: 1708538
 Project: TWP Roswell Station #9; 02.20120037.00

QC BATCH REPORT

Batch ID: **R144221** Instrument ID: **VMS4** Method: **ETO-15**

mbk	Sample ID: MBLK-R144221			Units: ppbv			Analysis Date: 8/29/2017 03:21 PM			
Client ID:	Run ID: VMS4_170829A			SeqNo: 1585217			Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	0.50								
Cyclohexane	ND	0.50								
Heptane	ND	0.50								
Hexane	ND	0.50								
Toluene	ND	0.50								
<i>Surr: Bromofluorobenzene</i>	10.14	0	10	0	101	60-140	0			

lcs	Sample ID: LCS-R144221			Units: ppbv			Analysis Date: 8/29/2017 02:36 PM			
Client ID:	Run ID: VMS4_170829A			SeqNo: 1585216			Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	10	0.50	10	0	100	60-140	0			
Cyclohexane	10.24	0.50	10	0	102	60-140	0			
Heptane	10.17	0.50	10	0	102	60-140	0			
Hexane	10.55	0.50	10	0	106	60-140	0			
Toluene	9.65	0.50	10	0	96.5	60-140	0			
<i>Surr: Bromofluorobenzene</i>	10.22	0	10	0	102	60-140	0			

The following samples were analyzed in this batch:

1708538-01A 1708538-02A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: EarthCon
Project: TWP Roswell Station #9; 02.20120037.00
WorkOrder: 1708538

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/m3	
ppbv	

Sample Receipt Checklist

Client Name: **EARTHCON-MARIETTA**

Date/Time Received: **15-Aug-17 12:29**

Work Order: **1708538**

Received by: **SNH**

Checklist completed by: **Jan Wilcox**

16-Aug-17

Reviewed by: **Shawn Smythe**

23-Aug-17

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **FedEx**

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Present ☒

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace?

Yes ☐

No ☐

No VOA vials submitted ☐

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☐

pH adjusted?

Yes ☐

No ☐

N/A ☐

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



09-Nov-2017

Rachel Andrews
EarthCon
188 West Oak Parkway
Suite 106
Marietta, GA 30062

Tel: (678) 569-2892
Fax: (770) 973-7395

Re: TWP Roswell Station #9; 02.20120037.00

Work Order: **17101018**

Dear Rachel,

ALS Environmental received 2 samples on 26-Oct-2017 12:15 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 18.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Shawn Smythe

Electronically approved by: Shawn Smythe

Shawn Smythe
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, Ohio 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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Environmental

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: EarthCon
Project: TWP Roswell Station #9; 02.20120037.00
Work Order: 17101018

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
17101018-01	TWP Roswell West Baker Furnace	Air		10/23/2017	10/26/2017 12:15	<input type="checkbox"/>
17101018-02	TWP Roswell East Baker Furnace	Air		10/23/2017	10/26/2017 12:15	<input type="checkbox"/>

Client: EarthCon
Project: TWP Roswell Station #9; 02.20120037.00
Work Order: 17101018

Case Narrative

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Results relate only to the items tested and are not blank corrected unless indicated.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

ALS Environmental

Date: 09-Nov-17

Client: EarthCon

Project: TWP Roswell Station #9; 02.20120037.00

Sample ID: TWP Roswell West Baker Furnace

Collection Date: 10/23/2017

Work Order: 17101018

Lab ID: 17101018-01

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TO-15 BY GC/MS			ETO-15		Analyst: MRJ	
1,1,1-Trichloroethane	ND		500	ppbv	1000	11/1/2017 04:25 PM
1,1,2,2-Tetrachloroethane	ND		500	ppbv	1000	11/1/2017 04:25 PM
1,1,2-Trichloroethane	ND		500	ppbv	1000	11/1/2017 04:25 PM
1,1-Dichloroethane	ND		500	ppbv	1000	11/1/2017 04:25 PM
1,1-Dichloroethene	ND		500	ppbv	1000	11/1/2017 04:25 PM
1,2,4-Trichlorobenzene	ND		500	ppbv	1000	11/1/2017 04:25 PM
1,2,4-Trimethylbenzene	ND		500	ppbv	1000	11/1/2017 04:25 PM
1,2-Dibromoethane	ND		500	ppbv	1000	11/1/2017 04:25 PM
1,2-Dichlorobenzene	ND		500	ppbv	1000	11/1/2017 04:25 PM
1,2-Dichloroethane	ND		500	ppbv	1000	11/1/2017 04:25 PM
1,2-Dichloropropane	ND		500	ppbv	1000	11/1/2017 04:25 PM
1,3,5-Trimethylbenzene	ND		500	ppbv	1000	11/1/2017 04:25 PM
1,3-Butadiene	ND		500	ppbv	1000	11/1/2017 04:25 PM
1,3-Dichlorobenzene	ND		500	ppbv	1000	11/1/2017 04:25 PM
1,4-Dichlorobenzene	ND		500	ppbv	1000	11/1/2017 04:25 PM
1,4-Dioxane	ND		1,000	ppbv	1000	11/1/2017 04:25 PM
2-Butanone	ND		500	ppbv	1000	11/1/2017 04:25 PM
2-Hexanone	ND		500	ppbv	1000	11/1/2017 04:25 PM
2-Propanol	ND		1,000	ppbv	1000	11/1/2017 04:25 PM
4-Ethyltoluene	ND		500	ppbv	1000	11/1/2017 04:25 PM
4-Methyl-2-pentanone	ND		500	ppbv	1000	11/1/2017 04:25 PM
Acetone	1,900		1,000	ppbv	1000	11/1/2017 04:25 PM
Benzene	1,300		500	ppbv	1000	11/1/2017 04:25 PM
Benzyl chloride	ND		500	ppbv	1000	11/1/2017 04:25 PM
Bromodichloromethane	ND		500	ppbv	1000	11/1/2017 04:25 PM
Bromoform	ND		500	ppbv	1000	11/1/2017 04:25 PM
Bromomethane	ND		500	ppbv	1000	11/1/2017 04:25 PM
Carbon disulfide	ND		500	ppbv	1000	11/1/2017 04:25 PM
Carbon tetrachloride	ND		500	ppbv	1000	11/1/2017 04:25 PM
Chlorobenzene	ND		500	ppbv	1000	11/1/2017 04:25 PM
Chloroethane	ND		500	ppbv	1000	11/1/2017 04:25 PM
Chloroform	ND		200	ppbv	1000	11/1/2017 04:25 PM
Chloromethane	ND		500	ppbv	1000	11/1/2017 04:25 PM
cis-1,2-Dichloroethene	ND		500	ppbv	1000	11/1/2017 04:25 PM
cis-1,3-Dichloropropene	ND		500	ppbv	1000	11/1/2017 04:25 PM
Cumene	ND		500	ppbv	1000	11/1/2017 04:25 PM
Cyclohexane	34,000		5,000	ppbv	10000	11/2/2017 09:19 AM
Dibromochloromethane	ND		500	ppbv	1000	11/1/2017 04:25 PM
Dichlorodifluoromethane	ND		500	ppbv	1000	11/1/2017 04:25 PM

Note:

ALS Environmental

Date: 09-Nov-17

Client: EarthCon

Project: TWP Roswell Station #9; 02.20120037.00

Sample ID: TWP Roswell West Baker Furnace

Collection Date: 10/23/2017

Work Order: 17101018

Lab ID: 17101018-01

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Ethyl acetate	ND		500	ppbv	1000	11/1/2017 04:25 PM
Ethylbenzene	ND		500	ppbv	1000	11/1/2017 04:25 PM
Freon 113	ND		500	ppbv	1000	11/1/2017 04:25 PM
Freon 114	ND		500	ppbv	1000	11/1/2017 04:25 PM
Heptane	31,000		5,000	ppbv	10000	11/2/2017 09:19 AM
Hexachlorobutadiene	ND		500	ppbv	1000	11/1/2017 04:25 PM
Hexane	68,000		5,000	ppbv	10000	11/2/2017 09:19 AM
m,p-Xylene	600		500	ppbv	1000	11/1/2017 04:25 PM
Methylene chloride	ND		1,000	ppbv	1000	11/1/2017 04:25 PM
MTBE	ND		500	ppbv	1000	11/1/2017 04:25 PM
Naphthalene	ND		200	ppbv	1000	11/1/2017 04:25 PM
o-Xylene	ND		500	ppbv	1000	11/1/2017 04:25 PM
Propene	ND		500	ppbv	1000	11/1/2017 04:25 PM
Styrene	ND		500	ppbv	1000	11/1/2017 04:25 PM
Tetrachloroethene	ND		500	ppbv	1000	11/1/2017 04:25 PM
Tetrahydrofuran	ND		500	ppbv	1000	11/1/2017 04:25 PM
Toluene	1,900		500	ppbv	1000	11/1/2017 04:25 PM
trans-1,2-Dichloroethene	ND		500	ppbv	1000	11/1/2017 04:25 PM
trans-1,3-Dichloropropene	ND		500	ppbv	1000	11/1/2017 04:25 PM
Trichloroethene	ND		200	ppbv	1000	11/1/2017 04:25 PM
Trichlorofluoromethane	ND		500	ppbv	1000	11/1/2017 04:25 PM
Vinyl acetate	ND		500	ppbv	1000	11/1/2017 04:25 PM
Vinyl chloride	ND		500	ppbv	1000	11/1/2017 04:25 PM
Surr: Bromofluorobenzene	99.7		60-140	%REC	1000	11/1/2017 04:25 PM
TO-15 BY GC/MS			ETO-15		Analyst: MRJ	
1,1,1-Trichloroethane	ND		2,730	µg/m3	1000	11/1/2017 04:25 PM
1,1,2,2-Tetrachloroethane	ND		3,430	µg/m3	1000	11/1/2017 04:25 PM
1,1,2-Trichloroethane	ND		2,730	µg/m3	1000	11/1/2017 04:25 PM
1,1-Dichloroethane	ND		2,020	µg/m3	1000	11/1/2017 04:25 PM
1,1-Dichloroethene	ND		1,980	µg/m3	1000	11/1/2017 04:25 PM
1,2,4-Trichlorobenzene	ND		3,710	µg/m3	1000	11/1/2017 04:25 PM
1,2,4-Trimethylbenzene	ND		2,460	µg/m3	1000	11/1/2017 04:25 PM
1,2-Dibromoethane	ND		3,840	µg/m3	1000	11/1/2017 04:25 PM
1,2-Dichlorobenzene	ND		3,010	µg/m3	1000	11/1/2017 04:25 PM
1,2-Dichloroethane	ND		2,020	µg/m3	1000	11/1/2017 04:25 PM
1,2-Dichloropropane	ND		2,310	µg/m3	1000	11/1/2017 04:25 PM
1,3,5-Trimethylbenzene	ND		2,460	µg/m3	1000	11/1/2017 04:25 PM
1,3-Butadiene	ND		1,110	µg/m3	1000	11/1/2017 04:25 PM
1,3-Dichlorobenzene	ND		3,010	µg/m3	1000	11/1/2017 04:25 PM
1,4-Dichlorobenzene	ND		3,010	µg/m3	1000	11/1/2017 04:25 PM

Note:

ALS Environmental

Date: 09-Nov-17

Client: EarthCon

Project: TWP Roswell Station #9; 02.20120037.00

Sample ID: TWP Roswell West Baker Furnace

Collection Date: 10/23/2017

Work Order: 17101018

Lab ID: 17101018-01

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,4-Dioxane	ND		3,600	µg/m3	1000	11/1/2017 04:25 PM
2-Butanone	ND		1,470	µg/m3	1000	11/1/2017 04:25 PM
2-Hexanone	ND		2,050	µg/m3	1000	11/1/2017 04:25 PM
2-Propanol	ND		2,460	µg/m3	1000	11/1/2017 04:25 PM
4-Ethyltoluene	ND		2,460	µg/m3	1000	11/1/2017 04:25 PM
4-Methyl-2-pentanone	ND		2,050	µg/m3	1000	11/1/2017 04:25 PM
Acetone	4,470		2,380	µg/m3	1000	11/1/2017 04:25 PM
Benzene	4,120		1,600	µg/m3	1000	11/1/2017 04:25 PM
Benzyl chloride	ND		2,590	µg/m3	1000	11/1/2017 04:25 PM
Bromodichloromethane	ND		3,350	µg/m3	1000	11/1/2017 04:25 PM
Bromoform	ND		5,170	µg/m3	1000	11/1/2017 04:25 PM
Bromomethane	ND		1,940	µg/m3	1000	11/1/2017 04:25 PM
Carbon disulfide	ND		1,560	µg/m3	1000	11/1/2017 04:25 PM
Carbon tetrachloride	ND		3,150	µg/m3	1000	11/1/2017 04:25 PM
Chlorobenzene	ND		2,300	µg/m3	1000	11/1/2017 04:25 PM
Chloroethane	ND		1,320	µg/m3	1000	11/1/2017 04:25 PM
Chloroform	ND		976	µg/m3	1000	11/1/2017 04:25 PM
Chloromethane	ND		1,030	µg/m3	1000	11/1/2017 04:25 PM
cis-1,2-Dichloroethene	ND		1,980	µg/m3	1000	11/1/2017 04:25 PM
cis-1,3-Dichloropropene	ND		2,270	µg/m3	1000	11/1/2017 04:25 PM
Cumene	ND		2,460	µg/m3	1000	11/1/2017 04:25 PM
Cyclohexane	119,000		17,200	µg/m3	10000	11/2/2017 09:19 AM
Dibromochloromethane	ND		4,260	µg/m3	1000	11/1/2017 04:25 PM
Dichlorodifluoromethane	ND		2,470	µg/m3	1000	11/1/2017 04:25 PM
Ethyl acetate	ND		1,800	µg/m3	1000	11/1/2017 04:25 PM
Ethylbenzene	ND		2,170	µg/m3	1000	11/1/2017 04:25 PM
Freon 113	ND		3,830	µg/m3	1000	11/1/2017 04:25 PM
Freon 114	ND		3,500	µg/m3	1000	11/1/2017 04:25 PM
Heptane	129,000		20,500	µg/m3	10000	11/2/2017 09:19 AM
Hexachlorobutadiene	ND		5,330	µg/m3	1000	11/1/2017 04:25 PM
Hexane	241,000		17,600	µg/m3	10000	11/2/2017 09:19 AM
m,p-Xylene	2,610		2,170	µg/m3	1000	11/1/2017 04:25 PM
Methylene chloride	ND		3,470	µg/m3	1000	11/1/2017 04:25 PM
MTBE	ND		1,800	µg/m3	1000	11/1/2017 04:25 PM
Naphthalene	ND		1,050	µg/m3	1000	11/1/2017 04:25 PM
o-Xylene	ND		2,170	µg/m3	1000	11/1/2017 04:25 PM
Propene	ND		861	µg/m3	1000	11/1/2017 04:25 PM
Styrene	ND		2,130	µg/m3	1000	11/1/2017 04:25 PM
Tetrachloroethene	ND		3,390	µg/m3	1000	11/1/2017 04:25 PM
Tetrahydrofuran	ND		1,470	µg/m3	1000	11/1/2017 04:25 PM

Note:

ALS Environmental

Date: 09-Nov-17

Client: EarthCon

Project: TWP Roswell Station #9; 02.20120037.00

Work Order: 17101018

Sample ID: TWP Roswell West Baker Furnace

Lab ID: 17101018-01

Collection Date: 10/23/2017

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Toluene	7,010		1,880	µg/m3	1000	11/1/2017 04:25 PM
trans-1,2-Dichloroethene	ND		1,980	µg/m3	1000	11/1/2017 04:25 PM
trans-1,3-Dichloropropene	ND		2,270	µg/m3	1000	11/1/2017 04:25 PM
Trichloroethene	ND		1,070	µg/m3	1000	11/1/2017 04:25 PM
Trichlorofluoromethane	ND		2,810	µg/m3	1000	11/1/2017 04:25 PM
Vinyl acetate	ND		1,760	µg/m3	1000	11/1/2017 04:25 PM
Vinyl chloride	ND		1,280	µg/m3	1000	11/1/2017 04:25 PM
Surr: Bromofluorobenzene	99.7		60-140	%REC	1000	11/1/2017 04:25 PM

Note:

ALS Environmental

Date: 09-Nov-17

Client: EarthCon

Project: TWP Roswell Station #9; 02.20120037.00

Sample ID: TWP Roswell East Baker Furnace

Collection Date: 10/23/2017

Work Order: 17101018

Lab ID: 17101018-02

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TO-15 BY GC/MS			ETO-15		Analyst: MRJ	
1,1,1-Trichloroethane	ND		500	ppbv	1000	11/1/2017 05:06 PM
1,1,2,2-Tetrachloroethane	ND		500	ppbv	1000	11/1/2017 05:06 PM
1,1,2-Trichloroethane	ND		500	ppbv	1000	11/1/2017 05:06 PM
1,1-Dichloroethane	ND		500	ppbv	1000	11/1/2017 05:06 PM
1,1-Dichloroethene	ND		500	ppbv	1000	11/1/2017 05:06 PM
1,2,4-Trichlorobenzene	ND		500	ppbv	1000	11/1/2017 05:06 PM
1,2,4-Trimethylbenzene	ND		500	ppbv	1000	11/1/2017 05:06 PM
1,2-Dibromoethane	ND		500	ppbv	1000	11/1/2017 05:06 PM
1,2-Dichlorobenzene	ND		500	ppbv	1000	11/1/2017 05:06 PM
1,2-Dichloroethane	ND		500	ppbv	1000	11/1/2017 05:06 PM
1,2-Dichloropropane	610		500	ppbv	1000	11/1/2017 05:06 PM
1,3,5-Trimethylbenzene	ND		500	ppbv	1000	11/1/2017 05:06 PM
1,3-Butadiene	ND		500	ppbv	1000	11/1/2017 05:06 PM
1,3-Dichlorobenzene	ND		500	ppbv	1000	11/1/2017 05:06 PM
1,4-Dichlorobenzene	ND		500	ppbv	1000	11/1/2017 05:06 PM
1,4-Dioxane	ND		1,000	ppbv	1000	11/1/2017 05:06 PM
2-Butanone	ND		500	ppbv	1000	11/1/2017 05:06 PM
2-Hexanone	ND		500	ppbv	1000	11/1/2017 05:06 PM
2-Propanol	ND		1,000	ppbv	1000	11/1/2017 05:06 PM
4-Ethyltoluene	ND		500	ppbv	1000	11/1/2017 05:06 PM
4-Methyl-2-pentanone	ND		500	ppbv	1000	11/1/2017 05:06 PM
Acetone	ND		1,000	ppbv	1000	11/1/2017 05:06 PM
Benzene	960		500	ppbv	1000	11/1/2017 05:06 PM
Benzyl chloride	ND		500	ppbv	1000	11/1/2017 05:06 PM
Bromodichloromethane	ND		500	ppbv	1000	11/1/2017 05:06 PM
Bromoform	ND		500	ppbv	1000	11/1/2017 05:06 PM
Bromomethane	ND		500	ppbv	1000	11/1/2017 05:06 PM
Carbon disulfide	ND		500	ppbv	1000	11/1/2017 05:06 PM
Carbon tetrachloride	ND		500	ppbv	1000	11/1/2017 05:06 PM
Chlorobenzene	ND		500	ppbv	1000	11/1/2017 05:06 PM
Chloroethane	ND		500	ppbv	1000	11/1/2017 05:06 PM
Chloroform	ND		200	ppbv	1000	11/1/2017 05:06 PM
Chloromethane	ND		500	ppbv	1000	11/1/2017 05:06 PM
cis-1,2-Dichloroethene	ND		500	ppbv	1000	11/1/2017 05:06 PM
cis-1,3-Dichloropropene	ND		500	ppbv	1000	11/1/2017 05:06 PM
Cumene	ND		500	ppbv	1000	11/1/2017 05:06 PM
Cyclohexane	22,000		500	ppbv	1000	11/1/2017 05:06 PM
Dibromochloromethane	ND		500	ppbv	1000	11/1/2017 05:06 PM
Dichlorodifluoromethane	ND		500	ppbv	1000	11/1/2017 05:06 PM

Note:

ALS Environmental

Date: 09-Nov-17

Client: EarthCon

Project: TWP Roswell Station #9; 02.20120037.00

Sample ID: TWP Roswell East Baker Furnace

Collection Date: 10/23/2017

Work Order: 17101018

Lab ID: 17101018-02

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Ethyl acetate	ND		500	ppbv	1000	11/1/2017 05:06 PM
Ethylbenzene	ND		500	ppbv	1000	11/1/2017 05:06 PM
Freon 113	ND		500	ppbv	1000	11/1/2017 05:06 PM
Freon 114	ND		500	ppbv	1000	11/1/2017 05:06 PM
Heptane	22,000		500	ppbv	1000	11/1/2017 05:06 PM
Hexachlorobutadiene	ND		500	ppbv	1000	11/1/2017 05:06 PM
Hexane	50,000		5,000	ppbv	10000	11/2/2017 04:00 AM
m,p-Xylene	680		500	ppbv	1000	11/1/2017 05:06 PM
Methylene chloride	ND		1,000	ppbv	1000	11/1/2017 05:06 PM
MTBE	ND		500	ppbv	1000	11/1/2017 05:06 PM
Naphthalene	ND		200	ppbv	1000	11/1/2017 05:06 PM
o-Xylene	ND		500	ppbv	1000	11/1/2017 05:06 PM
Propene	ND		500	ppbv	1000	11/1/2017 05:06 PM
Styrene	ND		500	ppbv	1000	11/1/2017 05:06 PM
Tetrachloroethene	ND		500	ppbv	1000	11/1/2017 05:06 PM
Tetrahydrofuran	ND		500	ppbv	1000	11/1/2017 05:06 PM
Toluene	1,500		500	ppbv	1000	11/1/2017 05:06 PM
trans-1,2-Dichloroethene	ND		500	ppbv	1000	11/1/2017 05:06 PM
trans-1,3-Dichloropropene	ND		500	ppbv	1000	11/1/2017 05:06 PM
Trichloroethene	ND		200	ppbv	1000	11/1/2017 05:06 PM
Trichlorofluoromethane	ND		500	ppbv	1000	11/1/2017 05:06 PM
Vinyl acetate	ND		500	ppbv	1000	11/1/2017 05:06 PM
Vinyl chloride	ND		500	ppbv	1000	11/1/2017 05:06 PM
Surr: Bromofluorobenzene	101		60-140	%REC	1000	11/1/2017 05:06 PM
TO-15 BY GC/MS			ETO-15		Analyst: MRJ	
1,1,1-Trichloroethane	ND		2,730	µg/m3	1000	11/1/2017 05:06 PM
1,1,2,2-Tetrachloroethane	ND		3,430	µg/m3	1000	11/1/2017 05:06 PM
1,1,2-Trichloroethane	ND		2,730	µg/m3	1000	11/1/2017 05:06 PM
1,1-Dichloroethane	ND		2,020	µg/m3	1000	11/1/2017 05:06 PM
1,1-Dichloroethene	ND		1,980	µg/m3	1000	11/1/2017 05:06 PM
1,2,4-Trichlorobenzene	ND		3,710	µg/m3	1000	11/1/2017 05:06 PM
1,2,4-Trimethylbenzene	ND		2,460	µg/m3	1000	11/1/2017 05:06 PM
1,2-Dibromoethane	ND		3,840	µg/m3	1000	11/1/2017 05:06 PM
1,2-Dichlorobenzene	ND		3,010	µg/m3	1000	11/1/2017 05:06 PM
1,2-Dichloroethane	ND		2,020	µg/m3	1000	11/1/2017 05:06 PM
1,2-Dichloropropane	2,820		2,310	µg/m3	1000	11/1/2017 05:06 PM
1,3,5-Trimethylbenzene	ND		2,460	µg/m3	1000	11/1/2017 05:06 PM
1,3-Butadiene	ND		1,110	µg/m3	1000	11/1/2017 05:06 PM
1,3-Dichlorobenzene	ND		3,010	µg/m3	1000	11/1/2017 05:06 PM
1,4-Dichlorobenzene	ND		3,010	µg/m3	1000	11/1/2017 05:06 PM

Note:

ALS Environmental

Date: 09-Nov-17

Client: EarthCon

Project: TWP Roswell Station #9; 02.20120037.00

Sample ID: TWP Roswell East Baker Furnace

Collection Date: 10/23/2017

Work Order: 17101018

Lab ID: 17101018-02

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,4-Dioxane	ND		3,600	µg/m3	1000	11/1/2017 05:06 PM
2-Butanone	ND		1,470	µg/m3	1000	11/1/2017 05:06 PM
2-Hexanone	ND		2,050	µg/m3	1000	11/1/2017 05:06 PM
2-Propanol	ND		2,460	µg/m3	1000	11/1/2017 05:06 PM
4-Ethyltoluene	ND		2,460	µg/m3	1000	11/1/2017 05:06 PM
4-Methyl-2-pentanone	ND		2,050	µg/m3	1000	11/1/2017 05:06 PM
Acetone	ND		2,380	µg/m3	1000	11/1/2017 05:06 PM
Benzene	3,070		1,600	µg/m3	1000	11/1/2017 05:06 PM
Benzyl chloride	ND		2,590	µg/m3	1000	11/1/2017 05:06 PM
Bromodichloromethane	ND		3,350	µg/m3	1000	11/1/2017 05:06 PM
Bromoform	ND		5,170	µg/m3	1000	11/1/2017 05:06 PM
Bromomethane	ND		1,940	µg/m3	1000	11/1/2017 05:06 PM
Carbon disulfide	ND		1,560	µg/m3	1000	11/1/2017 05:06 PM
Carbon tetrachloride	ND		3,150	µg/m3	1000	11/1/2017 05:06 PM
Chlorobenzene	ND		2,300	µg/m3	1000	11/1/2017 05:06 PM
Chloroethane	ND		1,320	µg/m3	1000	11/1/2017 05:06 PM
Chloroform	ND		976	µg/m3	1000	11/1/2017 05:06 PM
Chloromethane	ND		1,030	µg/m3	1000	11/1/2017 05:06 PM
cis-1,2-Dichloroethene	ND		1,980	µg/m3	1000	11/1/2017 05:06 PM
cis-1,3-Dichloropropene	ND		2,270	µg/m3	1000	11/1/2017 05:06 PM
Cumene	ND		2,460	µg/m3	1000	11/1/2017 05:06 PM
Cyclohexane	76,200		1,720	µg/m3	1000	11/1/2017 05:06 PM
Dibromochloromethane	ND		4,260	µg/m3	1000	11/1/2017 05:06 PM
Dichlorodifluoromethane	ND		2,470	µg/m3	1000	11/1/2017 05:06 PM
Ethyl acetate	ND		1,800	µg/m3	1000	11/1/2017 05:06 PM
Ethylbenzene	ND		2,170	µg/m3	1000	11/1/2017 05:06 PM
Freon 113	ND		3,830	µg/m3	1000	11/1/2017 05:06 PM
Freon 114	ND		3,500	µg/m3	1000	11/1/2017 05:06 PM
Heptane	90,600		2,050	µg/m3	1000	11/1/2017 05:06 PM
Hexachlorobutadiene	ND		5,330	µg/m3	1000	11/1/2017 05:06 PM
Hexane	175,000		17,600	µg/m3	10000	11/2/2017 04:00 AM
m,p-Xylene	2,950		2,170	µg/m3	1000	11/1/2017 05:06 PM
Methylene chloride	ND		3,470	µg/m3	1000	11/1/2017 05:06 PM
MTBE	ND		1,800	µg/m3	1000	11/1/2017 05:06 PM
Naphthalene	ND		1,050	µg/m3	1000	11/1/2017 05:06 PM
o-Xylene	ND		2,170	µg/m3	1000	11/1/2017 05:06 PM
Propene	ND		861	µg/m3	1000	11/1/2017 05:06 PM
Styrene	ND		2,130	µg/m3	1000	11/1/2017 05:06 PM
Tetrachloroethene	ND		3,390	µg/m3	1000	11/1/2017 05:06 PM
Tetrahydrofuran	ND		1,470	µg/m3	1000	11/1/2017 05:06 PM

Note:

ALS Environmental

Date: 09-Nov-17

Client: EarthCon

Project: TWP Roswell Station #9; 02.20120037.00

Work Order: 17101018

Sample ID: TWP Roswell East Baker Furnace

Lab ID: 17101018-02

Collection Date: 10/23/2017

Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Toluene	5,730		1,880	µg/m3	1000	11/1/2017 05:06 PM
trans-1,2-Dichloroethene	ND		1,980	µg/m3	1000	11/1/2017 05:06 PM
trans-1,3-Dichloropropene	ND		2,270	µg/m3	1000	11/1/2017 05:06 PM
Trichloroethene	ND		1,070	µg/m3	1000	11/1/2017 05:06 PM
Trichlorofluoromethane	ND		2,810	µg/m3	1000	11/1/2017 05:06 PM
Vinyl acetate	ND		1,760	µg/m3	1000	11/1/2017 05:06 PM
Vinyl chloride	ND		1,280	µg/m3	1000	11/1/2017 05:06 PM
Surr: Bromofluorobenzene	101		60-140	%REC	1000	11/1/2017 05:06 PM

Note:



ALS Laboratory Group
4388 Glendale-Milford Rd
Cincinnati, OH 45242
Ph: 513-733-5336
Fax: 513-733-5347
www.alsglobal.com

TVOC **

Client: Earthcon
Client Sample ID: TWP Roswell West Baker Furnaces
ALS Sample # 17101018-01A
Method: EPA TO-15

		Estimated Concentration	Units
	TVOC**	227384	PPBV
	TVOC**	801378	ug/m3

Client: Earthcon
Client Sample ID: TWP Roswell East Baker Furnaces
ALS Sample # 17101018-02A
Method: EPA TO-15

		Estimated Concentration	Units
	TVOC**	159971	PPBV
	TVOC**	563791	ug/m3

**TVOC calculation based on response factor and molecular weight of hexane.

****Results should be considered estimated.

ALS Environmental

Date: 09-Nov-17

Client: EarthCon

QC BATCH REPORT

Work Order: 17101018

Project: TWP Roswell Station #9; 02.20120037.00

Batch ID: R146330

Instrument ID: VMS3

Method: ETO-15

mbk		Sample ID: mblk-R146330			Units: ppbv		Analysis Date: 11/1/2017 02:13 PM			
Client ID:		Run ID: VMS3_171101A			SeqNo: 1627762		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	0.50								
1,1,2,2-Tetrachloroethane	ND	0.50								
1,1,2-Trichloroethane	ND	0.50								
1,1-Dichloroethane	ND	0.50								
1,1-Dichloroethene	ND	0.50								
1,2,4-Trichlorobenzene	ND	0.50								
1,2,4-Trimethylbenzene	ND	0.50								
1,2-Dibromoethane	ND	0.50								
1,2-Dichlorobenzene	ND	0.50								
1,2-Dichloroethane	ND	0.50								
1,2-Dichloropropane	ND	0.50								
1,3,5-Trimethylbenzene	ND	0.50								
1,3-Butadiene	ND	0.50								
1,3-Dichlorobenzene	ND	0.50								
1,4-Dichlorobenzene	ND	0.50								
1,4-Dioxane	ND	1.0								
2-Butanone	ND	0.50								
2-Hexanone	ND	0.50								
2-Propanol	ND	1.0								
4-Ethyltoluene	ND	0.50								
4-Methyl-2-pentanone	ND	0.50								
Acetone	ND	1.0								
Benzene	ND	0.50								
Benzyl chloride	ND	0.50								
Bromodichloromethane	ND	0.50								
Bromoform	ND	0.50								
Bromomethane	ND	0.50								
Carbon disulfide	ND	0.50								
Carbon tetrachloride	ND	0.50								
Chlorobenzene	ND	0.50								
Chloroethane	ND	0.50								
Chloroform	ND	0.20								
Chloromethane	ND	0.50								
cis-1,2-Dichloroethene	ND	0.50								
cis-1,3-Dichloropropene	ND	0.50								
Cumene	ND	0.50								
Cyclohexane	ND	0.50								
Dibromochloromethane	ND	0.50								
Dichlorodifluoromethane	ND	0.50								
Ethyl acetate	ND	0.50								
Ethylbenzene	ND	0.50								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: EarthCon
Work Order: 17101018
Project: TWP Roswell Station #9; 02.20120037.00

QC BATCH REPORT

Batch ID: R146330		Instrument ID: VMS3		Method: ETO-15	
Freon 113	ND	0.50			
Freon 114	ND	0.50			
Heptane	ND	0.50			
Hexachlorobutadiene	ND	0.50			
Hexane	ND	0.50			
m,p-Xylene	ND	0.50			
Methylene chloride	ND	1.0			
MTBE	ND	0.50			
Naphthalene	ND	0.20			
o-Xylene	ND	0.50			
Propene	ND	0.50			
Styrene	ND	0.50			
Tetrachloroethene	ND	0.50			
Tetrahydrofuran	ND	0.50			
Toluene	ND	0.50			
trans-1,2-Dichloroethene	ND	0.50			
trans-1,3-Dichloropropene	ND	0.50			
Trichloroethene	ND	0.20			
Trichlorofluoromethane	ND	0.50			
Vinyl acetate	ND	0.50			
Vinyl chloride	ND	0.50			
Surr: Bromofluorobenzene	10.58	0	10	0	106 60-140 0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: EarthCon
 Work Order: 17101018
 Project: TWP Roswell Station #9; 02.20120037.00

QC BATCH REPORT

Batch ID: **R146330** Instrument ID: **VMS3** Method: **ETO-15**

ics Sample ID: ics-R146330		Units: ppbv					Analysis Date: 11/1/2017 12:51 PM			
Client ID:		Run ID: VMS3_171101A			SeqNo: 1627760		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	7.99	0.50	10	0	79.9	58.8-163	0			
1,1,2,2-Tetrachloroethane	8.24	0.50	10	0	82.4	60-140	0			
1,1,2-Trichloroethane	10.5	0.50	10	0	105	60-140	0			
1,1-Dichloroethane	8.64	0.50	10	0	86.4	60-140	0			
1,1-Dichloroethene	8.95	0.50	10	0	89.5	60-140	0			
1,2,4-Trichlorobenzene	7.03	0.50	10	0	70.3	49.3-150	0			
1,2,4-Trimethylbenzene	7.41	0.50	10	0	74.1	50.1-162	0			
1,2-Dibromoethane	10.87	0.50	10	0	109	60-140	0			
1,2-Dichlorobenzene	7.31	0.50	10	0	73.1	41.9-141	0			
1,2-Dichloroethane	7.53	0.50	10	0	75.3	60-140	0			
1,2-Dichloropropane	9.26	0.50	10	0	92.6	60-140	0			
1,3,5-Trimethylbenzene	7.28	0.50	10	0	72.8	60-140	0			
1,3-Butadiene	9.16	0.50	10	0	91.6	50.6-140	0			
1,3-Dichlorobenzene	7.31	0.50	10	0	73.1	60-140	0			
1,4-Dichlorobenzene	7.07	0.50	10	0	70.7	55.1-145	0			
1,4-Dioxane	9.84	1.0	10	0	98.4	60-140	0			
2-Butanone	8.79	0.50	10	0	87.9	60-140	0			
2-Hexanone	9.58	0.50	10	0	95.8	56.2-162	0			
2-Propanol	9.72	1.0	10	0	97.2	60-140	0			
4-Ethyltoluene	7.43	0.50	10	0	74.3	60-140	0			
4-Methyl-2-pentanone	9.97	0.50	10	0	99.7	60-140	0			
Acetone	8.85	1.0	10	0	88.5	60-140	0			
Benzene	8.22	0.50	10	0	82.2	60-140	0			
Benzyl chloride	7.41	0.50	10	0	74.1	31.9-174	0			
Bromodichloromethane	8.87	0.50	10	0	88.7	60-140	0			
Bromoform	7.9	0.50	10	0	79	60-140	0			
Bromomethane	9.67	0.50	10	0	96.7	60-140	0			
Carbon disulfide	8.64	0.50	10	0	86.4	60-140	0			
Carbon tetrachloride	7.81	0.50	10	0	78.1	60-140	0			
Chlorobenzene	7.89	0.50	10	0	78.9	60-140	0			
Chloroethane	10.27	0.50	10	0	103	60-140	0			
Chloroform	8.26	0.20	10	0	82.6	60-140	0			
Chloromethane	9.19	0.50	10	0	91.9	60-140	0			
cis-1,2-Dichloroethene	8.74	0.50	10	0	87.4	60-140	0			
cis-1,3-Dichloropropene	9.7	0.50	10	0	97	60-140	0			
Cumene	7.44	0.50	10	0	74.4	60-140	0			
Cyclohexane	8.36	0.50	10	0	83.6	60-140	0			
Dibromochloromethane	10.76	0.50	10	0	108	60-140	0			
Dichlorodifluoromethane	8.6	0.50	10	0	86	60-140	0			
Ethyl acetate	9.52	0.50	10	0	95.2	60-140	0			
Ethylbenzene	7.93	0.50	10	0	79.3	60-140	0			
Freon 113	8.79	0.50	10	0	87.9	60-140	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: EarthCon
Work Order: 17101018
Project: TWP Roswell Station #9; 02.20120037.00

QC BATCH REPORT

Batch ID: R146330		Instrument ID: VMS3		Method: ETO-15			
Freon 114	9.45	0.50	10	0	94.5	60-140	0
Heptane	8.97	0.50	10	0	89.7	60-140	0
Hexachlorobutadiene	7.21	0.50	10	0	72.1	60-140	0
Hexane	8.34	0.50	10	0	83.4	60-140	0
m,p-Xylene	15.12	0.50	20	0	75.6	60-140	0
Methylene chloride	8.06	1.0	10	0	80.6	60-140	0
MTBE	8.85	0.50	10	0	88.5	60.8-151	0
Naphthalene	6.78	0.20	10	0	67.8	53.1-152	0
o-Xylene	7.52	0.50	10	0	75.2	60-140	0
Propene	12.7	0.50	10	0	127	34.4-139	0
Styrene	7.35	0.50	10	0	73.5	60-140	0
Tetrachloroethene	9.91	0.50	10	0	99.1	60-140	0
Tetrahydrofuran	10.2	0.50	10	0	102	60-140	0
Toluene	8.48	0.50	10	0	84.8	60-140	0
trans-1,2-Dichloroethene	8.71	0.50	10	0	87.1	60-140	0
trans-1,3-Dichloropropene	10.31	0.50	10	0	103	60-140	0
Trichloroethene	8.17	0.20	10	0	81.7	60-140	0
Trichlorofluoromethane	8.45	0.50	10	0	84.5	60-140	0
Vinyl acetate	9.19	0.50	10	0	91.9	48.4-145	0
Vinyl chloride	9.61	0.50	10	0	96.1	60-140	0
Surr: Bromofluorobenzene	10.26	0	10	0	103	60-140	0

The following samples were analyzed in this batch:

17101018-01A	17101018-02A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: EarthCon
Project: TWP Roswell Station #9; 02.20120037.00
WorkOrder: 17101018

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/m3	
ppbv	

Sample Receipt Checklist

Client Name: **EARTHCON-MARIETTA**

Date/Time Received: **26-Oct-17 12:15**

Work Order: **17101018**

Received by: **SNH**

Checklist completed by: **Rob Nieman**

27-Oct-17

Reviewed by: **Shawn Smythe**

27-Oct-17

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **FedEx**

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Present ☐

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☐

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace?

Yes ☐

No ☐

No VOA vials submitted ☐

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☐

pH adjusted?

Yes ☐

No ☐

N/A ☐

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 28, 2017

JD Haines

Earth Con

14405 Walters Rd Ste 700

Houston, TX

TEL: (317) 450-6126

FAX

RE: Earth Con TWP Roswell Station 9

OrderNo.: 1707496

Dear JD Haines:

Hall Environmental Analysis Laboratory received 5 sample(s) on 7/12/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1707496**

Date Reported: **7/28/2017**

CLIENT: Earth Con

Client Sample ID: Pre-Treatment

Project: Earth Con TWP Roswell Station 9

Collection Date: 7/11/2017 8:45:00 AM

Lab ID: 1707496-001

Matrix: AQUEOUS

Received Date: 7/12/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	5200	200		µg/L	200	7/13/2017 2:28:53 PM	W44196
Toluene	7000	200		µg/L	200	7/13/2017 2:28:53 PM	W44196
Ethylbenzene	160	50		µg/L	50	7/13/2017 12:52:03 PM	W44196
Xylenes, Total	2700	100		µg/L	50	7/13/2017 12:52:03 PM	W44196
Surr: 4-Bromofluorobenzene	134	72.5-140		%Rec	50	7/13/2017 12:52:03 PM	W44196

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1707496**

Date Reported: **7/28/2017**

CLIENT: Earth Con

Client Sample ID: Post-Air Stripper

Project: Earth Con TWP Roswell Station 9

Collection Date: 7/11/2017 8:50:00 AM

Lab ID: 1707496-002

Matrix: AQUEOUS

Received Date: 7/12/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	1.0		µg/L	1	7/13/2017 2:53:11 PM	W44196
Toluene	ND	1.0		µg/L	1	7/13/2017 2:53:11 PM	W44196
Ethylbenzene	ND	1.0		µg/L	1	7/13/2017 2:53:11 PM	W44196
Xylenes, Total	ND	2.0		µg/L	1	7/13/2017 2:53:11 PM	W44196
Surr: 4-Bromofluorobenzene	129	72.5-140		%Rec	1	7/13/2017 2:53:11 PM	W44196

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1707496**

Date Reported: **7/28/2017**

CLIENT: Earth Con

Client Sample ID: Betwen GACs

Project: Earth Con TWP Roswell Station 9

Collection Date: 7/11/2017 8:55:00 AM

Lab ID: 1707496-003

Matrix: AQUEOUS

Received Date: 7/12/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	1.0		µg/L	1	7/13/2017 3:17:28 PM	W44196
Toluene	ND	1.0		µg/L	1	7/13/2017 3:17:28 PM	W44196
Ethylbenzene	ND	1.0		µg/L	1	7/13/2017 3:17:28 PM	W44196
Xylenes, Total	ND	2.0		µg/L	1	7/13/2017 3:17:28 PM	W44196
Surr: 4-Bromofluorobenzene	134	72.5-140		%Rec	1	7/13/2017 3:17:28 PM	W44196

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1707496

Date Reported: 7/28/2017

CLIENT: Earth Con

Client Sample ID: Post-Treatment

Project: Earth Con TWP Roswell Station 9

Collection Date: 7/11/2017 9:00:00 AM

Lab ID: 1707496-004

Matrix: AQUEOUS

Received Date: 7/12/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	0.50		mg/L	5	7/13/2017 1:24:04 AM	R44157
Chloride	420	25	*	mg/L	50	7/19/2017 8:16:58 PM	A44368
Bromide	0.58	0.50		mg/L	5	7/13/2017 1:24:04 AM	R44157
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	7/13/2017 1:24:04 AM	R44157
Sulfate	560	10	*	mg/L	20	7/13/2017 1:36:28 AM	R44157
Nitrate+Nitrite as N	ND	1.0		mg/L	5	7/19/2017 8:29:23 PM	A44368
EPA METHOD 200.7: DISSOLVED METALS							Analyst: pmf
Calcium	220	10		mg/L	10	7/18/2017 2:34:16 PM	A44298
Magnesium	92	1.0		mg/L	1	7/18/2017 2:32:19 PM	A44298
Potassium	1.7	1.0		mg/L	1	7/18/2017 2:32:19 PM	A44298
Sodium	170	10		mg/L	10	7/18/2017 2:34:16 PM	A44298
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
Toluene	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
Ethylbenzene	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
Naphthalene	ND	2.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
1-Methylnaphthalene	ND	4.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
2-Methylnaphthalene	ND	4.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
Acetone	ND	10		µg/L	1	7/14/2017 8:48:52 PM	R44243
Bromobenzene	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
Bromodichloromethane	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
Bromoform	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
Bromomethane	ND	3.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
2-Butanone	ND	10		µg/L	1	7/14/2017 8:48:52 PM	R44243
Carbon disulfide	ND	10		µg/L	1	7/14/2017 8:48:52 PM	R44243
Carbon Tetrachloride	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
Chlorobenzene	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
Chloroethane	ND	2.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
Chloroform	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
Chloromethane	ND	3.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
2-Chlorotoluene	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
4-Chlorotoluene	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
cis-1,2-DCE	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1707496

Date Reported: 7/28/2017

CLIENT: Earth Con

Client Sample ID: Post-Treatment

Project: Earth Con TWP Roswell Station 9

Collection Date: 7/11/2017 9:00:00 AM

Lab ID: 1707496-004

Matrix: AQUEOUS

Received Date: 7/12/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
Dibromochloromethane	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
Dibromomethane	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
1,1-Dichloroethane	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
1,1-Dichloroethene	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
1,2-Dichloropropane	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
1,3-Dichloropropane	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
2,2-Dichloropropane	ND	2.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
1,1-Dichloropropene	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
Hexachlorobutadiene	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
2-Hexanone	ND	10		µg/L	1	7/14/2017 8:48:52 PM	R44243
Isopropylbenzene	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
4-Isopropyltoluene	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
4-Methyl-2-pentanone	ND	10		µg/L	1	7/14/2017 8:48:52 PM	R44243
Methylene Chloride	ND	3.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
n-Butylbenzene	ND	3.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
n-Propylbenzene	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
sec-Butylbenzene	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
Styrene	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
tert-Butylbenzene	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
trans-1,2-DCE	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
Trichlorofluoromethane	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
Vinyl chloride	ND	1.0		µg/L	1	7/14/2017 8:48:52 PM	R44243
Xylenes, Total	ND	1.5		µg/L	1	7/14/2017 8:48:52 PM	R44243

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1707496**

Date Reported: **7/28/2017**

CLIENT: Earth Con

Client Sample ID: Post-Treatment

Project: Earth Con TWP Roswell Station 9

Collection Date: 7/11/2017 9:00:00 AM

Lab ID: 1707496-004

Matrix: AQUEOUS

Received Date: 7/12/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	7/14/2017 8:48:52 PM	R44243
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	7/14/2017 8:48:52 PM	R44243
Surr: Dibromofluoromethane	95.7	70-130		%Rec	1	7/14/2017 8:48:52 PM	R44243
Surr: Toluene-d8	92.4	70-130		%Rec	1	7/14/2017 8:48:52 PM	R44243

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1707496

Date Reported: 7/28/2017

CLIENT: Earth Con

Client Sample ID: TRIP BLANK

Project: Earth Con TWP Roswell Station 9

Collection Date:

Lab ID: 1707496-005

Matrix: TRIP BLANK

Received Date: 7/12/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	1.0		µg/L	1	7/13/2017 3:41:46 PM	W44196
Toluene	ND	1.0		µg/L	1	7/13/2017 3:41:46 PM	W44196
Ethylbenzene	ND	1.0		µg/L	1	7/13/2017 3:41:46 PM	W44196
Xylenes, Total	ND	2.0		µg/L	1	7/13/2017 3:41:46 PM	W44196
Surr: 4-Bromofluorobenzene	132	72.5-140		%Rec	1	7/13/2017 3:41:46 PM	W44196
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
Toluene	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
Ethylbenzene	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
Naphthalene	ND	2.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
1-Methylnaphthalene	ND	4.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
2-Methylnaphthalene	ND	4.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
Acetone	ND	10		µg/L	1	7/14/2017 8:19:51 PM	R44243
Bromobenzene	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
Bromodichloromethane	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
Bromoform	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
Bromomethane	ND	3.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
2-Butanone	ND	10		µg/L	1	7/14/2017 8:19:51 PM	R44243
Carbon disulfide	ND	10		µg/L	1	7/14/2017 8:19:51 PM	R44243
Carbon Tetrachloride	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
Chlorobenzene	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
Chloroethane	ND	2.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
Chloroform	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
Chloromethane	ND	3.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
2-Chlorotoluene	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
4-Chlorotoluene	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
cis-1,2-DCE	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
Dibromochloromethane	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
Dibromomethane	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1707496

Date Reported: 7/28/2017

CLIENT: Earth Con

Client Sample ID: TRIP BLANK

Project: Earth Con TWP Roswell Station 9

Collection Date:

Lab ID: 1707496-005

Matrix: TRIP BLANK

Received Date: 7/12/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
1,1-Dichloroethane	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
1,1-Dichloroethene	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
1,2-Dichloropropane	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
1,3-Dichloropropane	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
2,2-Dichloropropane	ND	2.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
1,1-Dichloropropene	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
Hexachlorobutadiene	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
2-Hexanone	ND	10		µg/L	1	7/14/2017 8:19:51 PM	R44243
Isopropylbenzene	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
4-Isopropyltoluene	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
4-Methyl-2-pentanone	ND	10		µg/L	1	7/14/2017 8:19:51 PM	R44243
Methylene Chloride	ND	3.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
n-Butylbenzene	ND	3.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
n-Propylbenzene	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
sec-Butylbenzene	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
Styrene	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
tert-Butylbenzene	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
trans-1,2-DCE	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
Trichlorofluoromethane	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
Vinyl chloride	ND	1.0		µg/L	1	7/14/2017 8:19:51 PM	R44243
Xylenes, Total	ND	1.5		µg/L	1	7/14/2017 8:19:51 PM	R44243
Surr: 1,2-Dichloroethane-d4	97.1	70-130		%Rec	1	7/14/2017 8:19:51 PM	R44243
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	7/14/2017 8:19:51 PM	R44243
Surr: Dibromofluoromethane	92.5	70-130		%Rec	1	7/14/2017 8:19:51 PM	R44243
Surr: Toluene-d8	93.6	70-130		%Rec	1	7/14/2017 8:19:51 PM	R44243

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1707496

28-Jul-17

Client: Earth Con
Project: Earth Con TWP Roswell Station 9

Sample ID MB-A	SampType: MBLK		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: PBW	Batch ID: A44298		RunNo: 44298							
Prep Date:	Analysis Date: 7/18/2017		SeqNo: 1400233		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID LCSLL-A	SampType: LCSLL		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: BatchQC	Batch ID: A44298		RunNo: 44298							
Prep Date:	Analysis Date: 7/18/2017		SeqNo: 1400234		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0	0.5000	0	106	50	150			
Magnesium	ND	1.0	0.5000	0	106	50	150			
Potassium	ND	1.0	0.5000	0	107	50	150			
Sodium	ND	1.0	0.5000	0	102	50	150			

Sample ID LCS-A	SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: LCSW	Batch ID: A44298		RunNo: 44298							
Prep Date:	Analysis Date: 7/18/2017		SeqNo: 1400235		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	49	1.0	50.00	0	97.6	85	115			
Magnesium	49	1.0	50.00	0	98.7	85	115			
Potassium	47	1.0	50.00	0	94.7	85	115			
Sodium	48	1.0	50.00	0	96.6	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1707496

28-Jul-17

Client: Earth Con
Project: Earth Con TWP Roswell Station 9

Sample ID MB	SampType: mblk		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R44157		RunNo: 44157							
Prep Date:	Analysis Date: 7/12/2017		SeqNo: 1395195		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID LCS	SampType: lcs		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R44157		RunNo: 44157							
Prep Date:	Analysis Date: 7/12/2017		SeqNo: 1395196		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2.6	0.10	2.500	0	103	90	110			
Phosphorus, Orthophosphate (As P	5.4	0.50	5.000	0	107	90	110			
Sulfate	10	0.50	10.00	0	104	90	110			

Sample ID MB	SampType: mblk		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: A44368		RunNo: 44368							
Prep Date:	Analysis Date: 7/19/2017		SeqNo: 1402117		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID LCS	SampType: lcs		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: A44368		RunNo: 44368							
Prep Date:	Analysis Date: 7/19/2017		SeqNo: 1402118		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	98.5	90	110			
Nitrate+Nitrite as N	3.6	0.20	3.500	0	103	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1707496

28-Jul-17

Client: Earth Con
Project: Earth Con TWP Roswell Station 9

Sample ID RB	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBW	Batch ID: W44196		RunNo: 44196							
Prep Date:	Analysis Date: 7/13/2017		SeqNo: 1395612		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	28		20.00		138	72.5	140			

Sample ID 100NG BTEX LCS	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSW	Batch ID: W44196		RunNo: 44196							
Prep Date:	Analysis Date: 7/13/2017		SeqNo: 1395613		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	71.7	126			
Toluene	22	1.0	20.00	0	110	73.3	119			
Ethylbenzene	22	1.0	20.00	0	110	80	120			
Xylenes, Total	67	2.0	60.00	0	112	80	120			
Surr: 4-Bromofluorobenzene	27		20.00		135	72.5	140			

Sample ID 1707496-001AMS	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: Pre-Treatment	Batch ID: W44196		RunNo: 44196							
Prep Date:	Analysis Date: 7/13/2017		SeqNo: 1395615		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	6800	50	1000	5551	123	62.3	126			E
Toluene	8400	50	1000	7122	126	48.8	134			E
Ethylbenzene	1400	50	1000	163.0	121	44.4	142			
Xylenes, Total	6400	100	3000	2687	124	55.7	129			
Surr: 4-Bromofluorobenzene	1400		1000		137	72.5	140			

Sample ID 1707496-001AMSD	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: Pre-Treatment	Batch ID: W44196		RunNo: 44196							
Prep Date:	Analysis Date: 7/13/2017		SeqNo: 1395616		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	6500	50	1000	5551	97.6	62.3	126	3.89	20	E
Toluene	8000	50	1000	7122	91.8	48.8	134	4.22	20	E
Ethylbenzene	1300	50	1000	163.0	117	44.4	142	2.72	20	
Xylenes, Total	6200	100	3000	2687	118	55.7	129	2.50	20	
Surr: 4-Bromofluorobenzene	1300		1000		133	72.5	140	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1707496

28-Jul-17

Client: Earth Con

Project: Earth Con TWP Roswell Station 9

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R44243	RunNo:	44243					
Prep Date:		Analysis Date:	7/14/2017	SeqNo:	1397205	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1707496

28-Jul-17

Client: Earth Con

Project: Earth Con TWP Roswell Station 9

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R44243	RunNo:	44243					
Prep Date:		Analysis Date:	7/14/2017	SeqNo:	1397205	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.2	70	130			
Surr: Toluene-d8	9.5		10.00		94.9	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R44243	RunNo:	44243					
Prep Date:		Analysis Date:	7/14/2017	SeqNo:	1397206	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	19	1.0	20.00	0	94.6	70	130			
Chlorobenzene	18	1.0	20.00	0	90.8	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1707496

28-Jul-17

Client: Earth Con

Project: Earth Con TWP Roswell Station 9

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: R44243			RunNo: 44243					
Prep Date:		Analysis Date: 7/14/2017			SeqNo: 1397206		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21	1.0	20.00	0	103	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	95.7	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.1	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.2	70	130			
Surr: Toluene-d8	9.2		10.00		91.9	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: EARTH CON

Work Order Number: 1707496

RcptNo: 1

Received By: **Sophia Campuzano**

7/12/2017 9:30:00 AM

Completed By: **Ashley Gallegos**

7/12/2017 9:55:12 AM

Reviewed By:

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? UPS

Log In

- | | | | |
|--|---|--|--|
| 4. Was an attempt made to cool the samples? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 6. Sample(s) in proper container(s)? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Sufficient sample volume for indicated test(s)? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Are samples (except VOA and ONG) properly preserved? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Was preservative added to bottles? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | NA <input type="checkbox"/> |
| 10. VOA vials have zero headspace? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | No VOA Vials <input type="checkbox"/> |
| 11. Were any sample containers received broken? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | <div># of preserved bottles checked for pH: <u>7-2</u></div> <div>Adjusted? <input checked="" type="checkbox"/></div> <div>Checked by: _____</div> |
| 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 13. Are matrices correctly identified on Chain of Custody? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 14. Is it clear what analyses were requested? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 15. Were all holding times able to be met?
(If no, notify customer for authorization.) | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |

Special Handling (if applicable)

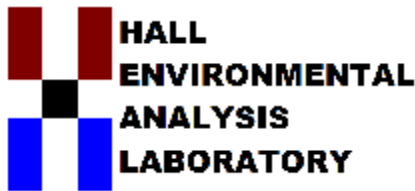
16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.0	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 11, 2017

JD Haines

Earth Con

14405 Walters Rd Ste 700

Houston, TX

TEL: (317) 450-6126

FAX

RE: TWP Roswell Sta 9 Monthly Discharge Samp

OrderNo.: 1708E91

Dear JD Haines:

Hall Environmental Analysis Laboratory received 5 sample(s) on 8/25/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1708E91

Date Reported: 9/11/2017

CLIENT: Earth Con

Client Sample ID: Pre-Treatment

Project: TWP Roswell Sta 9 Monthly Discharge S

Collection Date: 8/24/2017 9:00:00 AM

Lab ID: 1708E91-001

Matrix: AQUEOUS

Received Date: 8/25/2017 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	3600	50		µg/L	50	8/25/2017 4:52:53 PM	B45236
Toluene	3800	50		µg/L	50	8/25/2017 4:52:53 PM	B45236
Ethylbenzene	200	50		µg/L	50	8/25/2017 4:52:53 PM	B45236
Xylenes, Total	1500	100		µg/L	50	8/25/2017 4:52:53 PM	B45236
Surr: 4-Bromofluorobenzene	97.6	72.5-140		%Rec	50	8/25/2017 4:52:53 PM	B45236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1708E91

Date Reported: 9/11/2017

CLIENT: Earth Con

Client Sample ID: Post Air Stripper

Project: TWP Roswell Sta 9 Monthly Discharge S

Collection Date: 8/24/2017 9:07:00 AM

Lab ID: 1708E91-002

Matrix: AQUEOUS

Received Date: 8/25/2017 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	5.6	1.0		µg/L	1	8/25/2017 10:24:04 PM	B45236
Toluene	6.7	1.0		µg/L	1	8/25/2017 10:24:04 PM	B45236
Ethylbenzene	ND	1.0		µg/L	1	8/25/2017 10:24:04 PM	B45236
Xylenes, Total	3.5	2.0		µg/L	1	8/25/2017 10:24:04 PM	B45236
Surr: 4-Bromofluorobenzene	37.2	72.5-140	S	%Rec	1	8/25/2017 10:24:04 PM	B45236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1708E91

Date Reported: 9/11/2017

CLIENT: Earth Con

Client Sample ID: Between GAC's

Project: TWP Roswell Sta 9 Monthly Discharge S

Collection Date: 8/24/2017 9:15:00 AM

Lab ID: 1708E91-003

Matrix: AQUEOUS

Received Date: 8/25/2017 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	4.0	1.0		µg/L	1	8/25/2017 10:47:37 PM	B45236
Toluene	3.6	1.0		µg/L	1	8/25/2017 10:47:37 PM	B45236
Ethylbenzene	ND	1.0		µg/L	1	8/25/2017 10:47:37 PM	B45236
Xylenes, Total	ND	2.0		µg/L	1	8/25/2017 10:47:37 PM	B45236
Surr: 4-Bromofluorobenzene	47.7	72.5-140	S	%Rec	1	8/25/2017 10:47:37 PM	B45236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1708E91

Date Reported: 9/11/2017

CLIENT: Earth Con

Client Sample ID: Post -Treatment

Project: TWP Roswell Sta 9 Monthly Discharge S

Collection Date: 8/24/2017 9:30:00 AM

Lab ID: 1708E91-004

Matrix: AQUEOUS

Received Date: 8/25/2017 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	1.5	0.10		mg/L	1	8/25/2017 5:05:09 PM	R45222
Chloride	370	25	*	mg/L	50	8/31/2017 3:51:41 PM	R45378
Nitrogen, Nitrite (As N)	ND	2.0		mg/L	20	8/25/2017 5:42:24 PM	R45222
Bromide	0.30	0.10		mg/L	1	8/25/2017 5:05:09 PM	R45222
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	8/25/2017 5:05:09 PM	R45222
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	8/25/2017 5:05:09 PM	R45222
Sulfate	520	10	*	mg/L	20	8/25/2017 5:42:24 PM	R45222
EPA METHOD 200.7: DISSOLVED METALS							Analyst: pmf
Calcium	220	10		mg/L	10	8/31/2017 8:57:57 PM	C45361
Magnesium	110	10		mg/L	10	8/31/2017 8:57:57 PM	C45361
Potassium	1.7	1.0		mg/L	1	8/31/2017 8:56:11 PM	C45361
Sodium	210	10		mg/L	10	8/31/2017 8:57:57 PM	C45361
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
Toluene	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
Ethylbenzene	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
Naphthalene	ND	2.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
1-Methylnaphthalene	ND	4.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
2-Methylnaphthalene	ND	4.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
Acetone	ND	10		µg/L	1	8/29/2017 6:45:00 PM	W45305
Bromobenzene	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
Bromodichloromethane	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
Bromoform	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
Bromomethane	ND	3.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
2-Butanone	ND	10		µg/L	1	8/29/2017 6:45:00 PM	W45305
Carbon disulfide	ND	10		µg/L	1	8/29/2017 6:45:00 PM	W45305
Carbon Tetrachloride	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
Chlorobenzene	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
Chloroethane	ND	2.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
Chloroform	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
Chloromethane	ND	3.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
2-Chlorotoluene	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
4-Chlorotoluene	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1708E91

Date Reported: 9/11/2017

CLIENT: Earth Con

Client Sample ID: Post -Treatment

Project: TWP Roswell Sta 9 Monthly Discharge S

Collection Date: 8/24/2017 9:30:00 AM

Lab ID: 1708E91-004

Matrix: AQUEOUS

Received Date: 8/25/2017 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
cis-1,2-DCE	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
Dibromochloromethane	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
Dibromomethane	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
1,1-Dichloroethane	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
1,1-Dichloroethene	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
1,2-Dichloropropane	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
1,3-Dichloropropane	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
2,2-Dichloropropane	ND	2.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
1,1-Dichloropropene	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
Hexachlorobutadiene	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
2-Hexanone	ND	10		µg/L	1	8/29/2017 6:45:00 PM	W45305
Isopropylbenzene	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
4-Isopropyltoluene	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
4-Methyl-2-pentanone	ND	10		µg/L	1	8/29/2017 6:45:00 PM	W45305
Methylene Chloride	ND	3.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
n-Butylbenzene	ND	3.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
n-Propylbenzene	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
sec-Butylbenzene	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
Styrene	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
tert-Butylbenzene	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
trans-1,2-DCE	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
Trichlorofluoromethane	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/29/2017 6:45:00 PM	W45305
Vinyl chloride	ND	1.0		µg/L	1	8/29/2017 6:45:00 PM	W45305

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1708E91

Date Reported: 9/11/2017

CLIENT: Earth Con

Client Sample ID: Post -Treatment

Project: TWP Roswell Sta 9 Monthly Discharge S

Collection Date: 8/24/2017 9:30:00 AM

Lab ID: 1708E91-004

Matrix: AQUEOUS

Received Date: 8/25/2017 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Xylenes, Total	ND	1.5		µg/L	1	8/29/2017 6:45:00 PM	W45305
Surr: 1,2-Dichloroethane-d4	98.7	70-130		%Rec	1	8/29/2017 6:45:00 PM	W45305
Surr: 4-Bromofluorobenzene	96.0	70-130		%Rec	1	8/29/2017 6:45:00 PM	W45305
Surr: Dibromofluoromethane	99.0	70-130		%Rec	1	8/29/2017 6:45:00 PM	W45305
Surr: Toluene-d8	96.0	70-130		%Rec	1	8/29/2017 6:45:00 PM	W45305

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1708E91

Date Reported: 9/11/2017

CLIENT: Earth Con

Client Sample ID: TRIP BLANK

Project: TWP Roswell Sta 9 Monthly Discharge S

Collection Date:

Lab ID: 1708E91-005

Matrix: TRIP BLANK

Received Date: 8/25/2017 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	8/25/2017 11:11:14 PM	B45236
Benzene	ND	1.0		µg/L	1	8/25/2017 11:11:14 PM	B45236
Toluene	ND	1.0		µg/L	1	8/25/2017 11:11:14 PM	B45236
Ethylbenzene	ND	1.0		µg/L	1	8/25/2017 11:11:14 PM	B45236
Xylenes, Total	ND	2.0		µg/L	1	8/25/2017 11:11:14 PM	B45236
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/25/2017 11:11:14 PM	B45236
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/25/2017 11:11:14 PM	B45236
Surr: 4-Bromofluorobenzene	61.2	72.5-140	S	%Rec	1	8/25/2017 11:11:14 PM	B45236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1708E91

11-Sep-17

Client: Earth Con

Project: TWP Roswell Sta 9 Monthly Discharge Samp

Sample ID	MB-C	SampType:	MBLK		TestCode:	EPA Method 200.7: Dissolved Metals				
Client ID:	PBW	Batch ID:	C45361		RunNo:	45361				
Prep Date:		Analysis Date:	8/31/2017		SeqNo:	1437554	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID	LLLCS-C	SampType:	LCSLL	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	C45361	RunNo:	45361					
Prep Date:		Analysis Date:	8/31/2017	SeqNo:	1437555	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0	0.5000	0	106	50	150			
Magnesium	ND	1.0	0.5000	0	103	50	150			
Potassium	ND	1.0	0.5000	0	110	50	150			
Sodium	ND	1.0	0.5000	0	104	50	150			

Sample ID	LCS-C		SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	LCSW		Batch ID: C45361		RunNo: 45361					
Prep Date:			Analysis Date: 8/31/2017		SeqNo: 1437556		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	100	85	115			
Magnesium	50	1.0	50.00	0	101	85	115			
Potassium	50	1.0	50.00	0	99.2	85	115			
Sodium	49	1.0	50.00	0	97.5	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1708E91

11-Sep-17

Client: Earth Con
Project: TWP Roswell Sta 9 Monthly Discharge Samp

Sample ID MB	SampType: mblk		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R45222		RunNo: 45222							
Prep Date:	Analysis Date: 8/25/2017		SeqNo: 1433062		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P)	ND	0.50								
Sulfate	ND	0.50								

Sample ID LCS	SampType: lcs		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R45222		RunNo: 45222							
Prep Date:	Analysis Date: 8/25/2017		SeqNo: 1433063		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	101	90	110			
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	97.4	90	110			
Bromide	2.5	0.10	2.500	0	99.3	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	103	90	110			
Phosphorus, Orthophosphate (As P)	4.8	0.50	5.000	0	96.7	90	110			
Sulfate	10	0.50	10.00	0	99.7	90	110			

Sample ID 1708E91-004BMS	SampType: ms		TestCode: EPA Method 300.0: Anions							
Client ID: Post -Treatment	Batch ID: R45222		RunNo: 45222							
Prep Date:	Analysis Date: 8/25/2017		SeqNo: 1433102		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.8	0.10	0.5000	1.483	58.4	68.4	112			S
Nitrogen, Nitrite (As N)	0.75	0.10	1.000	0	75.0	78.6	103			S
Bromide	2.6	0.10	2.500	0.3041	91.3	77	108			
Nitrogen, Nitrate (As N)	2.3	0.10	2.500	0	93.3	85.6	113			
Phosphorus, Orthophosphate (As P)	4.0	0.50	5.000	0	79.9	68.2	116			

Sample ID 1708E91-004BMSD	SampType: msd		TestCode: EPA Method 300.0: Anions							
Client ID: Post -Treatment	Batch ID: R45222		RunNo: 45222							
Prep Date:	Analysis Date: 8/25/2017		SeqNo: 1433103		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.8	0.10	0.5000	1.483	67.4	68.4	112	2.50	20	S
Nitrogen, Nitrite (As N)	0.73	0.10	1.000	0	73.5	78.6	103	2.06	20	S
Bromide	2.6	0.10	2.500	0.3041	93.8	77	108	2.41	20	
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	94.3	85.6	113	1.15	20	
Phosphorus, Orthophosphate (As P)	4.0	0.50	5.000	0	81.0	68.2	116	1.33	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1708E91

11-Sep-17

Client: Earth Con

Project: TWP Roswell Sta 9 Monthly Discharge Samp

Sample ID MB	SampType: mbk		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R45378		RunNo: 45378							
Prep Date:	Analysis Date: 8/31/2017		SeqNo: 1437899		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID LCS	SampType: lcs		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R45378		RunNo: 45378							
Prep Date:	Analysis Date: 8/31/2017		SeqNo: 1437900		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.1	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1708E91

11-Sep-17

Client: Earth Con

Project: TWP Roswell Sta 9 Monthly Discharge Samp

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBW	Batch ID:	B45236	RunNo:	45236					
Prep Date:		Analysis Date:	8/25/2017	SeqNo:	1432653	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	20		20.00		102	72.5	140			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSW	Batch ID:	B45236	RunNo:	45236					
Prep Date:		Analysis Date:	8/25/2017	SeqNo:	1432654	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	17	2.5	20.00	0	87.0	66.3	115			
Benzene	18	1.0	20.00	0	89.6	71.7	126			
Toluene	18	1.0	20.00	0	91.2	73.3	119			
Ethylbenzene	18	1.0	20.00	0	91.5	80	120			
Xylenes, Total	55	2.0	60.00	0	91.8	80	120			
1,2,4-Trimethylbenzene	18	1.0	20.00	0	89.6	64.7	133			
1,3,5-Trimethylbenzene	18	1.0	20.00	0	90.8	80	120			
Surr: 4-Bromofluorobenzene	21		20.00		104	72.5	140			

Sample ID	1708E91-001AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	Pre-Treatment	Batch ID:	B45236	RunNo:	45236					
Prep Date:		Analysis Date:	8/25/2017	SeqNo:	1432661	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	680	120	1000	0	67.7	51.5	135			
Benzene	4600	50	1000	3607	96.7	62.3	126			
Toluene	4800	50	1000	3831	92.8	48.8	134			
Ethylbenzene	1100	50	1000	195.7	93.5	44.4	142			
Xylenes, Total	4300	100	3000	1474	94.2	55.7	129			
1,2,4-Trimethylbenzene	1000	50	1000	106.1	93.6	28.9	186			
1,3,5-Trimethylbenzene	980	50	1000	66.05	91.7	39.6	164			
Surr: 4-Bromofluorobenzene	1000		1000		102	72.5	140			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1708E91

11-Sep-17

Client: Earth Con

Project: TWP Roswell Sta 9 Monthly Discharge Samp

Sample ID	1708E91-001AMSD	SampType: MSD			TestCode: EPA Method 8021B: Volatiles					
Client ID:	Pre-Treatment	Batch ID: B45236			RunNo: 45236					
Prep Date:		Analysis Date: 8/25/2017			SeqNo: 1432662		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	690	120	1000	0	69.2	51.5	135	2.16	20	
Benzene	4700	50	1000	3607	108	62.3	126	2.55	20	
Toluene	4900	50	1000	3831	105	48.8	134	2.43	20	
Ethylbenzene	1100	50	1000	195.7	95.1	44.4	142	1.44	20	
Xylenes, Total	4400	100	3000	1474	96.7	55.7	129	1.67	20	
1,2,4-Trimethylbenzene	1100	50	1000	106.1	95.2	28.9	186	1.50	20	
1,3,5-Trimethylbenzene	1000	50	1000	66.05	94.7	39.6	164	3.01	20	
Surr: 4-Bromofluorobenzene	1000		1000		103	72.5	140	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1708E91

11-Sep-17

Client: Earth Con

Project: TWP Roswell Sta 9 Monthly Discharge Samp

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: W45305			RunNo: 45305					
Prep Date:		Analysis Date: 8/29/2017			SeqNo: 1435180		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.5	70	130			
Toluene	20	1.0	20.00	0	99.9	70	130			
Chlorobenzene	20	1.0	20.00	0	100	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	103	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	96.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.2	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.1	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.9	70	130			
Surr: Toluene-d8	9.7		10.00		96.8	70	130			

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: W45305			RunNo: 45305					
Prep Date:		Analysis Date: 8/29/2017			SeqNo: 1435182		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1708E91

11-Sep-17

Client: Earth Con

Project: TWP Roswell Sta 9 Monthly Discharge Samp

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: W45305			RunNo: 45305					
Prep Date:		Analysis Date: 8/29/2017			SeqNo: 1435182	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1708E91

11-Sep-17

Client: Earth Con

Project: TWP Roswell Sta 9 Monthly Discharge Samp

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	W45305	RunNo:	45305					
Prep Date:		Analysis Date:	8/29/2017	SeqNo:	1435182	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.9		10.00		98.8	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.2	70	130			
Surr: Dibromofluoromethane	10		10.00		99.8	70	130			
Surr: Toluene-d8	9.7		10.00		96.6	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: EARTH CON

Work Order Number: 1708E91

RcptNo: 1

Received By: Sophia Campuzano

8/25/2017 9:15:00 AM

Sophia Campuzano

Completed By: Erin Melendrez

8/25/2017 10:30:53 AM

Erin Melendrez

Reviewed By: *ES*

8-25-17

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? UPS

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved bottles checked for pH: 2
((<2 or >12 unless noted))
Adjusted? NO
Checked by: *Re*

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:		Date:	
By Whom:		Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.9	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 13, 2017

JD Haines

Earth Con

1880 West Oak Parkway Bldg. #100 Suite 106

Marietta, GA 30062

TEL: (317) 450-6126

FAX

RE: TWP Roswell Station 9

OrderNo.: 1709E33

Dear JD Haines:

Hall Environmental Analysis Laboratory received 5 sample(s) on 9/26/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709E33

Date Reported: 10/13/2017

CLIENT: Earth Con

Client Sample ID: Pre-Treatment

Project: TWP Roswell Station 9

Collection Date: 9/25/2017 9:00:00 AM

Lab ID: 1709E33-001

Matrix: AQUEOUS

Received Date: 9/26/2017 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: RAA
Benzene	4300	50		µg/L	50	9/29/2017 12:57:00 AM	R45970
Toluene	5700	500		µg/L	500	10/3/2017 1:34:00 PM	R46072
Ethylbenzene	250	50		µg/L	50	9/29/2017 12:57:00 AM	R45970
Xylenes, Total	2200	75		µg/L	50	9/29/2017 12:57:00 AM	R45970
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	50	9/29/2017 12:57:00 AM	R45970
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	50	9/29/2017 12:57:00 AM	R45970
Surr: Dibromofluoromethane	98.9	70-130		%Rec	50	9/29/2017 12:57:00 AM	R45970
Surr: Toluene-d8	102	70-130		%Rec	50	9/29/2017 12:57:00 AM	R45970

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709E33

Date Reported: 10/13/2017

CLIENT: Earth Con

Client Sample ID: Post Air Stripper

Project: TWP Roswell Station 9

Collection Date: 9/25/2017 9:10:00 AM

Lab ID: 1709E33-002

Matrix: AQUEOUS

Received Date: 9/26/2017 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: RAA
Benzene	380	10		µg/L	10	10/5/2017 11:20:00 AM	SL46146
Toluene	470	10		µg/L	10	10/5/2017 11:20:00 AM	SL46146
Ethylbenzene	19	1.0		µg/L	1	9/29/2017 2:08:00 AM	R45970
Xylenes, Total	190	1.5		µg/L	1	9/29/2017 2:08:00 AM	R45970
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	9/29/2017 2:08:00 AM	R45970
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	9/29/2017 2:08:00 AM	R45970
Surr: Dibromofluoromethane	102	70-130		%Rec	1	9/29/2017 2:08:00 AM	R45970
Surr: Toluene-d8	101	70-130		%Rec	1	9/29/2017 2:08:00 AM	R45970

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709E33

Date Reported: 10/13/2017

CLIENT: Earth Con

Client Sample ID: Between GAC's

Project: TWP Roswell Station 9

Collection Date: 9/25/2017 9:20:00 AM

Lab ID: 1709E33-003

Matrix: AQUEOUS

Received Date: 9/26/2017 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA	
Benzene	600	10		µg/L	10	10/3/2017 2:22:00 PM	R46072
Toluene	650	10		µg/L	10	10/3/2017 2:22:00 PM	R46072
Ethylbenzene	25	1.0		µg/L	1	9/29/2017 2:32:00 AM	R45970
Xylenes, Total	220	1.5		µg/L	1	9/29/2017 2:32:00 AM	R45970
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	9/29/2017 2:32:00 AM	R45970
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	9/29/2017 2:32:00 AM	R45970
Surr: Dibromofluoromethane	103	70-130		%Rec	1	9/29/2017 2:32:00 AM	R45970
Surr: Toluene-d8	101	70-130		%Rec	1	9/29/2017 2:32:00 AM	R45970

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709E33

Date Reported: 10/13/2017

CLIENT: Earth Con

Client Sample ID: Post Treatment

Project: TWP Roswell Station 9

Collection Date: 9/25/2017 9:30:00 AM

Lab ID: 1709E33-004

Matrix: AQUEOUS

Received Date: 9/26/2017 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Fluoride	ND	0.50		mg/L	5	9/26/2017 9:03:12 PM	R45923
Chloride	410	25	*	mg/L	50	10/11/2017 1:54:58 PM	R46291
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	9/26/2017 9:03:12 PM	R45923
Bromide	ND	0.50		mg/L	5	9/26/2017 9:03:12 PM	R45923
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	9/26/2017 9:03:12 PM	R45923
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	9/26/2017 9:03:12 PM	R45923
Sulfate	610	10	*	mg/L	20	9/26/2017 9:15:37 PM	R45923
EPA METHOD 200.7: DISSOLVED METALS							Analyst: TES
Calcium	260	5.0		mg/L	5	10/5/2017 3:10:10 PM	A46165
Magnesium	110	5.0		mg/L	5	10/5/2017 3:10:10 PM	A46165
Potassium	2.2	1.0		mg/L	1	10/5/2017 2:44:46 PM	A46165
Sodium	210	5.0		mg/L	5	10/5/2017 3:10:10 PM	A46165
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	3.1	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
Toluene	2.1	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
Ethylbenzene	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
Naphthalene	ND	2.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
1-Methylnaphthalene	ND	4.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
2-Methylnaphthalene	ND	4.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
Acetone	ND	10		µg/L	1	10/3/2017 2:46:00 PM	A46072
Bromobenzene	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
Bromodichloromethane	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
Bromoform	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
Bromomethane	ND	3.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
2-Butanone	ND	10		µg/L	1	10/3/2017 2:46:00 PM	A46072
Carbon disulfide	ND	10		µg/L	1	10/3/2017 2:46:00 PM	A46072
Carbon Tetrachloride	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
Chlorobenzene	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
Chloroethane	ND	2.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
Chloroform	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
Chloromethane	ND	3.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
2-Chlorotoluene	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
4-Chlorotoluene	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709E33

Date Reported: 10/13/2017

CLIENT: Earth Con

Client Sample ID: Post Treatment

Project: TWP Roswell Station 9

Collection Date: 9/25/2017 9:30:00 AM

Lab ID: 1709E33-004

Matrix: AQUEOUS

Received Date: 9/26/2017 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
cis-1,2-DCE	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
Dibromochloromethane	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
Dibromomethane	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
1,1-Dichloroethane	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
1,1-Dichloroethene	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
1,2-Dichloropropane	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
1,3-Dichloropropane	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
2,2-Dichloropropane	ND	2.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
1,1-Dichloropropene	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
Hexachlorobutadiene	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
2-Hexanone	ND	10		µg/L	1	10/3/2017 2:46:00 PM	A46072
Isopropylbenzene	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
4-Isopropyltoluene	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
4-Methyl-2-pentanone	ND	10		µg/L	1	10/3/2017 2:46:00 PM	A46072
Methylene Chloride	ND	3.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
n-Butylbenzene	ND	3.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
n-Propylbenzene	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
sec-Butylbenzene	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
Styrene	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
tert-Butylbenzene	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
trans-1,2-DCE	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
Trichlorofluoromethane	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/3/2017 2:46:00 PM	A46072
Vinyl chloride	ND	1.0		µg/L	1	10/3/2017 2:46:00 PM	A46072

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709E33

Date Reported: 10/13/2017

CLIENT: Earth Con

Client Sample ID: Post Treatment

Project: TWP Roswell Station 9

Collection Date: 9/25/2017 9:30:00 AM

Lab ID: 1709E33-004

Matrix: AQUEOUS

Received Date: 9/26/2017 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Xylenes, Total	ND	1.5		µg/L	1	10/3/2017 2:46:00 PM	A46072
Surr: 1,2-Dichloroethane-d4	111	70-130		%Rec	1	10/3/2017 2:46:00 PM	A46072
Surr: 4-Bromofluorobenzene	97.3	70-130		%Rec	1	10/3/2017 2:46:00 PM	A46072
Surr: Dibromofluoromethane	116	70-130		%Rec	1	10/3/2017 2:46:00 PM	A46072
Surr: Toluene-d8	99.4	70-130		%Rec	1	10/3/2017 2:46:00 PM	A46072

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709E33

Date Reported: 10/13/2017

CLIENT: Earth Con

Client Sample ID: Trip Blank

Project: TWP Roswell Station 9

Collection Date:

Lab ID: 1709E33-005

Matrix: AQUEOUS

Received Date: 9/26/2017 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
Toluene	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
Ethylbenzene	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
Naphthalene	ND	2.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
1-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
2-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
Acetone	ND	10		µg/L	1	9/29/2017 3:19:00 AM	W45970
Bromobenzene	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
Bromodichloromethane	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
Bromoform	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
Bromomethane	ND	3.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
2-Butanone	ND	10		µg/L	1	9/29/2017 3:19:00 AM	W45970
Carbon disulfide	ND	10		µg/L	1	9/29/2017 3:19:00 AM	W45970
Carbon Tetrachloride	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
Chlorobenzene	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
Chloroethane	ND	2.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
Chloroform	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
Chloromethane	ND	3.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
2-Chlorotoluene	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
4-Chlorotoluene	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
cis-1,2-DCE	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
Dibromochloromethane	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
Dibromomethane	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
1,1-Dichloroethane	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
1,1-Dichloroethene	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
1,2-Dichloropropane	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
1,3-Dichloropropane	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
2,2-Dichloropropane	ND	2.0		µg/L	1	9/29/2017 3:19:00 AM	W45970

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709E33

Date Reported: 10/13/2017

CLIENT: Earth Con

Client Sample ID: Trip Blank

Project: TWP Roswell Station 9

Collection Date:

Lab ID: 1709E33-005

Matrix: AQUEOUS

Received Date: 9/26/2017 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
Hexachlorobutadiene	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
2-Hexanone	ND	10		µg/L	1	9/29/2017 3:19:00 AM	W45970
Isopropylbenzene	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
4-Isopropyltoluene	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
4-Methyl-2-pentanone	ND	10		µg/L	1	9/29/2017 3:19:00 AM	W45970
Methylene Chloride	ND	3.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
n-Butylbenzene	ND	3.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
n-Propylbenzene	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
sec-Butylbenzene	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
Styrene	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
tert-Butylbenzene	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
trans-1,2-DCE	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
Trichlorofluoromethane	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
Vinyl chloride	ND	1.0		µg/L	1	9/29/2017 3:19:00 AM	W45970
Xylenes, Total	ND	1.5		µg/L	1	9/29/2017 3:19:00 AM	W45970
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	9/29/2017 3:19:00 AM	W45970
Surr: 4-Bromofluorobenzene	99.5	70-130		%Rec	1	9/29/2017 3:19:00 AM	W45970
Surr: Dibromofluoromethane	103	70-130		%Rec	1	9/29/2017 3:19:00 AM	W45970
Surr: Toluene-d8	99.2	70-130		%Rec	1	9/29/2017 3:19:00 AM	W45970

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1709E33

13-Oct-17

Client: Earth Con
Project: TWP Roswell Station 9

Sample ID MB-A	SampType: MBLK		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: PBW	Batch ID: A46165		RunNo: 46165							
Prep Date:	Analysis Date: 10/5/2017		SeqNo: 1469236		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID LLCS-A	SampType: LCSLL		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: BatchQC	Batch ID: A46165		RunNo: 46165							
Prep Date:	Analysis Date: 10/5/2017		SeqNo: 1469237		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0	0.5000	0	96.2	50	150			
Magnesium	ND	1.0	0.5000	0	98.4	50	150			
Potassium	ND	1.0	0.5000	0	105	50	150			
Sodium	ND	1.0	0.5000	0	108	50	150			

Sample ID LCS-A	SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: LCSW	Batch ID: A46165		RunNo: 46165							
Prep Date:	Analysis Date: 10/5/2017		SeqNo: 1469238		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	49	1.0	50.00	0	97.3	85	115			
Magnesium	51	1.0	50.00	0	102	85	115			
Potassium	51	1.0	50.00	0	102	85	115			
Sodium	52	1.0	50.00	0	103	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1709E33

13-Oct-17

Client: Earth Con
Project: TWP Roswell Station 9

Sample ID MB	SampType: mblk		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R45923		RunNo: 45923							
Prep Date:	Analysis Date: 9/26/2017		SeqNo: 1459487		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P)	ND	0.50								
Sulfate	ND	0.50								

Sample ID LCS-b	SampType: lcs		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R45923		RunNo: 45923							
Prep Date:	Analysis Date: 9/26/2017		SeqNo: 1459489		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	95.4	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	94.1	90	110			
Bromide	2.3	0.10	2.500	0	93.1	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	96.3	90	110			
Phosphorus, Orthophosphate (As P)	4.7	0.50	5.000	0	93.1	90	110			
Sulfate	9.4	0.50	10.00	0	93.9	90	110			

Sample ID MB	SampType: mblk		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R46291		RunNo: 46291							
Prep Date:	Analysis Date: 10/11/2017		SeqNo: 1474546		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID LCS	SampType: lcs		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R46291		RunNo: 46291							
Prep Date:	Analysis Date: 10/11/2017		SeqNo: 1474547		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.3	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1709E33

13-Oct-17

Client: Earth Con
Project: TWP Roswell Station 9

Sample ID	100ng lcs2		SampType: LCS		TestCode: EPA Method 8260: Volatiles Short List					
Client ID:	LCSW		Batch ID: R45970		RunNo: 45970					
Prep Date:			Analysis Date: 9/29/2017		SeqNo: 1463733		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.3	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.4	70	130			
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	9.9		10.00		98.8	70	130			

Sample ID	rb2	SampType: MBLK			TestCode: EPA Method 8260: Volatiles Short List					
Client ID:	PBW	Batch ID: R45970			RunNo: 45970					
Prep Date:		Analysis Date: 9/29/2017			SeqNo: 1463737		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.7	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.9		10.00		98.9	70	130			

Sample ID	1709e33-001ams		SampType: MS		TestCode: EPA Method 8260: Volatiles Short List					
Client ID:	Pre-Treatment		Batch ID: R45970		RunNo: 45970					
Prep Date:			Analysis Date: 9/29/2017		SeqNo: 1463753		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	5300	50	1000	4289	99.3	70	130			E
Surr: 1,2-Dichloroethane-d4	500		500.0		101	70	130			
Surr: 4-Bromofluorobenzene	500		500.0		101	70	130			
Surr: Dibromofluoromethane	500		500.0		100	70	130			
Surr: Toluene-d8	500		500.0		99.9	70	130			

Sample ID	1709e33-001amsd		SampType: MSD		TestCode: EPA Method 8260: Volatiles Short List					
Client ID:	Pre-Treatment		Batch ID: R45970		RunNo: 45970					
Prep Date:			Analysis Date: 9/29/2017		SeqNo: 1463754		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	5200	50	1000	4289	90.9	70	130	1.59	20	E
Surr: 1,2-Dichloroethane-d4	500		500.0		101	70	130	0	0	
Surr: 4-Bromofluorobenzene	510		500.0		102	70	130	0	0	
Surr: Dibromofluoromethane	500		500.0		99.5	70	130	0	0	
Surr: Toluene-d8	500		500.0		101	70	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1709E33

13-Oct-17

Client: Earth Con
Project: TWP Roswell Station 9

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260: Volatiles Short List					
Client ID:	LCSW	Batch ID:	R46072	RunNo:	46072					
Prep Date:		Analysis Date:	10/3/2017	SeqNo:	1465320	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	21	1.0	20.00	0	105	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.5	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.6	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		99.6	70	130			

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8260: Volatiles Short List					
Client ID:	PBW	Batch ID:	R46072	RunNo:	46072					
Prep Date:		Analysis Date:	10/3/2017	SeqNo:	1465325	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.5	70	130			
Surr: Dibromofluoromethane	11		10.00		105	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260: Volatiles Short List					
Client ID:	LCSW	Batch ID:	SL46146	RunNo:	46146					
Prep Date:		Analysis Date:	10/5/2017	SeqNo:	1468709	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.6	70	130			
Toluene	20	1.0	20.00	0	97.7	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.4	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		99.8	70	130			

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260: Volatiles Short List					
Client ID:	PBW	Batch ID:	SL46146	RunNo:	46146					
Prep Date:		Analysis Date:	10/5/2017	SeqNo:	1468710	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1709E33

13-Oct-17

Client: Earth Con
Project: TWP Roswell Station 9

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260: Volatiles Short List					
Client ID:	PBW	Batch ID:	SL46146	RunNo:	46146					
Prep Date:		Analysis Date:	10/5/2017	SeqNo:	1468710	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.8		10.00		97.7	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1709E33

13-Oct-17

Client: Earth Con
Project: TWP Roswell Station 9

Sample ID 100ng lcs2	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: W45970			RunNo: 45970						
Prep Date:	Analysis Date: 9/29/2017			SeqNo: 1463731		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.3	70	130			
Toluene	20	1.0	20.00	0	98.2	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	102	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	96.5	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.4	70	130			
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	9.9		10.00		98.8	70	130			

Sample ID rb2	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: W45970			RunNo: 45970						
Prep Date:	Analysis Date: 9/29/2017			SeqNo: 1463735		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1709E33

13-Oct-17

Client: Earth Con
Project: TWP Roswell Station 9

Sample ID rb2	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: W45970			RunNo: 45970						
Prep Date:	Analysis Date: 9/29/2017			SeqNo: 1463735		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1709E33

13-Oct-17

Client: Earth Con
Project: TWP Roswell Station 9

Sample ID rb2	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: W45970			RunNo: 45970						
Prep Date:	Analysis Date: 9/29/2017			SeqNo: 1463735		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.7	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.9		10.00		98.9	70	130			

Sample ID 100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: A46072			RunNo: 46072						
Prep Date:	Analysis Date: 10/3/2017			SeqNo: 1465318		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	21	1.0	20.00	0	105	70	130			
Chlorobenzene	22	1.0	20.00	0	108	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	106	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.5	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.6	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		99.6	70	130			

Sample ID RB	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: A46072			RunNo: 46072						
Prep Date:	Analysis Date: 10/3/2017			SeqNo: 1465323		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1709E33

13-Oct-17

Client: Earth Con
Project: TWP Roswell Station 9

Sample ID	RB	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: A46072			RunNo: 46072					
Prep Date:		Analysis Date: 10/3/2017			SeqNo: 1465323	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1709E33

13-Oct-17

Client: Earth Con
Project: TWP Roswell Station 9

Sample ID RB	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: A46072			RunNo: 46072						
Prep Date:	Analysis Date: 10/3/2017			SeqNo: 1465323		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.5	70	130			
Surr: Dibromofluoromethane	11		10.00		105	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID 100ng lcs	SampType: LCS4			TestCode: EPA Method 8260B: VOLATILES						
Client ID: BatchQC	Batch ID: R46146			RunNo: 46146						
Prep Date:	Analysis Date: 10/5/2017			SeqNo: 1468708		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.4	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		99.8	70	130			

Sample ID rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R46146			RunNo: 46146						
Prep Date:	Analysis Date: 10/5/2017			SeqNo: 1468712		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.8		10.00		97.7	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1709E33

13-Oct-17

Client: Earth Con
Project: TWP Roswell Station 9

Sample ID	100ng lcs2	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	A46146	RunNo:	46146					
Prep Date:		Analysis Date:	10/5/2017	SeqNo:	1468794	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.8		10.00		97.8	70	130			

Sample ID	rb2	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	A46146	RunNo:	46146					
Prep Date:		Analysis Date:	10/5/2017	SeqNo:	1468795	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.6	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.8		10.00		98.3	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: EARTH CON

Work Order Number: 1709E33

RcptNo: 1

Received By: Isaiah Ortiz

9/26/2017 9:40:00 AM

IO

Completed By: Anne Thorne

9/26/2017 10:53:11 AM

Anne Thorne

Reviewed By: *IO*

9/26/17

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? UPS

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved bottles checked for pH: 2
(<2 or >12 unless noted)
Adjusted? NO
Checked by: *IO*

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:	Date:
By Whom:	Via: <input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	
Client Instructions:	

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			

Chain-of-Custody Record

Client: EarthCon Consultants, Inc.
 ATTN: Rachel Andrews
 Mailing Address: 1800 West Oak Parkway, Bldg. #100
Suite 106, Murfreesboro, TN 37062
 Phone #: 770.973.2100
 Email or Fax#: Randrews@earthcon.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)
 Accreditation
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush
 Project Name: EarthCon Consultants, Inc.
TWP Raswell Station #9
 Project #: 02.2012.0037.00
Monthly Discharge Water
September 2012
 Project Manager:
JD Haines, PG

Sampler: CM Barnhill, PG
 Date: 09/26/17 Time: 11:00
 Sample Temperature: 15.5
 Container Type and #
 Preservative Type
 Fish No.

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	Fish No.
09/25/17	0900	H2O	Pre-Treatment	3x400ml Vials	HCL	001
09/25/17	0910	H2O	Post-Air Stripper	3x400ml Vials	HCL	002
09/25/17	0920	H2O	Between Cais	3x400ml Vials	HCL	003
09/25/17	0930	H2O	Post-Treatment	3x400ml Vials	HCL	004
09/25/17	0940	H2O	Post-Treatment	3x400ml Vials	None/None	005
			TRIP Blank			

Date: 09/26/17 Time: 11:00
 Relinquished by: [Signature]
 Date: 09/26/17 Time: 09:40
 Received by: [Signature]
 Relinquished by: [Signature]



HALL ENVIRONMENTAL ANALYSIS LABORATORY
 www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX + MTBE + TMBs (E021)	
BTEX + MTBE + TPH (Gas only)	
TPH 8015B (GRO / DRO / MRO)	
TPH (Method 418.1)	
EDB (Method 504.1)	
PAHs (8310 or 8270 SIMS)	
RCRA 8 Metals	
Anions (F, Cl, NO ₃ , PO ₄ , SO ₄)	
8081 Pesticides / 8082 PCBs	
8260B (VOA) Full List	
8270 (Semi-VOA)	
Dissolved Metals (Method 8200)	
* Field Filtered	
Mg/L No. 10	
6 - Phosphorus	
Bromide	

Remarks: Any questions? Please call me
at 575.626.1615. Send Results ASAP
To: randrews@earthcon.com



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 26, 2018

JD Haines

Earth Con

14405 Walters Rd Ste 700

Houston, TX

TEL: (317) 450-6126

FAX

RE: Earth Con Consultants Inc TWP Roswell Station 9

OrderNo.: 1710C42

Dear JD Haines:

Hall Environmental Analysis Laboratory received 5 sample(s) on 10/24/2017 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued November 03, 2017.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710C42

Date Reported: 1/26/2018

CLIENT: Earth Con

Client Sample ID: Pre-Treatment

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 10/23/2017 9:15:00 AM

Lab ID: 1710C42-001

Matrix: AQUEOUS

Received Date: 10/24/2017 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	4400	100		µg/L	100	10/27/2017 3:29:00 PM
Toluene	5200	100		µg/L	100	10/27/2017 3:29:00 PM
Ethylbenzene	200	100		µg/L	100	10/27/2017 3:29:00 PM
Xylenes, Total	2300	150		µg/L	100	10/27/2017 3:29:00 PM
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	100	10/27/2017 3:29:00 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	100	10/27/2017 3:29:00 PM
Surr: Dibromofluoromethane	101	70-130		%Rec	100	10/27/2017 3:29:00 PM
Surr: Toluene-d8	99.5	70-130		%Rec	100	10/27/2017 3:29:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710C42

Date Reported: 1/26/2018

CLIENT: Earth Con

Client Sample ID: Post-Air Stripper

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 10/23/2017 9:30:00 AM

Lab ID: 1710C42-002

Matrix: AQUEOUS

Received Date: 10/24/2017 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	9.6	1.0		µg/L	1	10/30/2017 1:24:00 PM
Toluene	13	1.0		µg/L	1	10/30/2017 1:24:00 PM
Ethylbenzene	ND	1.0		µg/L	1	10/30/2017 1:24:00 PM
Xylenes, Total	7.9	1.0		µg/L	1	10/30/2017 1:24:00 PM
Surr: 1,2-Dichloroethane-d4	99.9	70-130		%Rec	1	10/30/2017 1:24:00 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	10/30/2017 1:24:00 PM
Surr: Dibromofluoromethane	104	70-130		%Rec	1	10/30/2017 1:24:00 PM
Surr: Toluene-d8	99.6	70-130		%Rec	1	10/30/2017 1:24:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710C42

Date Reported: 1/26/2018

CLIENT: Earth Con

Client Sample ID: Between GACs

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 10/23/2017 9:40:00 AM

Lab ID: 1710C42-003

Matrix: AQUEOUS

Received Date: 10/24/2017 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	16	1.0		µg/L	1	10/30/2017 1:48:00 PM
Toluene	14	1.0		µg/L	1	10/30/2017 1:48:00 PM
Ethylbenzene	ND	1.0		µg/L	1	10/30/2017 1:48:00 PM
Xylenes, Total	7.7	1.5		µg/L	1	10/30/2017 1:48:00 PM
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	10/30/2017 1:48:00 PM
Surr: 4-Bromofluorobenzene	98.9	70-130		%Rec	1	10/30/2017 1:48:00 PM
Surr: Dibromofluoromethane	106	70-130		%Rec	1	10/30/2017 1:48:00 PM
Surr: Toluene-d8	98.4	70-130		%Rec	1	10/30/2017 1:48:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710C42

Date Reported: 1/26/2018

CLIENT: Earth Con

Client Sample ID: Post Treatment

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 10/23/2017 9:50:00 AM

Lab ID: 1710C42-004

Matrix: AQUEOUS

Received Date: 10/24/2017 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MRA
Fluoride	1.2	0.10		mg/L	1	10/24/2017 3:15:12 PM
Chloride	400	25	*	mg/L	50	10/31/2017 1:14:44 AM
Nitrogen, Nitrite (As N)	ND	2.0		mg/L	20	10/24/2017 3:40:01 PM
Bromide	0.45	0.10		mg/L	1	10/24/2017 3:15:12 PM
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	10/24/2017 3:15:12 PM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	10/24/2017 3:15:12 PM
Sulfate	740	10	*	mg/L	20	10/24/2017 3:40:01 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: pmf
Calcium	270	5.0		mg/L	5	10/27/2017 3:45:50 PM
Magnesium	100	5.0		mg/L	5	10/27/2017 3:45:50 PM
Potassium	1.8	1.0		mg/L	1	10/27/2017 1:42:04 PM
Sodium	190	5.0		mg/L	5	10/27/2017 3:45:50 PM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	1.0	1.0		µg/L	1	10/27/2017 4:40:00 PM
Toluene	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
Ethylbenzene	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
Naphthalene	ND	2.0		µg/L	1	10/27/2017 4:40:00 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	10/27/2017 4:40:00 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	10/27/2017 4:40:00 PM
Acetone	ND	10		µg/L	1	10/27/2017 4:40:00 PM
Bromobenzene	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
Bromodichloromethane	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
Bromoform	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
Bromomethane	ND	3.0		µg/L	1	10/27/2017 4:40:00 PM
2-Butanone	ND	10		µg/L	1	10/27/2017 4:40:00 PM
Carbon disulfide	ND	10		µg/L	1	10/27/2017 4:40:00 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
Chlorobenzene	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
Chloroethane	ND	2.0		µg/L	1	10/27/2017 4:40:00 PM
Chloroform	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
Chloromethane	ND	3.0		µg/L	1	10/27/2017 4:40:00 PM
2-Chlorotoluene	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
4-Chlorotoluene	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710C42

Date Reported: 1/26/2018

CLIENT: Earth Con

Client Sample ID: Post Treatment

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 10/23/2017 9:50:00 AM

Lab ID: 1710C42-004

Matrix: AQUEOUS

Received Date: 10/24/2017 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
cis-1,2-DCE	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/27/2017 4:40:00 PM
Dibromochloromethane	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
Dibromomethane	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	10/27/2017 4:40:00 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
2-Hexanone	ND	10		µg/L	1	10/27/2017 4:40:00 PM
Isopropylbenzene	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	10/27/2017 4:40:00 PM
Methylene Chloride	ND	3.0		µg/L	1	10/27/2017 4:40:00 PM
n-Butylbenzene	ND	3.0		µg/L	1	10/27/2017 4:40:00 PM
n-Propylbenzene	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
sec-Butylbenzene	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
Styrene	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
tert-Butylbenzene	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/27/2017 4:40:00 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
trans-1,2-DCE	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/27/2017 4:40:00 PM
Vinyl chloride	ND	1.0		µg/L	1	10/27/2017 4:40:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710C42

Date Reported: 1/26/2018

CLIENT: Earth Con

Client Sample ID: Post Treatment

Project: Earth Con Consultants Inc TWP Roswell

Collection Date: 10/23/2017 9:50:00 AM

Lab ID: 1710C42-004

Matrix: AQUEOUS

Received Date: 10/24/2017 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Xylenes, Total	ND	1.5		µg/L	1	10/27/2017 4:40:00 PM
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	10/27/2017 4:40:00 PM
Surr: 4-Bromofluorobenzene	99.6	70-130		%Rec	1	10/27/2017 4:40:00 PM
Surr: Dibromofluoromethane	102	70-130		%Rec	1	10/27/2017 4:40:00 PM
Surr: Toluene-d8	97.3	70-130		%Rec	1	10/27/2017 4:40:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710C42

Date Reported: 1/26/2018

CLIENT: Earth Con

Client Sample ID: TRIP BLANK

Project: Earth Con Consultants Inc TWP Roswell

Collection Date:

Lab ID: 1710C42-005

Matrix: TRIP BLANK

Received Date: 10/24/2017 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
Toluene	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
Ethylbenzene	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
Naphthalene	ND	2.0		µg/L	1	10/27/2017 5:04:00 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	10/27/2017 5:04:00 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	10/27/2017 5:04:00 PM
Acetone	ND	10		µg/L	1	10/27/2017 5:04:00 PM
Bromobenzene	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
Bromodichloromethane	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
Bromoform	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
Bromomethane	ND	3.0		µg/L	1	10/27/2017 5:04:00 PM
2-Butanone	ND	10		µg/L	1	10/27/2017 5:04:00 PM
Carbon disulfide	ND	10		µg/L	1	10/27/2017 5:04:00 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
Chlorobenzene	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
Chloroethane	ND	2.0		µg/L	1	10/27/2017 5:04:00 PM
Chloroform	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
Chloromethane	ND	3.0		µg/L	1	10/27/2017 5:04:00 PM
2-Chlorotoluene	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
4-Chlorotoluene	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
cis-1,2-DCE	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/27/2017 5:04:00 PM
Dibromochloromethane	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
Dibromomethane	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	10/27/2017 5:04:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710C42

Date Reported: 1/26/2018

CLIENT: Earth Con

Client Sample ID: TRIP BLANK

Project: Earth Con Consultants Inc TWP Roswell

Collection Date:

Lab ID: 1710C42-005

Matrix: TRIP BLANK

Received Date: 10/24/2017 9:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
2-Hexanone	ND	10		µg/L	1	10/27/2017 5:04:00 PM
Isopropylbenzene	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	10/27/2017 5:04:00 PM
Methylene Chloride	ND	3.0		µg/L	1	10/27/2017 5:04:00 PM
n-Butylbenzene	ND	3.0		µg/L	1	10/27/2017 5:04:00 PM
n-Propylbenzene	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
sec-Butylbenzene	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
Styrene	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
tert-Butylbenzene	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/27/2017 5:04:00 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
trans-1,2-DCE	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/27/2017 5:04:00 PM
Vinyl chloride	ND	1.0		µg/L	1	10/27/2017 5:04:00 PM
Xylenes, Total	ND	1.5		µg/L	1	10/27/2017 5:04:00 PM
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	10/27/2017 5:04:00 PM
Surr: 4-Bromofluorobenzene	97.5	70-130		%Rec	1	10/27/2017 5:04:00 PM
Surr: Dibromofluoromethane	104	70-130		%Rec	1	10/27/2017 5:04:00 PM
Surr: Toluene-d8	98.7	70-130		%Rec	1	10/27/2017 5:04:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1710C42

26-Jan-18

Client: Earth Con

Project: Earth Con Consultants Inc TWP Roswell Station

Sample ID	MB-B		SampType:	MBLK		TestCode:	EPA Method 200.7: Dissolved Metals				
Client ID:	PBW		Batch ID:	B46735		RunNo:	46735				
Prep Date:			Analysis Date:	10/27/2017		SeqNo:	1489228	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Potassium	ND	1.0									

Sample ID	LLLCS-B		SampType:	LCSLL		TestCode:	EPA Method 200.7: Dissolved Metals				
Client ID:	BatchQC		Batch ID:	B46735		RunNo:	46735				
Prep Date:			Analysis Date:	10/27/2017		SeqNo:	1489230	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Potassium	ND	1.0	0.5000	0	106	50	150				

Sample ID	LCS-B		SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	LCSW		Batch ID: B46735		RunNo: 46735					
Prep Date:			Analysis Date: 10/27/2017		SeqNo: 1489232		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	51	1.0	50.00	0	102	85	115			

Sample ID	1710C42-004CMS		SampType: MS		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	Post Treatment		Batch ID: B46735		RunNo: 46735					
Prep Date:			Analysis Date: 10/27/2017		SeqNo: 1489337		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	51	1.0	50.00	1.822	98.4	70	130			

Sample ID	1710C42-004CMSD			SampType:	MSD		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	Post Treatment		Batch ID:	B46735		RunNo:	46735				
Prep Date:			Analysis Date:	10/27/2017		SeqNo:	1489338		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Potassium	50	1.0	50.00	1.822	96.7	70	130	1.69	20		

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1710C42

26-Jan-18

Client: Earth Con
Project: Earth Con Consultants Inc TWP Roswell Station

Sample ID MB	SampType: mblk		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R46633		RunNo: 46633							
Prep Date:	Analysis Date: 10/24/2017		SeqNo: 1485451		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P)	ND	0.50								
Sulfate	ND	0.50								

Sample ID LCS	SampType: lcs		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R46633		RunNo: 46633							
Prep Date:	Analysis Date: 10/24/2017		SeqNo: 1485452		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	103	90	110			
Nitrogen, Nitrite (As N)	0.95	0.10	1.000	0	95.2	90	110			
Bromide	2.5	0.10	2.500	0	98.2	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	102	90	110			
Phosphorus, Orthophosphate (As P)	4.8	0.50	5.000	0	96.2	90	110			
Sulfate	9.8	0.50	10.00	0	97.8	90	110			

Sample ID 1710C42-004BMS	SampType: ms		TestCode: EPA Method 300.0: Anions							
Client ID: Post Treatment	Batch ID: R46633		RunNo: 46633							
Prep Date:	Analysis Date: 10/24/2017		SeqNo: 1485458		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.6	0.10	0.5000	1.175	80.6	68.4	112			
Nitrogen, Nitrite (As N)	1.3	0.10	1.000	0	133	78.6	103			S
Bromide	2.8	0.10	2.500	0.4501	92.4	77	108			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	96.4	85.6	113			
Phosphorus, Orthophosphate (As P)	3.2	0.50	5.000	0	63.6	68.2	116			S

Sample ID 1710C42-004BMSD	SampType: msd		TestCode: EPA Method 300.0: Anions							
Client ID: Post Treatment	Batch ID: R46633		RunNo: 46633							
Prep Date:	Analysis Date: 10/24/2017		SeqNo: 1485460		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.6	0.10	0.5000	1.175	87.6	68.4	112	2.19	20	
Nitrogen, Nitrite (As N)	1.3	0.10	1.000	0	132	78.6	103	0.840	20	S
Bromide	2.8	0.10	2.500	0.4501	92.6	77	108	0.203	20	
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	96.1	85.6	113	0.217	20	
Phosphorus, Orthophosphate (As P)	ND	0.50	5.000	0	0	68.2	116	200	20	RS

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1710C42

26-Jan-18

Client: Earth Con

Project: Earth Con Consultants Inc TWP Roswell Station

Sample ID MB	SampType: mblk			TestCode: EPA Method 300.0: Anions						
Client ID: PBW	Batch ID: R46740			RunNo: 46740						
Prep Date:	Analysis Date: 10/30/2017			SeqNo: 1490216		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID LCS	SampType: lcs			TestCode: EPA Method 300.0: Anions						
Client ID: LCSW	Batch ID: R46740			RunNo: 46740						
Prep Date:	Analysis Date: 10/30/2017			SeqNo: 1490217		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.3	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1710C42

26-Jan-18

Client: Earth Con

Project: Earth Con Consultants Inc TWP Roswell Station

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260: Volatiles Short List					
Client ID:	PBW	Batch ID:	SL46694	RunNo:	46694					
Prep Date:		Analysis Date:	10/27/2017	SeqNo:	1487911	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.9	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260: Volatiles Short List					
Client ID:	LCSW	Batch ID:	SL46753	RunNo:	46753					
Prep Date:		Analysis Date:	10/30/2017	SeqNo:	1489945	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	94.8	70	130			
Toluene	19	1.0	20.00	0	92.6	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.9	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.8		10.00		98.3	70	130			

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8260: Volatiles Short List					
Client ID:	PBW	Batch ID:	SL46753	RunNo:	46753					
Prep Date:		Analysis Date:	10/30/2017	SeqNo:	1490338	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.5	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.7		10.00		97.1	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1710C42

26-Jan-18

Client: Earth Con

Project: Earth Con Consultants Inc TWP Roswell Station

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: R46694			RunNo: 46694					
Prep Date:	Analysis Date: 10/27/2017			SeqNo: 1487796		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130			
Toluene	20	1.0	20.00	0	98.8	70	130			
Chlorobenzene	20	1.0	20.00	0	98.8	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	108	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	100	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.8		10.00		98.0	70	130			

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R46694			RunNo: 46694					
Prep Date:		Analysis Date: 10/27/2017			SeqNo: 1487797		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1710C42

26-Jan-18

Client: Earth Con

Project: Earth Con Consultants Inc TWP Roswell Station

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R46694	RunNo:	46694					
Prep Date:		Analysis Date:	10/27/2017	SeqNo:	1487797	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1710C42

26-Jan-18

Client: Earth Con

Project: Earth Con Consultants Inc TWP Roswell Station

Sample ID rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R46694			RunNo: 46694						
Prep Date:	Analysis Date: 10/27/2017			SeqNo: 1487797		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.9	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID 100ng lcs2	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: B46694			RunNo: 46694						
Prep Date:	Analysis Date: 10/27/2017			SeqNo: 1488862		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.6	70	130			
Surr: Dibromofluoromethane	10		10.00		105	70	130			
Surr: Toluene-d8	9.8		10.00		97.9	70	130			

Sample ID RB2	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: B46694			RunNo: 46694						
Prep Date:	Analysis Date: 10/27/2017			SeqNo: 1488863		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	9.8		10.00		98.0	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: EARTH CON

Work Order Number: 1710C42

RcptNo: 1

Received By: Richie Eriacho 10/24/2017 9:35:00 AM

Completed By: Ashley Gallegos 10/24/2017 10:11:41 AM

Reviewed By: DDS 10/24/17

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? UPS

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved bottles checked for pH: 2
(2 or >12 unless noted)
Adjusted? NO
Checked by: Re

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:		Date:	
By Whom:		Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.6	Good	Yes			

Chain-of-Custody Record

Client: Farthcon Consultants, Inc.
ATTN: Rachel Andrews
100 West Oak Parkway, Bldg 100
Suite 106, Marietta, GA 30067
770.973.2100

email: randrews@earthcon.com
 QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)
 Accreditation
☐ NELAP ☐ Other
☐ EDD (Type)

Date	Time	Matrix	Sample Request ID
12/31/09	14:30	H ₂ O	Pre-Treatment
12/31/09	14:30	H ₂ O	Post-Treatment
12/31/09	14:30	H ₂ O	Between CWS
12/31/09	14:30	H ₂ O	Post-Treatment
12/31/09	14:30	H ₂ O	Post-Treatment

Trip Blank

Date: 12/31/09 Time: 14:30
 Relinquished by: [Signature]
 Date: 12/31/09 Time: 14:30
 Relinquished by: [Signature]

Turn-Around Time:

☒ Standard ☐ Rush

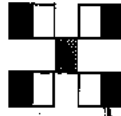
Project Name: Earthcon Consultants, Inc.
TWP Roswell Station #9
 Project #: 02-2012-003700
Monthly Discharge Water
October 2017

Project Manager: J.D. Hames, PE
 Sampler: CM Barnhill, PE
 Sample Temperature: 10°C

Container Type and #	Preservative Type	HEATING
3x40ml vials	HCL	-001
3x40ml vials	HCL	-002
3x40ml vials	HCL	-003
3x40ml vials	HCL	-004A
3x40ml vials	HCL	-005A

Trip Blank

Received by: [Signature] Date: 10/24/09 Time: 09:35
 Received by: [Signature] Date: 10/24/09 Time: 09:35



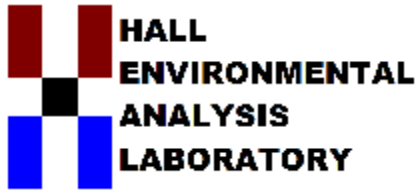
HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

<input checked="" type="checkbox"/> BTX + MTBE + TMB's (6021)	<input type="checkbox"/> TPH 8015B (GRO / DRO / MRO)	<input type="checkbox"/> EDB (Method 504.1)	<input type="checkbox"/> PAH's (8310 or 8270 SIMS)	<input type="checkbox"/> RCRA 8 Metals	<input type="checkbox"/> Anions (F, Cl, NO ₃ , PO ₄ , SO ₄)	<input type="checkbox"/> 8081 Pesticides / 8082 PCB's	<input checked="" type="checkbox"/> 8260B (VOA) Full List	<input type="checkbox"/> 8270 (Semi-VOA) Dissolved Metals	<input type="checkbox"/> Mg, K, Na	<input type="checkbox"/> O ₂ phosphorus	<input type="checkbox"/> Bromide	<input type="checkbox"/> Air Bubbles (Y or N)
---	--	---	--	--	---	---	---	---	------------------------------------	--	----------------------------------	---

Remarks: Any Questions Please
Call CM at 575-626-1615
Sample Res. is 10/24/09
Handwritten on earthcon



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 26, 2018

JD Haines

Earth Con

14405 Walters Rd Ste 700

Houston, TX

TEL: (317) 450-6126

FAX

RE: Earth Con Consultants Inc
TWP Roswell Station 9

OrderNo.: 1711C79

Dear JD Haines:

Hall Environmental Analysis Laboratory received 5 sample(s) on 11/28/2017 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued December 14, 2017.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711C79

Date Reported: 1/26/2018

CLIENT: Earth Con

Client Sample ID: Pre-Treatment

Project: Earth Con Consultants Inc

Collection Date: 11/27/2017 9:45:00 AM

Lab ID: 1711C79-001

Matrix: AQUEOUS

Received Date: 11/28/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	4400	100		µg/L	100	12/2/2017 4:30:04 AM
Toluene	5300	100		µg/L	100	12/2/2017 4:30:04 AM
Ethylbenzene	200	100		µg/L	100	12/2/2017 4:30:04 AM
Xylenes, Total	2200	200		µg/L	100	12/2/2017 4:30:04 AM
Surr: 4-Bromofluorobenzene	87.2	72.5-140		%Rec	100	12/2/2017 4:30:04 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711C79

Date Reported: 1/26/2018

CLIENT: Earth Con

Client Sample ID: Post-Air Stripper

Project: Earth Con Consultants Inc

Collection Date: 11/27/2017 9:55:00 AM

Lab ID: 1711C79-002

Matrix: AQUEOUS

Received Date: 11/28/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	29	1.0		µg/L	1	12/2/2017 4:53:24 AM
Toluene	38	1.0		µg/L	1	12/2/2017 4:53:24 AM
Ethylbenzene	1.8	1.0		µg/L	1	12/2/2017 4:53:24 AM
Xylenes, Total	20	2.0		µg/L	1	12/2/2017 4:53:24 AM
Surr: 4-Bromofluorobenzene	86.4	72.5-140		%Rec	1	12/2/2017 4:53:24 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711C79

Date Reported: 1/26/2018

CLIENT: Earth Con

Client Sample ID: Between GAC's

Project: Earth Con Consultants Inc

Collection Date: 11/27/2017 10:05:00 AM

Lab ID: 1711C79-003

Matrix: AQUEOUS

Received Date: 11/28/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	21	1.0		µg/L	1	12/2/2017 5:16:45 AM
Toluene	19	1.0		µg/L	1	12/2/2017 5:16:45 AM
Ethylbenzene	ND	1.0		µg/L	1	12/2/2017 5:16:45 AM
Xylenes, Total	8.7	2.0		µg/L	1	12/2/2017 5:16:45 AM
Surr: 4-Bromofluorobenzene	83.3	72.5-140		%Rec	1	12/2/2017 5:16:45 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711C79

Date Reported: 1/26/2018

CLIENT: Earth Con

Client Sample ID: Post-Treatment

Project: Earth Con Consultants Inc

Collection Date: 11/27/2017 10:15:00 AM

Lab ID: 1711C79-004

Matrix: AQUEOUS

Received Date: 11/28/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MRA
Fluoride	1.2	0.10		mg/L	1	11/28/2017 5:42:35 PM
Chloride	400	25	*	mg/L	50	12/5/2017 6:23:56 AM
Nitrogen, Nitrite (As N)	ND	2.0		mg/L	20	11/28/2017 5:55:01 PM
Bromide	0.33	0.10		mg/L	1	11/28/2017 5:42:35 PM
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	11/28/2017 5:42:35 PM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	11/28/2017 5:42:35 PM
Sulfate	810	10	*	mg/L	20	11/28/2017 5:55:01 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: pmf
Calcium	310	5.0		mg/L	5	12/6/2017 5:29:56 PM
Magnesium	100	5.0		mg/L	5	12/6/2017 5:29:56 PM
Potassium	1.8	1.0		mg/L	1	12/5/2017 6:25:12 PM
Sodium	200	5.0		mg/L	5	12/6/2017 5:29:56 PM
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Benzene	1.7	1.0		µg/L	1	12/2/2017 6:37:20 AM
Toluene	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
Ethylbenzene	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
Naphthalene	ND	2.0		µg/L	1	12/2/2017 6:37:20 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	12/2/2017 6:37:20 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	12/2/2017 6:37:20 AM
Acetone	ND	10		µg/L	1	12/2/2017 6:37:20 AM
Bromobenzene	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
Bromodichloromethane	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
Bromoform	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
Bromomethane	ND	3.0		µg/L	1	12/2/2017 6:37:20 AM
2-Butanone	ND	10		µg/L	1	12/2/2017 6:37:20 AM
Carbon disulfide	ND	10		µg/L	1	12/2/2017 6:37:20 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
Chlorobenzene	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
Chloroethane	ND	2.0		µg/L	1	12/2/2017 6:37:20 AM
Chloroform	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
Chloromethane	ND	3.0		µg/L	1	12/2/2017 6:37:20 AM
2-Chlorotoluene	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
4-Chlorotoluene	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711C79

Date Reported: 1/26/2018

CLIENT: Earth Con

Client Sample ID: Post-Treatment

Project: Earth Con Consultants Inc

Collection Date: 11/27/2017 10:15:00 AM

Lab ID: 1711C79-004

Matrix: AQUEOUS

Received Date: 11/28/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
cis-1,2-DCE	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/2/2017 6:37:20 AM
Dibromochloromethane	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
Dibromomethane	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	12/2/2017 6:37:20 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
2-Hexanone	ND	10		µg/L	1	12/2/2017 6:37:20 AM
Isopropylbenzene	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	12/2/2017 6:37:20 AM
Methylene Chloride	ND	3.0		µg/L	1	12/2/2017 6:37:20 AM
n-Butylbenzene	ND	3.0		µg/L	1	12/2/2017 6:37:20 AM
n-Propylbenzene	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
sec-Butylbenzene	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
Styrene	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
tert-Butylbenzene	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/2/2017 6:37:20 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
trans-1,2-DCE	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/2/2017 6:37:20 AM
Vinyl chloride	ND	1.0		µg/L	1	12/2/2017 6:37:20 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711C79

Date Reported: 1/26/2018

CLIENT: Earth Con

Client Sample ID: Post-Treatment

Project: Earth Con Consultants Inc

Collection Date: 11/27/2017 10:15:00 AM

Lab ID: 1711C79-004

Matrix: AQUEOUS

Received Date: 11/28/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Xylenes, Total	ND	1.5		µg/L	1	12/2/2017 6:37:20 AM
Surr: 1,2-Dichloroethane-d4	89.7	70-130		%Rec	1	12/2/2017 6:37:20 AM
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	12/2/2017 6:37:20 AM
Surr: Dibromofluoromethane	90.4	70-130		%Rec	1	12/2/2017 6:37:20 AM
Surr: Toluene-d8	97.9	70-130		%Rec	1	12/2/2017 6:37:20 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711C79

Date Reported: 1/26/2018

CLIENT: Earth Con

Client Sample ID: TRIP BLANK

Project: Earth Con Consultants Inc

Collection Date:

Lab ID: 1711C79-005

Matrix: TRIP BLANK

Received Date: 11/28/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Benzene	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
Toluene	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
Ethylbenzene	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
Naphthalene	ND	2.0		µg/L	1	12/2/2017 7:06:08 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	12/2/2017 7:06:08 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	12/2/2017 7:06:08 AM
Acetone	ND	10		µg/L	1	12/2/2017 7:06:08 AM
Bromobenzene	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
Bromodichloromethane	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
Bromoform	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
Bromomethane	ND	3.0		µg/L	1	12/2/2017 7:06:08 AM
2-Butanone	ND	10		µg/L	1	12/2/2017 7:06:08 AM
Carbon disulfide	ND	10		µg/L	1	12/2/2017 7:06:08 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
Chlorobenzene	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
Chloroethane	ND	2.0		µg/L	1	12/2/2017 7:06:08 AM
Chloroform	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
Chloromethane	ND	3.0		µg/L	1	12/2/2017 7:06:08 AM
2-Chlorotoluene	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
4-Chlorotoluene	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
cis-1,2-DCE	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/2/2017 7:06:08 AM
Dibromochloromethane	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
Dibromomethane	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	12/2/2017 7:06:08 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711C79

Date Reported: 1/26/2018

CLIENT: Earth Con

Client Sample ID: TRIP BLANK

Project: Earth Con Consultants Inc

Collection Date:

Lab ID: 1711C79-005

Matrix: TRIP BLANK

Received Date: 11/28/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
2-Hexanone	ND	10		µg/L	1	12/2/2017 7:06:08 AM
Isopropylbenzene	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	12/2/2017 7:06:08 AM
Methylene Chloride	ND	3.0		µg/L	1	12/2/2017 7:06:08 AM
n-Butylbenzene	ND	3.0		µg/L	1	12/2/2017 7:06:08 AM
n-Propylbenzene	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
sec-Butylbenzene	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
Styrene	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
tert-Butylbenzene	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/2/2017 7:06:08 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
trans-1,2-DCE	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/2/2017 7:06:08 AM
Vinyl chloride	ND	1.0		µg/L	1	12/2/2017 7:06:08 AM
Xylenes, Total	ND	1.5		µg/L	1	12/2/2017 7:06:08 AM
Surr: 1,2-Dichloroethane-d4	85.8	70-130		%Rec	1	12/2/2017 7:06:08 AM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	12/2/2017 7:06:08 AM
Surr: Dibromofluoromethane	88.1	70-130		%Rec	1	12/2/2017 7:06:08 AM
Surr: Toluene-d8	96.6	70-130		%Rec	1	12/2/2017 7:06:08 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1711C79

26-Jan-18

Client: Earth Con
Project: Earth Con Consultants Inc

Sample ID	MB-A		SampType: MBLK		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	PBW		Batch ID: A47541		RunNo: 47541					
Prep Date:			Analysis Date: 12/5/2017		SeqNo: 1518152		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	ND	1.0								

Sample ID	LCS-A		SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	LCSW		Batch ID: A47541		RunNo: 47541					
Prep Date:			Analysis Date: 12/5/2017		SeqNo: 1518156		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	46	1.0	50.00	0	91.1	85	115			

Sample ID	LLCS-A		SampType:	LCSLL		TestCode:	EPA Method 200.7: Dissolved Metals				
Client ID:	BatchQC		Batch ID:	A47541		RunNo:	47541				
Prep Date:			Analysis Date:	12/5/2017		SeqNo:	1518157	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Potassium	ND	1.0	0.5000	0	103	50	150				

Sample ID	1711C79-004CMS		SampType: MS		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	Post-Treatment		Batch ID: A47541		RunNo: 47541					
Prep Date:			Analysis Date: 12/5/2017		SeqNo: 1518190		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	47	1.0	50.00	1.781	90.5	70	130			

Sample ID	1711C79-004CMSD			SampType:	MSD		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	Post-Treatment		Batch ID:	A47541		RunNo:	47541				
Prep Date:			Analysis Date:	12/5/2017		SeqNo:	1518191		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Potassium	47	1.0	50.00	1.781	89.8	70	130	0.745	20		

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1711C79

26-Jan-18

Client: Earth Con
Project: Earth Con Consultants Inc

Sample ID MB	SampType: mblk		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R47367		RunNo: 47367							
Prep Date:	Analysis Date: 11/28/2017		SeqNo: 1512226		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P)	ND	0.50								
Sulfate	ND	0.50								

Sample ID LCS	SampType: lcs		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R47367		RunNo: 47367							
Prep Date:	Analysis Date: 11/28/2017		SeqNo: 1512227		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	96.4	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	93.7	90	110			
Bromide	2.4	0.10	2.500	0	96.0	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	100	90	110			
Phosphorus, Orthophosphate (As P)	4.7	0.50	5.000	0	94.8	90	110			
Sulfate	9.6	0.50	10.00	0	96.3	90	110			

Sample ID MB	SampType: mblk		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: A47526		RunNo: 47526							
Prep Date:	Analysis Date: 12/5/2017		SeqNo: 1517864		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID LCS	SampType: lcs		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: A47526		RunNo: 47526							
Prep Date:	Analysis Date: 12/5/2017		SeqNo: 1517865		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.5	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1711C79

26-Jan-18

Client: Earth Con
Project: Earth Con Consultants Inc

Sample ID RB	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles						
Client ID: PBW	Batch ID: BW47476			RunNo: 47476						
Prep Date:	Analysis Date: 12/1/2017			SeqNo: 1516103		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	17		20.00		84.6	72.5	140			

Sample ID 100NG BTEX LCS	SampType: LCS			TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSW	Batch ID: BW47476			RunNo: 47476						
Prep Date:	Analysis Date: 12/1/2017			SeqNo: 1516104		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	92.6	73.9	120			
Toluene	19	1.0	20.00	0	92.7	77.3	117			
Ethylbenzene	18	1.0	20.00	0	92.3	78.8	119			
Xylenes, Total	56	2.0	60.00	0	94.1	76.9	121			
Surr: 4-Bromofluorobenzene	17		20.00		86.6	72.5	140			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1711C79

26-Jan-18

Client: Earth Con

Project: Earth Con Consultants Inc

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	A47473	RunNo:	47473					
Prep Date:		Analysis Date:	12/1/2017	SeqNo:	1516313	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1711C79

26-Jan-18

Client: Earth Con

Project: Earth Con Consultants Inc

Sample ID	rb	SampType: MBLK				TestCode: EPA Method 8260B: VOLATILES				
Client ID:	PBW	Batch ID: A47473				RunNo: 47473				
Prep Date:		Analysis Date: 12/1/2017				SeqNo: 1516313	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.2		10.00		92.0	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		110	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.4	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID	100ng lcs	SampType: LCS				TestCode: EPA Method 8260B: VOLATILES				
Client ID:	LCSW	Batch ID: A47473				RunNo: 47473				
Prep Date:		Analysis Date: 12/1/2017				SeqNo: 1516314	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	90.0	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Chlorobenzene	20	1.0	20.00	0	99.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1711C79

26-Jan-18

Client: Earth Con
Project: Earth Con Consultants Inc

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	A47473	RunNo:	47473					
Prep Date:		Analysis Date:	12/1/2017	SeqNo:	1516314	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	20	1.0	20.00	0	99.3	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	92.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		91.5	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		110	70	130			
Surr: Dibromofluoromethane	9.2		10.00		91.9	70	130			
Surr: Toluene-d8	9.7		10.00		97.3	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: EARTH CON

Work Order Number: 1711C79

RcptNo: 1

Received By: Dennis Suazo 11/28/2017 9:30:00 AM

Completed By: Ashley Gallegos 11/28/2017 10:17:49 AM

Reviewed By: ENM 11/28/17

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? UPS

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:		Date:	
By Whom:		Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

18. Cooler Information

Cooler No.	Temp. $^{\circ}\text{C}$	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	0.8	Good	Yes			

Appendix E
Historical SVE System Table for Gasoline Range Organics

**APPENDIX E: Historical Summary of Vapor Sample Analyses
for the SVE System (Gasoline Range VOCs)
Transwestern Compressor Station No. 9 - Roswell, NM**

Sample ID	Date	Gasoline Range VOCs		Estimated Process Flow	Potential Emissions	< C5	C5-C6	C6-C7	C7-C8	C8-C9	C9-C10	C10-C11	C11-C12	C12-C14	C14+
		(ug/L)	(ppbv) ^(a)													(scfm)	(lb/hr)	(%)
West Baker Furnace															
West Baker Furnace	10/06/09	1,770	539	142	0.9	--	10.5	46.2	38.1	4.0	1.2	0.0	0.0	0.0	0.0
West Baker Furnace	08/10/11	3,200	974	147	1.8	--	--	--	--	--	--	--	--	--	--
West Baker Furnace	07/03/12	3,700	1,126	162	2.2	--	--	--	--	--	--	--	--	--	--
West Baker Furnace	10/05/12	1,400	426	162	0.8	--	--	--	--	--	--	--	--	--	--
West Baker Furnace	10/22/12	1,670	508	162	1.0	--	17.1	44.2	28.6	4.2	5.0	0.5	0.2	0.1	0.1
West Baker Furnace	01/29/13	1,130	344	160	0.7	--	20.3	44.9	25.9	3.9	4.6	0.3	0.0	0.1	0.0
West Baker Furnace	02/27/13	1,120	341	160	0.7	--	14.2	40.2	30.2	6.1	8.3	0.6	0.4	0.0	0.0
West Baker Furnace	03/29/13	694	211	160	0.4	--	14.8	42.0	29.5	8.1	5.1	0.2	0.1	0.2	0.0
West Baker Furnace	04/30/13	850	259	160	0.5	--	31.1	32.1	23.6	8.0	4.3	0.7	0.1	0.1	0.0
West Baker Furnace	05/16/13	5,610	1,707	160	3.4	--	33.5	31.4	26.8	5.8	2.0	0.4	0.1	0.0	0.0
West Baker Furnace	06/17/13	4,600	1,400	160	2.8	--	--	--	--	--	--	--	--	--	--
West Baker Furnace	07/17/13	4,680	1,424	160	2.8	--	28.6	30.3	30.3	6.9	3.5	0.3	0.1	0.0	0.0
West Baker Furnace	08/27/13	3,040	925	160	1.8	--	25.7	28.7	31.0	8.3	5.0	0.9	0.3	0.1	0.0
West Baker Furnace	09/25/13	2,280	694	160	1.4	--	25.4	29.5	24.8	10.0	7.5	1.9	0.8	0.1	0.0
West Baker Furnace	10/17/13	1,900	578	160	1.1	--	28.0	38.7	21.3	7.4	3.6	0.5	0.4	0.1	0.0
West Baker Furnace	11/22/13	2,100	639	160	1.3	--	31.9	35.5	23.4	5.9	3.0	0.1	0.1	0.1	0.0
West Baker Furnace	12/17/13	1,980	603	160	1.2	--	28.6	37.8	21.0	7.3	4.1	0.7	0.3	0.2	0.0
East Baker Furnace															
East Baker Furnace	10/06/09	2,010	612	216	1.6	--	15.4	49.3	31.4	2.9	1.0	0.0	0.0	0.0	0.0
East Baker Furnace	08/10/11	2,200	669	147	1.2	--	--	--	--	--	--	--	--	--	--
East Baker Furnace	07/03/12	2,100	639	159	1.3	--	--	--	--	--	--	--	--	--	--
East Baker Furnace	10/05/12	1,200	365	159	0.7	--	--	--	--	--	--	--	--	--	--
East Baker Furnace	10/22/12	1,780	542	160	1.1	--	15.3	41.0	29.6	5.8	7.1	0.9	0.1	0.1	0.1
East Baker Furnace	01/29/13	928	282	160	0.6	--	16.4	46.9	24.9	6.2	5.4	0.2	0.0	0.0	0.0
East Baker Furnace	02/27/13	860	262	160	0.5	--	15.2	43.2	30.0	6.2	5.2	0.2	0.0	0.0	0.0
East Baker Furnace	03/29/13	555	169	160	0.3	--	16.6	47.6	24.4	6.1	4.5	0.5	0.2	0.1	0.0
East Baker Furnace	04/30/13	772	235	160	0.5	--	27.7	28.9	29.6	8.0	4.6	0.9	0.2	0.1	0.0
East Baker Furnace	05/16/13	5,350	1,628	160	3.2	--	31.4	30.2	27.7	6.9	2.7	0.8	0.2	0.1	0.0
East Baker Furnace	06/17/13	4,700	1,430	160	2.8	--	--	--	--	--	--	--	--	--	--
East Baker Furnace	07/17/13	5,780	1,759	160	3.5	--	29.5	29.8	29.1	7.0	3.6	0.8	0.2	0.0	0.0
East Baker Furnace	08/27/13	3,040	925	160	1.8	--	25.6	28.7	31.0	8.5	5.1	0.9	0.2	0.0	0.0
East Baker Furnace	09/25/13	2,040	621	160	1.2	--	25.9	30.1	25.4	9.5	7.4	1.2	0.4	0.1	0.0
East Baker Furnace	10/17/13	1,650	502	160	1.0	--	30.5	32.8	22.8	7.9	4.6	0.6	0.4	0.2	0.2
East Baker Furnace	11/22/13	1,960	596	160	1.2	--	29.6	32.5	24.2	7.9	4.4	0.7	0.4	0.3	0.0
East Baker Furnace	12/17/13	1,770	539	160	1.1	--	31.4	33.2	22.8	7.2	4.2	0.6	0.3	0.3	0.0

(a) Conversion Factor:

P = 1.00 atm, MW = 79 g/mole, R = 0.08205 L*atm/(K*mole), T = 293°K

C ppbv = C ug/L * ((R * T)/(MW*P))

C ppbv = C ug/L * 0.3043

**APPENDIX E: Historical SVE System Potential Emissions Estimate for
Gasoline Range Organics
Transwestern Compressor Station No. 9 - Roswell, NM**

Date	West Unit				East Unit				Total				
	Total GRO C(ug/L)	Flow Rate Q(scfm)	Potential Emissions M(lb/hr)	Projected TPY M(tons/yr)	Total GRO C(ug/L)	Flow Rate Q(scfm)	Potential Emissions M(lb/hr)	Projected TPY M(tons/yr)	Flow Rate Q(scfm)	Potential Emissions M(lb/hr)	Projected TPY M(tons/yr)	Projected GPY M(gal/yr)	Projected PPY M(lbs/yr)
05/21/03	3220	128	1.5	6.8	1850	175	1.2	5.3	303	2.8	12.1	3810	24147
06/04/03	3660	127	1.7	7.6	3450	142	1.8	8.0	269	3.6	15.7	4942	31326
12/15/04	979	157	0.6	2.5	2800	215	2.3	9.9	372	2.8	12.4	3912	24796
07/15/05	2120	153	1.2	5.3	4140	184	2.9	12.5	337	4.1	17.8	5622	35638
05/01/06	2200	160	1.3	5.8	4470	198	3.3	14.5	358	4.6	20.3	6404	40590
09/13/06	990	165	0.6	2.7	3140	210	2.5	10.8	375	3.1	13.5	4259	26996
06/22/07	826	161	0.5	2.2	1300	206	1.0	4.4	367	1.5	6.6	2075	13150
07/02/08	728	150	0.4	1.8	1420	193	1.0	4.5	343	1.4	6.3	1984	12575
11/05/08	5840	140	3.1	13.4	4580	177	3.0	13.3	317	6.1	26.7	8429	53426
10/06/09	1770	142	0.9	4.1	2010	216	1.6	7.1	358	2.6	11.2	3549	22492
08/10/11	3200	147	1.8	7.7	2200	147	1.2	5.3	294	3.0	13.0	4109	26046
07/03/12	3700	162	2.2	9.8	2100	159	1.3	5.5	321	3.5	15.3	4831	30623
10/05/12	1400	162	0.8	3.7	1200	159	0.7	3.1	321	1.6	6.9	2162	13702
10/22/12	1670	162	1.0	4.4	1780	160	1.1	4.7	322	2.1	9.1	2875	18222
01/29/13	1130	160	0.7	3.0	928	160	0.6	2.4	320	1.2	5.4	1705	10804
02/27/13	1120	160	0.7	2.9	860	160	0.5	2.3	320	1.2	5.2	1640	10395
03/29/13	694	160	0.4	1.8	555	160	0.3	1.5	320	0.7	3.3	1035	6557
04/30/13	850	160	0.5	2.2	772	160	0.5	2.0	320	1.0	4.3	1343	8515
05/16/13	5610	160	3.4	14.7	5350	160	3.2	14.0	320	6.6	28.8	9078	57539
06/17/13	4600	160	2.8	12.1	4700	160	2.8	12.3	320	5.6	24.4	7703	48824
07/17/13	4680	160	2.8	12.3	5780	160	3.5	15.2	320	6.3	27.5	8664	54914
08/27/13	3040	160	1.8	8.0	3040	160	1.8	8.0	320	3.6	16.0	5036	31919
09/25/13	2280	160	1.4	6.0	2040	160	1.2	5.4	320	2.6	11.3	3578	22679
10/17/13	1900	160	1.1	5.0	1650	160	1.0	4.3	320	2.1	9.3	2940	18637
11/22/13	2100	160	1.3	5.5	1960	160	1.2	5.1	320	2.4	10.7	3363	21315
12/17/13	1980	160	1.2	5.2	1770	160	1.1	4.6	320	2.2	9.8	3106	19687

Notes:

- 1) Concentrations based on Hall Lab analysis of SVE system samples

Appendix F
SVE System Optimization Study Data

APPENDIX F: Extraction Well Observations

Optimization Study - Circuit A

Roswell Compressor Station
Transwestern Pipeline Company, LLC
Roswell, Chaves County, New Mexico
EarthCon Project No. 02.20180005.00
Manifold @ Circuit "A" Building

Sample Location	Date	Time	Blower Air Flowrate (scfm)	Blower Vacuum ("Hg)	Manifold Vacuum ("Hg)	PID Readings (ppmV)
Blower and Manifold						
E. Baker Blower	2/2/2017	10:57	152	1.5	--	13.4
	2/15/2017	9:03	159	5	--	65.2
	2/25/2017	10:35	153	5.5	--	212.0
	3/20/2017	11:05	159	4.5	--	51.9
W. Baker Blower	2/2/2017	10:56	173	2	--	73.1
Building A Composite Mainifold*	2/2/2017	11:06	--	--	2	4
	2/15/2017	9:18	--	--	4.75	127.2
	2/25/2017	9:51	--	--	5.25	189.2
	3/20/2017	11:32	--	--	4	149.3
Extraction Well at the Manifold						
MPE-7	2/2/2017	11:25	--	--	2	4.4
	2/15/2017	9:25	--	--	4.25	2.2
	2/25/2017	9:20	--	--	4.75	73.2
	3/20/2017	11:25	--	--	3.5	77.5
MPE-8	2/2/2017	11:25	--	--	1	2.1
	2/15/2017	9:34	--	--	4.75	36.5
	2/25/2017	9:21	--	--	4.5	118.8
	3/20/2017	11:27	--	--	3.5	57.7
MPE-9	2/2/2017	11:25	--	--	0.5	1.6
	2/15/2017	9:42	--	--	4.5	85.9
	2/25/2017	9:22	--	--	5	176.7
	3/20/2017	11:29	--	--	3.5	93.0
MPE-10	2/2/2017	11:25	--	--	1	1
	2/15/2017	9:45	--	--	4	375.4
	2/25/2017	9:24	--	--	5	406.2
	3/20/2017	11:30	--	--	4	159.2
MPE-11	2/2/2017	11:25	--	--	< 1	45.9
	2/15/2017	9:50	--	--	4.5	237.3
	2/25/2017	9:25	--	--	5.5	302.5
	3/20/2017	11:31	--	--	4	149.3

Notes:

scfm= standard cubic feet per minute

"Hg= inches of mercury

ppmV= parts per million per volume

PID = Photoionization detector

* = Measurement at manifold

-- = No recorded data

1. Data was not collected from the W. Baker Blower on February 15th and 25th and March 20th, 2017 because the W. Baker Furnace was under repair.

Prepared by: EJC 2/9/18

Checked by: SSD 2/9/18

**APPENDIX F: Well Head PID Reading Observations
Optimization Study - Circuit A**

Roswell Compressor Station
Transwestern Pipeline Company, LLC
Roswell, Chaves County, New Mexico
EarthCon Project No. 02.20180005.00

PID Reading at Well Head (ppmV)					
Date	Well ID				
	MPE-7	MPE-8	MPE-9	MPE-10	MPE-11
2/2/2017	7.9	1.6	18	385.6	33.4
2/15/2017	4.7	16.8	49.3	201.7	72.4
2/25/2017	10.7	31.2	95.9	274.7	60.9
3/20/2017	5.6	6.4	63.4	117.8	81.6

Notes:

ppmV = parts per million per volume
PID = Photoionization Detector

Prepared by: EJC 2/9/18

Checked by: SSD 2/9/18

**APPENDIX F: Well Head Vacuum Influence Observations
Optimization Study - Circuit A**

Roswell Compressor Station
Transwestern Pipeline Company, LLC
Roswell, Chaves County, New Mexico
EarthCon Project No. 02.20180005.00

Vacuum Observations at Well Head ("H ₂ O)					
Date	Well ID				
	MPE-7	MPE-8	MPE-9	MPE-10	MPE-11
2/2/2017	14.0	12.0	2.0	14.0	12.0
2/15/2017	53.6	59.6	46.8	52.0	58.3
2/25/2017	67.4	67.6	47.1	58.8	62.8
3/20/2017	49.1	47.2	40.7	42.8	48.7

Notes:

1. Measurements are in inches of water ("H₂O)

Prepared by: EJC 2/9/18

Checked by: SSD 2/9/18

**APPENDIX F: Groundwater Drawdown Observations
Optimization Study - Circuit A**

Roswell Compressor Station
Transwestern Pipeline Company, LLC
Roswell, Chaves County, New Mexico
EarthCon Project No. 02.20180005.00

Depth To Water and Product Readings (ft.)										
Date	Well ID									
	MPE-7		MPE-8		MPE-9		MPE-10		MPE-11	
	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)
2/2/2017	0.00	68.15	0.00	66.61	0.00	68.77	66.98	67.95	0.00	64.29
2/15/2017	0.00	67.50	0.00	64.57	0.00	66.90	64.48	66.20	0.00	61.40
2/25/2017	0.00	65.67	0.00	63.55	0.00	66.68	64.40	66.05	0.00	60.84
3/20/2017	0.00	66.15	0.00	64.15	0.00	66.95	64.50	66.65	0.00	61.65

Notes:

1. Depth to water readings based from top of well casing.
2. ft - feet

Prepared by: EJC 2/9/18
Checked by: SSD 2/9/18

APPENDIX F: Extraction Well Observations

Optimization Study - Circuit B

Roswell Compressor Station
Transwestern Pipeline Company, LLC
Roswell, Chaves County, New Mexico
EarthCon Project No. 02.20180005.00
Manifold @ Circuit "B" Building

Sample Location	Date	Blower Air Flowrate (scfm)	Blower Vacuum ("Hg)	Manifold Vacuum ("Hg)	PID Readings (ppmV)
Blower and Manifold					
E. Baker Blower	6/13/2017	158	3.75	--	75
	7/14/2017	153	4	--	129.9
	7/28/2017	153	4	--	130.7
	8/2/2017	160	3.25	--	--
	8/7/2017	159	3.5	--	190.8
	9/9/2017	186	6	--	286.8
W. Baker Blower	6/13/2017	159	3.75	--	97.4
	7/14/2017	158	4.5	--	166.4
	7/28/2017	157	4.25	--	171.1
	8/2/2017	159.8	4	--	--
	8/7/2017	158.1	4	--	265.1
	9/9/2017	158	6	--	277.3
Building B Composite Mainifold (Inside)*	6/13/2017	--	--	3.5	114.7
	7/14/2017	--	--	3.75	171
	7/28/2017	--	--	3.5	147.6
	8/2/2017	--	--	4.25	--
	8/7/2017	--	--	5	386.5
	9/9/2017	--	--	--	356.6
Extraction Well at the Manifold					
MPE-12	6/13/2017	--	--	3.25	578.5
	7/14/2017	--	--	3	538.6
	7/28/2017	--	--	2.8	672
	8/7/2017	--	--	5	733.9
	9/9/2017	--	--	5	593.1
MPE-13	6/13/2017	--	--	3.25	157.4
	7/14/2017	--	--	3.5	366.1
	7/28/2017	--	--	2.75	282.5
	8/7/2017	--	--	5	389.1
	9/9/2017	--	--	6	103.4
MPE-14	6/13/2017	--	--	3.5	278.8
	7/14/2017	--	--	3.5	299.9
	7/28/2017	--	--	2.75	364.1
	8/7/2017	--	--	5.25	564.4
	9/9/2017	--	--	4.75	309.2
MPE-15	6/13/2017	--	--	3.5	38.8
	7/14/2017	--	--	3.5	109.8
	7/28/2017	--	--	2.75	107.5
	8/7/2017	--	--	--	--
	9/9/2017	--	--	--	--
MPE-16	6/13/2017	--	--	3.25	380.3
	7/14/2017	--	--	3.5	511.5
	7/28/2017	--	--	3.75	627.1
	8/7/2017	--	--	5	789.9
	9/9/2017	--	--	5.25	481.9
MPE-17	6/13/2017	--	--	3.25	668.6
	7/14/2017	--	--	3.5	530.4
	7/28/2017	--	--	3	787.7
	8/7/2017	--	--	5	1215.0
	9/9/2017	--	--	5.75	122.6
MPE-18	6/13/2017	--	--	3	19.1
	7/14/2017	--	--	3.5	68.1
	7/28/2017	--	--	3	65.6
	8/7/2017	--	--	--	--
	9/9/2017	--	--	--	--
MPE-19	6/13/2017	--	--	3.25	95.4
	7/14/2017	--	--	3.5	319.4
	7/28/2017	--	--	3.25	306.1
	8/7/2017	--	--	5	169.1
	9/9/2017	--	--	5.5	386.5
MPE-20	6/13/2017	--	--	3	410.9
	7/14/2017	--	--	3.5	319.1
	7/28/2017	--	--	3.5	404.6
	8/7/2017	--	--	5	665.0
	9/9/2017	--	--	6	605.2
MPE-21	6/13/2017	--	--	3	24.4
	7/14/2017	--	--	3.5	32.3
	7/28/2017	--	--	3.25	34.5
	8/7/2017	--	--	4.25	53.1
	9/9/2017	--	--	4	58.6
MPE-38	6/13/2017	--	--	3	86.1
	7/14/2017	--	--	3.25	133.9
	7/28/2017	--	--	2.75	130.6
	8/7/2017	--	--	5	92.7
	9/9/2017	--	--	4.75	68.2

Notes:
Vac= Vacuum
scfm= standard cubic feet per minute
"Hg= inches of mercury
ppmV= parts per million per volume
PID = Photoionization detector
* = Measurement at manifold
-- = No recorded data

Prepared by: EJC 2/9/18
Checked by: SSD 2/9/18

APPENDIX F: Well Head PID Reading Observations Optimization Study - Circuit B

Roswell Compressor Station
Transwestern Pipeline Company, LLC
Roswell, Chaves County, New Mexico
EarthCon Project No. 02.20180005.00

PID Reading at Well Head (ppmV)										
Date	Well ID									
	MPE-12	MPE-13	MPE-14	MPE-15	MPE-16	MPE-17	MPE-18	MPE-19	MPE-20	MPE-21
7/14/2017	169.1	61.5	134.9	48.4	131.9	103.1	5.8	34.8	198.4	124
7/28/2017	123.6	--	--	44.2	270.1	656.9	13	28.8	337	18.1
8/7/2017	152.9	9.7	201	62.3	504.1	954	18.3	46.6	564.7	47.6
9/9/2017	515.9	31.8	226.2	62.3	446.7	954	18.3	30.8	564.7	47.6

Notes:

ppmV= parts per million per volume
-- = data not collected

Prepared by: EJC 2/9/18

Checked by: SSD 2/9/18

**APPENDIX F: Vacuum Influence Observations
Optimization Study - Circuit B**

Roswell Compressor Station
Transwestern Pipeline Company, LLC
Roswell, Chaves County, New Mexico
EarthCon Project No. 02.20180005.00

Vacuum Observations at Well Head ("H ₂ O)										
Date	Well ID									
	MPE-12	MPE-13	MPE-14	MPE-15	MPE-16	MPE-17	MPE-18	MPE-19	MPE-20	MPE-21
7/14/2017	41.8	41.6	35.6	41.6	14.8	41.0	30.8	42.0	42.8	21.7
7/28/2017	42.9	37.7	35.0	39.9	45.7	40.0	29.7	39.9	40.4	26.1
8/7/2017	61.2	53.3	46.2	0.0	64.2	64.3	0.0	63.5	64.3	34.6
9/9/2017	64.9	67.0	56.4	0.0	70.5	71.9	0.0	70.2	71.4	37.9

Notes:

1. Measurements are in inches of water ("H₂O)

Prepared by: EJC 2/9/18

Checked by: SSD 2/9/18

APPENDIX F: Groundwater Drawdown Observations
Optimization Study - Circuit B

Roswell Compressor Station
Transwestern Pipeline Company, LLC
Roswell, Chaves County, New Mexico
EarthCon Project No. 02.20180005.00

Depth To Water and Product Readings (ft.)

Date	Well ID																									
	MPE-12		MPE-13		MPE-14		MPE-15		MPE-16		MPE-17		MPE-18		MPE-19		MPE-20		MPE-21		MPE-38		MW-21		MW-16	
	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)
7/14/2017	63.72	63.90	0.00	63.95	0.00	71.40	0.00	62.12	71.94	71.95	0.00	71.15	0.00	62.28	0.00	63.95	0.00	70.20	0.00	65.99	71.19	71.20	0.00	67.38	68.72	69.11
7/28/2017	63.58	64.40	0.00	64.25	0.00	70.45	0.00	62.03	70.60	70.61	0.00	71.11	0.00	62.28	0.00	64.17	0.00	71.99	0.00	65.99	0.00	71.22	0.00	67.28	69.11	69.63
8/7/2017	0.00	62.59	0.00	66.04	0.00	71.75	0.00	64.17	0.00	71.85	0.00	71.12	0.00	64.21	0.00	62.26	0.00	70.27	0.00	66.08	0.00	71.10	0.00	67.17	69.07	69.61

- Notes:
- 1. Depth to water readings based from top of well casing.
 - 2. ft - feet
 - 3. DTW = depth to water
 - 4. DTP = depth to phase separated hydrocarbons (PSH)

Prepared by: EJC 2/9/18
Checked by: SSD 2/9/18

APPENDIX F: Extraction Well Observations

Optimization Study - Circuit C

Roswell Compressor Station
Transwestern Pipeline Company, LLC
Roswell, Chaves County, New Mexico
EarthCon Project No. 02.20180005.00
Manifold @ Circuit "C" Building

Sample Location	Date	Blower Air Flowrate (scfm)	Blower Vacuum ("Hg)	Manifold Vacuum ("Hg)	PID Readings (ppmV)
Blower and Manifold					
E. Baker Blower	1/18/2018	141	9.0	--	--
	2/2/2018	141	10.0	--	338.3
W. Baker Blower	1/18/2018	130.2	9.0	--	--
	2/2/2018	123	10.0	--	363
Building C Composite Mainifold*	1/18/2018	--	--	9.75	--
	2/2/2018	--	--	9.5	--
Extraction Well at the Manifold					
MPE-30	1/18/2018	--	--	9	326.7
	2/2/2018	--	--	11	390
MPE-31	1/18/2018	--	--	9.25	717.5
	2/2/2018	--	--	10.25	365.9
MPE-32	1/18/2018	--	--	9	347.3
	2/2/2018	--	--	9.5	166
MPE-33	1/18/2018	--	--	9.25	56.5
	2/2/2018	--	--	11	31.6
MPE-34	1/18/2018	--	--	9.5	83.6
	2/2/2018	--	--	10.5	57.3
MPE-35	1/18/2018	--	--	9.5	663.5
	2/2/2018	--	--	10.5	144.8
MPE-36	1/18/2018	--	--	10	58.7
	2/2/2018	--	--	10.75	43
MPE-37	1/18/2018	--	--	8.5	22.8
	2/2/2018	--	--	11	25.9
MPE-39	1/18/2018	--	--	9.75	416.4
	2/2/2018	--	--	10.5	570.1
MPE-40	1/18/2018	--	--	10	492.6
	2/2/2018	--	--	10.5	627.2

Notes:

scfm= standard cubic feet per minute
"Hg= inches of mercury
ppmV= parts per million per volume
PID = Photoionization detector
* = Measurement at manifold
-- = No recorded data

Prepared by: EJC 2/9/18
Checked by: SSD 2/9/18

**APPENDIX F: Well PID Reading Observations
Optimization Study - Circuit C**

Roswell Compressor Station
Transwestern Pipeline Company, LLC
Roswell, Chaves County, New Mexico
EarthCon Project No. 02.20180005.00

PID Reading at Well Head (ppmV)											
Date	Well ID										
	MPE-32	MPE-33	MPE-35	MPE-36	MPE-37	MPE-41	MPE-39	MPE-40	MPE-30	MPE-24	MPE-31
1/18/2018	27.6	1.3	248.1	1.1	0.7	N/A	239	382.1	0	23.2	23.2
2/2/2018	202.1	10.2	68	6.5	2	N/A	40.1	62.2	85.5	21.7	274.8

Notes:

ppmV = parts per million per volume
N/A = could not retrieve data

Prepared by: EJC 2/8/18

Checked by: SSD 2/9/18

APPENDIX F: Vacuum Influence Observations Optimization Study - Circuit C

Roswell Compressor Station
Transwestern Pipeline Company, LLC
Roswell, Chaves County, New Mexico
EarthCon Project No. 02.20180005.00

Vacuum Observations at Well head ("H ₂ O)														
Date	Well ID													
	MPE-32	MPE-33	MPE-35	MPE-36	MPE-37	MPE-41	MW-12	MW-20	MPE-39	MPE-40	MPE-30	MPE-34	MW-2	MW-31
1/18/2018	125.2	76.4	117.0	124.6	99.0	0.0	0.0	0.0	129.6	120.0	0.0	95.0	3.8	77.7
2/2/2018	141.2	78.8	155.8	122.7	110.5	0.0	2.0	0.0	155.0	115.0	134.2	88.7	0.0	102.7

Notes:

1. Measurements are in inches of water ("H₂O)

Prepared by: EJC 2/9/18

Checked by: SSD 2/9/18

APPENDIX F: Groundwater Drawdown Observations
Optimization Study - Circuit C

Roswell Compressor Station
Transwestern Pipeline Company, LLC
Roswell, Chaves County, New Mexico
EarthCon Project No. 02.20180005.00

Depth To Water and Product Readings (ft.)																						
Date	Well ID																					
	MPE-32		MPE-41		MPE-33		MPE-36		MPE-37		MPE-35		MPE-39		MPE-40		MPE-30		MPE-34		MPE-31	
	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)
1/18/2018	0.00	57.30	57.60	62.60	0.00	53.00	0.00	57.50	0.00	46.45	51.40	56.55	0.00	54.80	0.00	57.30	0.00	69.35	0.00	60.90	0.00	58.95
2/2/2018	0.00	56.20	--	--	0.00	52.00	0.00	48.80	0.00	46.10	0.00	56.40	0.00	56.50	0.00	59.00	0.00	60.30	0.00	49.70	0.00	58.40

Notes:

1. Depth to water readings based from top of well casing.
2. ft = feet
3. DTW = Depth to Water
4. DTP = Depth to Phase Separated Hydrocarbons (PSH)
"--" = No detection

Prepared by: EJC 2/9/18
Checked by: SSD 2/9/18

APPENDIX F: Extraction Well Observations
Optimization Study - Circuit D

Roswell Compressor Station
Transwestern Pipeline Company, LLC
Roswell, Chaves County, New Mexico
EarthCon Project No. 02.20180005.00
Manifold @ Circuit "D" Building

Extraction Wells	Date	Time	Blower Air Flowrate (scfm)	Blower Vacuum ("Hg)	Manifold Vacuum ("Hg)	PID Readings (ppmV)
Blower and Manifold						
E. Baker Blower	10/23/2017	10:30	153	5.5	--	184.4
	11/6/2017	0:00	151	5.5	--	250.5
W. Baker Blower	10/23/2017	10:30	147	6	--	235.5
	11/6/2017	0:00	147	6	--	267
Building D Composite Mainifold	10/23/2017	10:45	--	4.5	--	--
	11/6/2017	0:00	--	4.5	--	--
Extraction Well at the Manifold						
MPE-22	10/23/2017	10:30	--	--	5	243.9
	11/6/2017	10:23	--	--	4.5	--
MPE-23	10/23/2017	10:30	--	--	5.5	400.5
	11/6/2017	10:32	--	--	5	909.1
MPE-24	10/23/2017	10:30	--	--	5	870.7
	11/6/2017	10:32	--	--	5.5	1980.0
MPE-25	10/23/2017	10:30	--	--	5.5	211.2
	11/6/2017	10:38	--	--	5.5	220.5
MPE-26	10/23/2017	10:30	--	--	5.5	565.6
	11/6/2017	10:42	--	--	5.5	1634.0
MPE-27	10/23/2017	10:30	--	--	4.5	457.1
	11/6/2017	10:45	--	--	5.5	987.5
MPE-28	10/23/2017	10:30	--	--	5	813.1
	11/6/2017	10:48	--	--	5.75	1600.0
MPE-29	10/23/2017	10:30	--	--	1	--
	11/6/2017	0:00	--	--	0.5	--
MPE-41	10/23/2017	10:30	--	--	5	511.6
	11/6/2017	0:00	--	--	5.5	514.6

Notes:

scfm = standard cubic feet per minute
"Hg = inches of mercury
ppmV = parts per million per volume
PID = photoionization detector
* = measurement at manifold
-- = no recorded data

Prepared by: EJC 2/9/18

Checked by: SSD 2/9/18

**APPENDIX F: Well PID Reading Observations
Optimization Study - Circuit D**

Roswell Compressor Station
Transwestern Pipeline Company, LLC
Roswell, Chaves County, New Mexico
EarthCon Project No. 02.20180005.00

PID Reading at Well Head (ppmV)									
Date	Well ID								
	MPE-41	MPE-24	MPE-23	MPE-22	MPE-25	MPE-29	MPE-26	MPE-27	MPE-28
10/23/2017	77.1	1278	402.4	76.1	169.3	19.5	454.6	172.2	515.2
11/6/2017	26.9	982.6	535.9	149.5	159.3	36.6	628.5	221	678.5

Notes:

ppmV= parts per million per volume

Prepared by: EJC 2/9/18

Checked by: SSD 2/9/18

APPENDIX F: Vacuum Influence Observations
Optimization Study - Circuit D

Roswell Compressor Station
Transwestern Pipeline Company, LLC
Roswell, Chaves County, New Mexico
EarthCon Project No. 02.20180005.00

Vacuum Observations at Well Head																				
Date	Well ID																			
	MPE-41	MPE-24	MPE-39	MPE-40	MPE-23	MPE-22	MPE-25	MPE-29	MPE-26	MPE-27	MPE-28	MPE-31	MPE-30	MW-2	MPE-34	MW-11	MW-10	MW-3	MW-13	MW-18
10/23/2017	63.3	68.30	0.00	0.0	63.50	6.00	52.10	0.0	68.40	62.00	68.80	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00
11/6/2017	54.0	71.5	0.0	0.0	66.80	9.00	65.00	0.00	69.40	65.80	56.40	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.0	0.00

Notes:
1. Measurements are in inches of water ("H₂O)

Prepared by: EJC 2/9/18
Checked by: SSD 2/9/18

APPENDIX F: Groundwater Drawdown Observations
Optimization Study - Circuit D

Roswell Compressor Station
Transwestern Pipeline Company, LLC
Roswell, Chaves County, New Mexico
EarthCon Project No. 02.20180005.00

Depth To Water and Product Readings (ft)																				
Date	Well ID																			
	MPE-41		MPE-24		MPE-23		MPE-22		MPE-25		MPE-29		MPE-26		MPE-27		MPE-28		MPE-40	
	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)	DTP (ft)	DTW (ft)
10/23/2017	0.00	68.95	0.00	70.99	59.55	64.25	0.00	68.75	0.00	64.83	0.00	69.58	0.00	62.75	0.00	74.98	0.00	54.82	--	--
11/6/2017	0.00	71.05	0.00	71.71	0.00	72.45	0.00	68.68	0.00	65.10	0.00	69.75	0.00	62.57	0.00	75.10	0.00	56.80	63.72	70.58

- Notes:
- 1. Depth to water readings based from top of well casing.
 - 2. ft = feet
 - 3. -- = DTW and DTP was not recorded for extraction wells due to recovery lines to pump.
 - 4. DTW = depth to Water
 - 5. DTP = depth to phase separated hydrocarbons (PSH)

Prepared by: EJC 2/9/18
Checked by: SSD 2/9/18

Appendix G
Plume Analytics™ Presentation
(Included on CD)