Illinois Environmental Protection Agency

Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

RCRA FACILITY GROUNDWATER, LEACHATE AND GAS REPORTING FORM

This form must be used as a cover sheet for the notices and reports, identified below as required by: (1) a facility's RCRA interim status closure plan; (2) the RCRA interim status regulations; or (3) a facility's RCRA permit. All reports must be submitted to the Illinois EPA's Bureau of Land Permit Section. This form is for use by Hazardous Waste facilities only. Reporting for Solid Waste facilities should be submitted on a separate form. All reports submitted to the Illinois EPA's Bureau of Land Permit Section must contain an original, plus a minimum of two copies.

Note: This form is not to be used with permit or closure plan modification requests. The facility's approved permit or closure plan will state whether the document you are submitting is required as a report or a modification request.

Facility Name: Equilon Enterprises LLC dba Shell Oil Products US

Facility Address: 900 South Central Ave., Roxana, IL 62048

Site ID #: 1191150002 Fed ID #: ILD 080 012 305

Check the appropriate heading. Only one heading may be checked for each corresponding submittal. Check the appropriate sub-heading, where applicable. Attach the original and all copies behind this form.

☐ LPC-160 Forms

Groundwater	Leachate
___ Quarterly - Enter: 1, 2, 3, or 4	___ Quarterly - Enter: 1, 2, 3, or 4
☐ Semi-Annual	☐ Semi-Annual
☐ Annual	☐ Annual
☐ Biennial	☐ Biennial

☑ Groundwater Data (without LPC-160 Forms)

4 Quarterly - Enter: 1, 2, 3, or 4 ☐ Annual ☐ Semi-Annual ☐ Biennial

☐ Well Construction Information

- ☐ Well Construction Forms, Boring Logs and/or Abandonment Forms
- ☐ Well Survey Data (e.g., Stick-up Elevation Data)

☐ Notice of Statistically Significant Evidence of Groundwater Contamination (35 Ill. Adm. Code 724.198)

☐ Notice of Exceedence of Groundwater Concentration Limit (35 Ill. Adm. Code 724.199(h))

☐ Notice of Alternate Source or Error in Sampling Analysis or Evaluation of Groundwater (35 Ill. Adm. Code 724.199(i))

☐ Gas Monitoring Reports

☑ Other (identify)

Copies of this submittal sent separately directly to Amy Butler and Gina Search with IEPA.

AECOM
100 N. Broadway, 20th Floor
St. Louis, MO 63102
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314 429 0100 tel
314 429 0462 fax

January 10, 2019

Mr. Theodore J. Dragovich, PE
Acting Manager, Permit Section
Illinois Environmental Protection Agency
Bureau of Land
1021 North Grand Avenue East
Springfield, Illinois 62794

Groundwater Monitoring Report – 4th Quarter 2018
Roxana, Illinois
1191150002 – Madison County
Equilon Enterprises LLC d/b/a Shell Oil Products US
Log No. B-43R-CA-21

Dear Mr. Dragovich:

On behalf of Shell Oil Products US (SOPUS), AECOM is submitting the enclosed referenced report and RCRA Facility Groundwater, Leachate and Gas Reporting Form for your review. This sampling was required by Condition 7 of the Agency's letter dated August 5, 2010.

Copies of this submittal are being sent separately directly to Amy Butler and Gina Search with Illinois Environmental Protection Agency (IEPA).

If you have any questions during your review, please contact Kevin Dyer, SOPUS Senior Principal Program Manager, at kevin.dyer@shell.com (618/288-7237), or Bob Billman at bob.billman@aecom.com (314/743-4108).

Sincerely,

AECOM, on behalf of Shell Oil Products US

Melissa Remiger
Environmental Scientist

Robert E. Mooshegian, STS
Senior Program Manager

Enclosures: 4th Quarter 2018 Report, Roxana Interim Groundwater Monitoring Program
RCRA Facility Groundwater, Leachate and Gas Reporting Form
(Original plus 1 copy)

cc: Kevin Dyer, SOPUS
Thomas Morgan, Phillips 66
Amy Butler, IEPA, Springfield
Gina Search, IEPA, Collinsville
Lori Littrell, Atlantic Richfield Company
Shannon Haney, Greensfelder, Hemker & Gale P.C.
Repositories –Roxana Public Library, website

AECOM

4th Quarter 2018 Report

Roxana Interim Groundwater Monitoring Program

Prepared for:
Equilon Enterprises LLC dba Shell Oil Products US
Roxana, Illinois

Project Number: 60527968
January 2019

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1 Introduction

AECOM Technical Services, Inc. (AECOM) is submitting this report on behalf of Equilon Enterprises LLC d/b/a Shell Oil Products US (SOPUS) for the 4th Quarter 2018 (4Q18) groundwater monitoring well gauging and sampling conducted in the Village of Roxana, Illinois (**Figure 1**). The study area within the Village of Roxana (Village) is generally bounded by the alley north of First Street, Illinois Route 111, the West Fenceline of the WRB Refining, LP (WRB) Wood River Refinery (WRR), and the Roxana Public Works Yard. Some groundwater monitoring wells within the WRR were also sampled as part of this event; this was conducted in cooperation with WRB/Phillips 66 (P66). For purposes of presentation in this report only, the combined area is collectively referred to as the "Investigation Area."

In an August 5, 2010 letter from the Illinois Environmental Protection Agency (IEPA) to SOPUS (IEPA, 2010a), IEPA requested various site characterization and monitoring activities, along with initiation of the Interim Groundwater Monitoring Program. This program began in 4th Quarter 2010 (4Q10), and the first report was submitted on January 14, 2011. On March 3, 2011, a conference call was held among representatives of SOPUS, IEPA, and URS Corporation (URS) to discuss the groundwater monitoring program and IEPA's general comments on the 4Q10 report. Subsequent modifications were incorporated during the 1st Quarter 2011 (1Q11) and 2nd Quarter 2011 (2Q11) Interim Groundwater Monitoring Program. Additional items and comments regarding the Interim Groundwater Monitoring Program were presented by IEPA in June 16, 2011 (IEPA, 2011a) and August 31, 2011 (IEPA, 2011b) letters. These items and comments were addressed in the 3rd Quarter 2011 (3Q11) and 4th Quarter 2011 (4Q11) reports.

In a March 14, 2012 letter (CA-24) from IEPA to SOPUS (IEPA, 2012a), IEPA requested groundwater piezometer ROST-3-PZ and groundwater monitoring well ROST-4-PZ(C) be added to the program. These monitoring locations were added to the program in 2nd Quarter 2012 (2Q12).

In a second letter (CA-25), dated March 14, 2012, from IEPA to SOPUS (IEPA, 2012b), IEPA requested that perched groundwater be evaluated at the following existing groundwater monitoring piezometers: P-60-12S, P-60-13S, ROST-5-PZ, ROST-7-PZ, ROST-10-PZ, and ROST-21-PZ. These perched groundwater monitoring piezometers were incorporated into the program beginning in 2Q12. In a letter dated August 16, 2013 (URS, 2013a), URS, on behalf of SOPUS, informed the IEPA of the determination that the perched groundwater monitoring piezometers are either dry, based on the criteria given in their March 14, 2012 letter, or not able to be sampled per the groundwater sampling standard operating procedure (SOP) due to slow recharge. The IEPA, during phone conversations, requested that certain piezometers remain in the program. In response to this request, a letter dated January 14, 2014 was submitted to IEPA (URS, 2014a), stating that these piezometers will remain in the program. A separate letter dated January 14, 2014 was submitted to the IEPA (URS, 2014b), requesting removal of ROST-5-PZ and ROST-10-PZ based on Condition 8(a) of the March 14, 2012 IEPA letter (CA-25), which states that ROST-5-PZ and ROST-10-PZ must remain within the program for one year before the determination is made that these wells are dry. IEPA responded to the August 16, 2013 and both January 14, 2014 letters in a correspondence dated July 27, 2016 (IEPA, 2016a). In the July 27, 2016 letter, IEPA approved the request to abandon perched wells P-60-12S, P-60-13S, ROST-5-PZ, ROST-7-PZ, ROST-10-PZ, and ROST-21-PZ and remove them from the program. Abandonment activities were conducted on September 15, 2016.

In the March 14, 2012 letter (CA-25), IEPA also requested the installation of groundwater monitoring wells in the Village to evaluate potential light non-aqueous phase liquid (LNAPL). These groundwater monitoring wells (MW-16 through MW-22 and MW-24) were installed during 4th Quarter 2012 (4Q12) and incorporated into the Interim Groundwater Monitoring Program beginning in 1st Quarter 2013 (1Q13).

On May 31, 2012, IEPA verbally requested the following be incorporated into the 2Q12 report:

- The ROST-4 series of groundwater monitoring wells and piezometers in the groundwater elevation contour maps;
- A groundwater contour map focusing on the West Fenceline area in the Village; and
- A Roxana site and WRR LNAPL map.

In an April 8, 2013 letter from IEPA to SOPUS (IEPA, 2013a), IEPA requested a discussion of irregular potentiometric contours in the ROST-4-PZ area and P-60 area wells. This response was submitted to the IEPA in a letter dated July 29, 2013 (URS, 2013b). In a letter dated July 27, 2016 (IEPA, 2016b), IEPA approved the July 29, 2013 letter with the following conditions and modifications:

- Address the potentiometric high in the northern portion of the Study Area, by submitting a proposal within 120 days, which at a minimum will include:
    - A proposal to install nested wells that will track the area of the low-permeability zone.
    - The nested wells must be adequate to verify groundwater quality, flow direction, and hydraulic gradient, and these wells should show that pumping overcomes potential radial flow.
- A text section must be added to the Interim Groundwater Monitoring Program quarterly reports to provide a detailed discussion of the potentiometric surface in this area.

AECOM responded to the July 27, 2016 letter in a letter dated October 14, 2016 (AECOM, 2016c). A response to this letter is pending as of the date of this report.

In a July 18, 2013 letter from IEPA to SOPUS (IEPA, 2013b), IEPA approved a change in gauging frequencies for wells in the Interim Groundwater Monitoring Program. The list of wells to be gauged on a weekly basis was reduced and a new list of wells to be gauged on a monthly basis was initiated. This letter also requested that any free-phase hydrocarbon (FPH) and photoionization detector (PID) data collected at the well heads be included in the quarterly groundwater monitoring reports. The modified gauging frequencies for wells began the week of July 22, 2013. The list of wells gauged during each routine event is reviewed on a regular basis and modified to meet the conditions requested by the IEPA. The additional reporting requirements were first incorporated in the 3rd Quarter 2013 (3Q13) report.

In a June 13, 2014 letter from IEPA to SOPUS (IEPA, 2014a), IEPA requested the installation of four groundwater monitoring wells in the Village to monitor the extent and effectiveness of corrective action efforts within the residential area. The access agreement with the Village was signed on August 12, 2014, and well installation began in September 2014 and was completed in October 2014. These groundwater monitoring wells (MW-25 through MW-28) were added to the Interim Groundwater Monitoring Program in 4th Quarter 2014 (4Q14).

In an October 9, 2014 letter from IEPA to SOPUS (IEPA, 2014b), IEPA approved the installation plan for a groundwater monitoring well located on BP property with certain conditions and modifications. Well MW-23 was installed during January 2015 and was added to the Interim Groundwater Monitoring Program in 1st Quarter 2015 (1Q15).

In a letter dated November 25, 2014 (IEPA, 2014c), IEPA approved the proposed plan for groundwater corrective action (submitted to IEPA on November 14, 2013 (URS, 2013c)), with the following conditions:

- The 1Q15 groundwater samples obtained from: (1) the current monitoring well network; (2) the four new wells required by the modified Resource Conservation and Recovery Act (RCRA) Hazardous Waste Management Post-Closure Permit (Permit) at the WRR, issued September 23, 2010 (modified June 13, 2014) (IEPA, 2010b); and (3) the new well required by the October 9, 2014, letter must be used in a demonstration to verify the extent of groundwater contamination has been delineated; or
- If SOPUS cannot define the extent of contamination, a proposal for additional investigation must be submitted.

On April 16, 2015, AECOM, on behalf of SOPUS, submitted a demonstration to verify the extent of groundwater contamination has been delineated (AECOM, 2015). The demonstration is based on monitoring data from wells in the Roxana Interim Groundwater Monitoring Program. Additional information was submitted to IEPA in a letter dated January 29, 2016 (AECOM, 2016a). In a letter dated February 23, 2016 (IEPA, 2016c), IEPA agreed with this determination and required a Groundwater Management Zone (GMZ) proposal be submitted within 90 days. The GMZ proposal was submitted by AECOM, on behalf of SOPUS, on May 19, 2016 (AECOM, 2016b). IEPA provided comments via email in October 2017; AECOM responded to IEPA comments on January 2, 2018 (AECOM, 2018a). Meetings with SOPUS, AECOM and IEPA representatives were held on April 5, 2018 and July 19, 2018 in order to provide additional information regarding the proposed GMZ. On September 26, 2018, AECOM, on behalf of SOPUS, submitted *Groundwater Management Zone – Additional Information* to present information requested via email dated September 5, 2018 (AECOM, 2018b).

On December 5, 2014, a letter was submitted to IEPA by URS (URS, 2014c), on behalf of SOPUS, requesting a reduction in the routine gauging performed as part of the Interim Groundwater Monitoring Program. In a letter dated August 2, 2017 (IEPA, 2017), IEPA approved the December 5, 2014 request to reduce the frequency of routine gauging from weekly/monthly to quarterly with the following condition:

- Groundwater monitoring wells ROST-4-PZ(E) and ROST-4-PZ(G) must be added to the list of wells sampled quarterly for groundwater quality. These monitoring wells were added to the sampling portion of the Interim Groundwater Monitoring Program in 4th Quarter 2017.

In a letter dated May 22, 2015, IEPA provided approval for the April 3, 2013, Groundwater Monitoring Well and Vapor Monitoring Point Installation Report (IEPA, 2015).

In a meeting on April 5, 2018, IEPA verbally requested that benzene concentration trend plots for selected monitoring wells be incorporated into Roxana Interim Groundwater Monitoring Program quarterly reports. This information is discussed in Section 3. These trend plots were first included with the 2nd Quarter 2018 (2Q18) monitoring report.

Groundwater samples were collected and analyzed during 4Q18 to meet the requirements of the Interim Groundwater Monitoring Program, as specified in the above guidances. **Figure 2** shows the groundwater monitoring wells that are part of the interim monitoring well network.

2 Groundwater Sampling and Analytical Procedures

The groundwater monitoring well gauging, sample collection, and analytical procedures are discussed in this section. Gauging and sampling procedures are based on the Interim Groundwater Monitoring Program, as outlined in the IEPA's letter dated August 5, 2010 (IEPA, 2010a), and as modified based on other correspondence described in **Section 1**.

2.1 Additional Activities or Modifications

No additional work activities or modifications were conducted during 4Q18.

2.2 Groundwater Monitoring Well Gauging and Sampling

Groundwater Monitoring Well Gauging

The comprehensive quarterly groundwater monitoring well gauging event was conducted between October 1 and 3, 2018. The 4Q18 gauging activities were conducted in conjunction with the 4Q18 gauging event for the WRR to evaluate groundwater flow direction and identify possible LNAPL in the Investigation Area. Depth to LNAPL (if present) and depth to water were noted in electronic format using Panasonic Toughpad® technology (Toughpad®), or similar, and on groundwater field gauging sheets. Quarterly groundwater monitoring well gauging results can be found in **Table 1**. The groundwater gauging data table also includes well-head PID results.

Low-Flow Groundwater Purging and Sampling

Groundwater samples were collected from groundwater monitoring wells between October 4 and 16, 2018. Data are included in this report and discussed in **Section 3**.

Groundwater samples were collected via low-flow groundwater purging and sampling procedures. Prior to groundwater monitoring well sampling, the initial water level was measured and recorded in the Toughpad® and on low flow groundwater sampling data sheets.

Groundwater monitoring wells MW-1 through MW-14, MW-16, MW-22 through MW-28, P-54, P-56, P-57, P-59, P-66, P-74, P-93A, P-93C, P-114R, ROST-3-MW, ROST-4-PZ(C), ROST-4-PZ(E), ROST-4-PZ(G), and T-12 were purged and sampled using a Proactive™ Stainless Steel Monsoon Pump (pump), low-flow controller, and designated[1] polyethylene tubing. The pump and designated polyethylene tubing were slowly lowered into the groundwater monitoring well to be sampled and set with the pump intake near the midpoint of the groundwater monitoring well screen.

Groundwater monitoring wells P-93B and P-93D were purged and sampled using dedicated stainless steel QED Environmental Systems (QED) Well Wizard® groundwater sampling pumps (Well Wizard®) and dedicated bonded polyethylene tubing. The Well Wizards® typically have a length of 42 inches, an outside diameter of 1.5 inches, and a Teflon® bladder capacity of approximately 495 milliliters (mL). The Well Wizard® and associated bonded polyethylene tubing are dedicated to each well and remain in place between sampling events. The dedicated pump intake is positioned near the midpoint of the well screen and the pump is operated using a QED MP50 MicroPurge® Controller/Compressor.

[1] All designated tubing is stored in a sealed bag designated for a particular groundwater monitoring well between sampling events.

For both sampling methods, the tubing from the sampling pump was connected to a flow-through cell, which discharged into a 5-gallon plastic container. Pumping was performed at a low flow rate (≤ 500 mL/minute) to minimize drawdown of the water level within the groundwater monitoring well. During groundwater purging, water quality parameters (pH, temperature, specific conductivity, turbidity, dissolved oxygen (DO), and oxidation-reduction potential (ORP)) were measured and recorded on the low flow groundwater sampling data sheets after every flow-through cell volume. Purging continued until a minimum of three flow-through cell volumes of water were removed and the groundwater quality parameters stabilized, or a maximum purge time of two hours was reached. The final water quality parameters were recorded in the Toughpad® and on low flow groundwater sampling data sheets. Once stabilization was achieved or a maximum purge time of two hours was reached, the groundwater flow was diverted from the flow-through cell and groundwater samples were collected for VOCs and semi-volatile organic compound (SVOC) analysis.

Groundwater monitoring wells located inside the WRR and designated for sampling in the Interim Groundwater Monitoring Program, P-55R and P-68, contained LNAPL when gauged and, therefore, were not sampled. Groundwater sampling field parameters can be found in **Table 2**, and low flow groundwater sampling data sheets are included in **Appendix A**.

2.3 Health & Safety, Decontamination, and Investigation-Derived Waste

Health & Safety

The quarterly sampling activities were performed in general accordance with the project-specific Health and Safety Plan (HASP), dated September 27, 2017 (AECOM, 2017).

Prior to beginning site work and at the start of work each day, a daily safety meeting was held. The purpose of this meeting was to discuss the day's planned activities and to address any potential health and safety concerns. As a part of the daily safety meeting, job hazard analyses (JHAs) were reviewed to address task specific safety concerns.

AECOM field personnel wore U.S. Environmental Protection Agency (USEPA) Level D personal protective equipment (PPE). In addition, work within the WRR was performed wearing flame retardant clothing (FRCs) per WRR requirements (in areas where required).

A PID with a 10.6 electron volt (eV) lamp, combustible gas indicator (CGI), and individual hydrogen sulfide gas detectors (for locations inside WRR) were used during the field activities to monitor air quality. A benzene gas monitor with a 9.8 eV lamp was available during field activities to monitor benzene levels, if necessary. Field instruments were calibrated prior to use each day in accordance with the manufacturers' specifications.

Decontamination

Field personnel and equipment underwent decontamination procedures to ensure the health and safety of those present, to maintain sample integrity, and to minimize cross contamination. Reusable sampling equipment (e.g., groundwater pump) was decontaminated after each sample location by spraying and/or wiping down with isopropyl alcohol, then washing with LiquiNox® and distilled water, and finishing with a distilled water rinse. The wash and rinse water were replaced periodically throughout the day, at least at mid-day. Interface probes were decontaminated by wiping down with LiquiNox® followed by a distilled water rinse. Personnel and small equipment decontamination were performed at the sample locations.

Investigation-Derived Waste

Investigation-derived waste (IDW), such as purge water and decontamination fluid generated during groundwater sampling activities, was collected, stored, and disposed in accordance with RCRA, Illinois and United States Department of Transportation (DOT) regulations. Expendable materials (e.g., disposable sampling equipment such as gloves and tubing) were decontaminated, if necessary, collected in trash bags, and disposed as municipal waste.

Decontamination fluid and purge water from groundwater monitoring wells MW-4, MW-7, MW-8, and MW-25 were initially collected in 5-gallon plastic containers, then transferred to a 30-gallon steel drum, which was staged at the Public Works Yard (satellite accumulation area), and removed by Heritage Environmental Services, LLC (Heritage) within 4 days of generation. This material is managed as hazardous waste based on prior characterization and was disposed at the Heritage facility in Indianapolis, Indiana.

Decontamination fluid and purge water from other groundwater monitoring wells in the Village were initially collected in 5-gallon plastic containers then transferred to 55-gallon steel drums located near the northeastern portion of the former Tannery Property (designated staging area). This material is managed as non-hazardous waste based on prior characterization and was disposed at the Heritage facility in Indianapolis, Indiana.

Decontamination fluid and purge water related to, or generated from, work within the WRR was collected and discharged through the WRR's National Pollutant Discharge Elimination System (NPDES)-permitted Wastewater Treatment Plant (WWTP).

2.4 Groundwater Sample Handling and Laboratory Testing

Samples were collected in pre-preserved laboratory-supplied containers and labeled in the field. Sample information was recorded on a chain of custody (COC) form at the time of collection. The sample ID format is "well ID-ROX-date". COCs are included with laboratory analytical reports in **Appendix B**.

Upon collection and labeling, sample containers were immediately placed inside an iced cooler and packed in such a way as to help prevent breakage and maintain sample temperature within 0-6°C without freezing. The samples were then delivered via overnight courier, under the proper COC documentation, to TestAmerica Laboratories, Inc. (TestAmerica) in Pensacola, Florida or Nashville, Tennessee for analysis.

Samples were analyzed by TestAmerica for VOCs via USEPA Methods 8260B and 8011, for SVOCs via USEPA Method 8270D, and for Polycyclic Aromatic Hydrocarbons (PAHs) via USEPA Method 8270D Low Level (LL). USEPA Method 8011 was used for select VOCs (1,2-dibromoethane and 1,2-dibromo-3-chloropropane) in order to achieve lower reporting limits specified in the most recent version of the Permit. Per direction from IEPA, the Interim Groundwater Monitoring Program concentration limits need to be consistent with those in the Permit.

2.5 Data Quality Review and Data Management

Laboratory data were provided in electronic form and included data qualifiers on the basis of the laboratory's quality control or to indicate sample analysis information. The data were independently reviewed and qualified by AECOM. One hundred percent of the data were subjected to a data quality review. Evaluation of the data followed procedures outlined in the USEPA National Functional Guidelines for Superfund Organic Methods Data Review (USEPA, 2017). Data qualifiers were also added by AECOM, as appropriate, and are included on **Table 3** and in the laboratory results in **Appendix B**. The results of the data quality review are discussed in **Section 3.2**.

Field data and documentation collected as part of this scope of work became part of the project file. AECOM maintains the files for the site and the database management system.

The following documentation was completed and supplements the COC records:

- Field logbooks;
- Equipment calibration forms;
- Groundwater field gauging sheets;
- Low Flow Groundwater Sampling Data Sheets;
- Field sample collection data via electronic Toughpad®; and
- Safety documentation.

3 Groundwater Sampling Results

This section presents the results of the 4Q18 groundwater gauging and sampling event.

3.1 Groundwater Monitoring Well Gauging Results

The comprehensive quarterly groundwater monitoring well gauging for the 4Q18 event was conducted between October 1 and 3, 2018. This groundwater monitoring well gauging was conducted in accordance with the Interim Groundwater Monitoring Program, and the results can be found in **Table 1**. Groundwater levels in most wells in the vicinity of the West Fenceline have remained similar to those in 3rd Quarter 2018 (3Q18). Groundwater levels in most wells in the central and eastern portions of the WRR have fallen approximately 0.25 to 1 feet since 3Q18. Water levels are above the top of the screens in the majority of the wells gauged during the 4Q18 event. The potentiometric surface observed during the 4Q18 groundwater monitoring well gauging (**Figures 3a** and **3b**) illustrates groundwater flow toward the WRR groundwater production wells.

During the 4Q18 quarterly groundwater monitoring well gauging event, LNAPL was detected in four Interim Groundwater Monitoring Program groundwater monitoring wells. All of these monitoring wells (P-55R, P-60, P-60-S, and P-68) are located in the WRR (**Table 1**). In these wells, LNAPL thicknesses ranged from 0.02 to 0.69 feet. **Figures 4a** and **4b** illustrate the measured LNAPL thickness observed along the West Fenceline and inside the refinery, respectively, during the 4Q18 gauging event.

During 4Q18, LNAPL was removed using bailers from groundwater monitoring wells located in the Village and on the WRR property if observed exceeding the minimum thickness for recovery (0.10 feet). LNAPL was placed in a double-walled lube cube, which is staged on WRR North Property, prior to being taken to the WRR oil-water separators for reprocessing.

3.2 Data Quality Review Results

A total of twelve sample delivery groups (SDGs) were prepared and sent to TestAmerica for the 4Q18 event. Fifty-four different groundwater sample sets were prepared and analyzed for VOCs and SVOCs (including PAHs). The 54 samples included 42 different investigative sample sets, six field duplicate sets, and three matrix spike/matrix spike duplicate (MS/MSD) sets. SDGs for 4Q18 are presented in **Appendix B**.

Trip blanks (TBs), equipment blanks (EBs), and laboratory method blanks were analyzed to evaluate for the existence and magnitude of any contamination resulting from field and laboratory activities. Five different EB sets were collected for this quarter. A TB set was included in every cooler that contained samples for VOC analysis. A total of 12 TB sets were analyzed for groundwater VOCs. Laboratory method blanks were analyzed with every analytical batch.

Based on laboratory control sample (LCS), MS/MSD, surrogate, holding time, and field duplicate criteria, the groundwater analytical results reported were accepted for their intended use. Analytical results qualified by AECOM are specified in the data reviews presented in **Appendix B**.

3.3 Analytical Results and Discussion

Table 2 presents cumulative information on groundwater sampling field parameters for main aquifer wells. These results are consistent with those observed in the 3Q18 sampling event. The laboratory analytical results for the groundwater samples collected during this event are presented in **Table 3**.

Analytical detections were compared to the concentration limits as provided in Condition IV(E) of the Permit for the WRB Refining LP Wood River Refinery[2]. These concentration limits include the Groundwater Quality Standards for Class I: Potable Resource Groundwater (35 IAC 620, Subpart D, Section 410) (Part 620) (IEPA, 2012c), the IEPA Tiered Approach to Corrective Action Objectives (TACO) Tier 1 Groundwater Remediation Objectives for the Groundwater Component of the Groundwater Ingestion Route (35 IAC 742, Appendix B, Table E) (IEPA, 2007), and the IEPA Toxicity Assessment Unit (Chemicals not in TACO, Tier 1 Tables). Where screening values were available from multiple sources from the ones mentioned above, screening values from Part 620 were used preferentially over the screening values found in TACO and Chemicals not in TACO sources. All three sources are checked on a quarterly basis to ensure the most current published screening values are being used. The results of this screening comparison are presented in **Table 3**.

Samples from 16 groundwater monitoring wells in the Interim Groundwater Monitoring Program (seven in the Village, nine in the WRR along the West Fenceline) exhibited exceedances of the groundwater screening criteria for one or more of the following constituents:

- Benzene
- Naphthalene
- 1,3,5-Trimethylbenzene
- bis(2-Ethylhexyl) phthalate
- Pentachlorophenol
- Ethylbenzene
- Toluene
- Benzo(a)anthracene
- 2-Methylnaphthalene
- Phenol

Figure 5 presents concentrations of analytes that exceeded the indicated screening criteria for 4Q18. **Figure 6** presents a plan view depiction of benzene analytical results in groundwater across the site. **Figure 7** presents a cross-section along Chaffer Avenue with a vertical distribution of the benzene concentrations in groundwater superimposed. **Figure 8** presents a cross-section across the Roxana Public Works Yard with a vertical distribution of the benzene analytical results in groundwater superimposed.

Appendix C contains benzene concentration trend plots for selected monitoring wells[3] to represent groundwater conditions in the 4th Street area and Public Works Yard area, respectively:

- 4th Street area – MW-22, ROST-4 PZ(C), P-59, and T-12
- Public Works Yard area – MW-7, MW-8, MW-25, and P-57

The data used to develop the plots are included in **Table C-1**.

AECOM conducted the 4Q18 Interim Groundwater Monitoring Program, and the following conclusions are based on the data and information collected as part of this program:

- During 4Q18, groundwater level data indicate groundwater flow from the Investigation Area is moving toward groundwater production wells at the WRR. Groundwater levels in most wells in the vicinity of the West Fenceline have remained similar to those in 3Q18. Groundwater levels in most wells in the central and eastern portions of the WRR have fallen approximately 0.25 to 1 feet since the previous quarter.
- The analytical results from 4Q18 are generally similar to those from previous quarters, with the exception of higher benzene concentrations in groundwater monitoring well P-93B.

[2] IEPA requested that the Interim Groundwater Monitoring Program be consistent with the RCRA Part B Permit.
[3] In a meeting with IEPA on April 5, 2018, the AECOM presentation included benzene concentration trend plots pertinent to GMZ discussion.

3.4 Limitations

SOPUS shall have the right to make and retain copies of and use all Work Product provided. However, such use shall be limited to the particular Site and project for which the Work Product is provided. SOPUS and its agents may release the Work Product to third parties at its sole risk and discretion. This report is based on data, site conditions, and other information that is generally applicable as of the date of this report, and the conclusions and recommendations herein are therefore applicable only to that time frame and to the report in its entirety.

Data may have been provided to AECOM by SOPUS or a third party and used in preparing this report. AECOM has relied on this information as furnished, and is neither responsible for, nor has confirmed the accuracy of this information.

4 References

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Tables

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TABLE 1
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
MW-01											
1Q16	442.65	1/4/2016	NE	41.31	NA	NA	NA	401.34	393.85 - 383.85 (48.80 - 58.80)	0.0	*
2Q16		4/4/2016	NE	40.24	NA	NA	NA	402.41		0.0	*
3Q16		7/5/2016	NE	39.32	NA	NA	NA	403.33		0.8	*
4Q16		10/3/2016	NE	38.74	NA	NA	NA	403.91		0.6	*
1Q17		1/16/2017	NE	38.35	NA	NA	NA	404.30		2.7	*
2Q17		4/3/2017	NE	38.72	NA	NA	NA	403.93		0.0	*
3Q17		7/5/2017	NE	37.24	NA	NA	NA	405.41		11.3	*
4Q17		10/2/2017	NE	37.62	NA	NA	NA	405.03		0.1	*
1Q18		1/2/2018	NE	39.42	NA	NA	NA	403.23		2.6	*
2Q18		4/2/2018	NE	40.76	NA	NA	NA	401.89		0.0	*
3Q18		7/2/2018	NE	41.36	NA	NA	NA	401.29		0.0	*
4Q18		10/1/2018	NE	41.25	NA	NA	NA	401.40		0.0	*
MW-02											
1Q16	443.77	1/4/2016	NE	42.62	NA	NA	NA	401.15	393.90 - 383.90 (49.87 - 59.87)	161	*
2Q16		4/4/2016	NE	41.55	NA	NA	NA	402.22		199	*
3Q16		7/5/2016	NE	40.64	NA	NA	NA	403.13		123	*
4Q16		10/3/2016	NE	40.11	NA	NA	NA	403.66		177	*
1Q17		1/16/2017	NE	39.58	NA	NA	NA	404.19		118	*
2Q17		4/3/2017	NE	39.97	NA	NA	NA	403.80		181	*
3Q17		7/5/2017	NE	38.69	NA	NA	NA	405.08		365	*
4Q17		10/2/2017	NE	38.87	NA	NA	NA	404.90		15000	*
1Q18		1/2/2018	NE	41.27	NA	NA	NA	402.50		106	*
2Q18		4/3/2018	NE	41.84	NA	NA	NA	401.93		62.2	*
3Q18		7/2/2018	NE	42.78	NA	NA	NA	400.99		70.0	*
4Q18		10/1/2018	NE	42.68	NA	NA	NA	401.09		1460	*
MW-03											
1Q16	430.08	1/5/2016	NE	28.13	NA	NA	NA	401.95	395.41 - 385.41 (34.67 - 44.67)	0.2	*
2Q16		4/4/2016	NE	27.31	NA	NA	NA	402.77		0.0	*
3Q16		7/5/2016	NE	26.46	NA	NA	NA	403.62		0.0	*
4Q16		10/3/2016	NE	25.71	NA	NA	NA	404.37		0.3	*
1Q17		1/16/2017	NE	25.65	NA	NA	NA	404.43		0.2	*
2Q17		4/3/2017	NE	26.10	NA	NA	NA	403.98		0.0	*
3Q17		7/5/2017	NE	24.17	NA	NA	NA	405.91		3.1	*
4Q17		10/2/2017	NE	24.98	NA	NA	NA	405.10		0.0	*
1Q18		1/2/2018	NE	27.17	NA	NA	NA	402.91		0.4	*
2Q18		4/2/2018	NE	28.03	NA	NA	NA	402.05		0.0	*
3Q18		7/2/2018	NE	28.32	NA	NA	NA	401.76		0.2	*
4Q18		10/1/2018	NE	28.20	NA	NA	NA	401.88		0.0	*
MW-04											
1Q16	441.14	1/5/2016	NE	39.53	NA	NA	NA	401.61	396.08 - 386.08 (45.06 - 55.06)	67.3	*
2Q16		4/4/2016	NE	38.61	NA	NA	NA	402.53		0.0	*
3Q16		7/5/2016	NE	37.87	NA	NA	NA	403.27		48.1	*
4Q16		10/3/2016	NE	37.13	NA	NA	NA	404.01		48.6	*
1Q17		1/16/2017	NE	36.84	NA	NA	NA	404.30		24.2	*
2Q17		4/3/2017	NE	37.17	NA	NA	NA	403.97		24.8	*
3Q17		7/5/2017	NE	35.65	NA	NA	NA	405.49		10.6	*
4Q17		10/2/2017	NE	36.20	NA	NA	NA	404.94		0.2	*
1Q18		1/2/2018	NE	38.46	NA	NA	NA	402.68		1.9	*
2Q18		4/2/2018	NE	39.26	NA	NA	NA	401.88		29.2	*
3Q18		7/2/2018	NE	39.73	NA	NA	NA	401.41		0.0	*
4Q18		10/1/2018	NE	39.64	NA	NA	NA	401.50		0.0	*

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WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
MW-05											
1Q16	429.80	1/4/2016	NE	27.89	NA	NA	NA	401.91	395.83 - 385.83 (33.97 - 43.97)	0.5	*
2Q16		4/4/2016	NE	27.02	NA	NA	NA	402.78		0.0	*
3Q16		7/5/2016	NE	26.25	NA	NA	NA	403.55		3.3	*
4Q16		10/3/2016	NE	25.41	NA	NA	NA	404.39		0.4	*
1Q17		1/16/2017	NE	25.33	NA	NA	NA	404.47		2.0	*
2Q17		4/3/2017	NE	25.75	NA	NA	NA	404.05		3.5	*
3Q17		7/5/2017	NE	23.96	NA	NA	NA	405.84		0.3	*
4Q17		10/2/2017	NE	24.78	NA	NA	NA	405.02		0.0	*
1Q18		1/2/2018	NE	27.01	NA	NA	NA	402.79		0.1	*
2Q18		4/2/2018	NE	27.73	NA	NA	NA	402.07		0.0	*
3Q18		7/2/2018	NE	27.99	NA	NA	NA	401.81		0.1	*
4Q18		10/2/2018	NE	27.93	NA	NA	NA	401.87		0.0	*
MW-06A											
1Q16	432.14	1/4/2016	NE	29.94	NA	NA	NA	402.20	397.31 - 387.31 (34.83 - 44.83)	0.0	*
2Q16		4/4/2016	NE	29.17	NA	NA	NA	402.97		0.0	*
3Q16		7/7/2016	NE	28.40	NA	NA	NA	403.74		0.0	*
4Q16		10/3/2016	NE	27.51	NA	NA	NA	404.63		0.7	*
1Q17		1/16/2017	NE	27.43	NA	NA	NA	404.71		0.4	*
2Q17		4/3/2017	NE	27.78	NA	NA	NA	404.36		1.4	*
3Q17		7/5/2017	NE	26.11	NA	NA	NA	406.03		0.2	*
4Q17		10/2/2017	NE	26.98	NA	NA	NA	405.16		0.0	*
1Q18		1/2/2018	NE	29.18	NA	NA	NA	402.96		0.0	*
2Q18		4/2/2018	NE	29.82	NA	NA	NA	402.32	398.29 - 388.29 (33.85 - 43.85)	0.0	*
3Q18		7/2/2018	NE	30.05	NA	NA	NA	402.09		0.0	*
4Q18		10/2/2018	NE	30.03	NA	NA	NA	402.11		0.0	*
MW-06B											
1Q16	432.29	1/4/2016	NE	29.96	NA	NA	NA	402.33	368.24 - 363.24 (64.05 - 69.05)	0.0	*
2Q16		4/4/2016	NE	29.39	NA	NA	NA	402.90		82.8	*
3Q16		7/7/2016	NE	28.42	NA	NA	NA	403.87		0.0	*
4Q16		10/3/2016	NE	27.52	NA	NA	NA	404.77		0.6	*
1Q17		1/16/2017	NE	27.49	NA	NA	NA	404.80		0.4	*
2Q17		4/3/2017	NE	27.89	NA	NA	NA	404.40		0.0	*
3Q17		7/5/2017	NE	26.16	NA	NA	NA	406.13		37.6	*
4Q17		10/2/2017	NE	27.02	NA	NA	NA	405.27		0.0	*
1Q18		1/2/2018	NE	29.22	NA	NA	NA	403.07		0.0	*
2Q18		4/2/2018	NE	29.88	NA	NA	NA	402.41		0.0	*
3Q18		7/2/2018	NE	30.10	NA	NA	NA	402.19		0.0	*
4Q18		10/2/2018	NE	30.09	NA	NA	NA	402.20		0.0	*
MW-06C											
1Q16	432.11	1/4/2016	NE	29.75	NA	NA	NA	402.36	347.16 - 342.16 (84.95 - 89.95)	0.3	*
2Q16		4/4/2016	NE	28.99	NA	NA	NA	403.12		24.9	*
3Q16		7/7/2016	NE	28.24	NA	NA	NA	403.87		0.0	*
4Q16		10/3/2016	NE	27.33	NA	NA	NA	404.78		0.6	*
1Q17		1/16/2017	NE	27.26	NA	NA	NA	404.85		21.1	*
2Q17		4/3/2017	NE	27.61	NA	NA	NA	404.50		4.9	*
3Q17		7/5/2017	NE	25.96	NA	NA	NA	406.15		15.4	*
4Q17		10/2/2017	NE	26.81	NA	NA	NA	405.30		0.0	*
1Q18		1/2/2018	NE	29.01	NA	NA	NA	403.10		0.0	*
2Q18		4/2/2018	NE	29.68	NA	NA	NA	402.43		0.0	*
3Q18		7/2/2018	NE	29.90	NA	NA	NA	402.21		0.0	*
4Q18		10/2/2018	NE	29.87	NA	NA	NA	402.24		0.0	*

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WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
MW-06D											
1Q16	431.99	1/4/2016	NE	29.59	NA	NA	NA	402.40	327.27 - 322.27 (104.72 - 109.72)	0.2	*
2Q16		4/4/2016	NE	28.84	NA	NA	NA	403.15		22.4	*
3Q16		7/7/2016	NE	28.09	NA	NA	NA	403.90		0.0	*
4Q16		10/3/2016	NE	27.16	NA	NA	NA	404.83		0.5	*
1Q17		1/16/2017	NE	27.14	NA	NA	NA	404.85		0.2	*
2Q17		4/3/2017	NE	27.47	NA	NA	NA	404.52		0.0	*
3Q17		7/5/2017	NE	25.83	NA	NA	NA	406.16		0.4	*
4Q17		10/2/2017	NE	26.68	NA	NA	NA	405.31		0.0	*
1Q18		1/2/2018	NE	28.87	NA	NA	NA	403.12		0.0	*
2Q18		4/2/2018	NE	29.53	NA	NA	NA	402.46		0.0	*
3Q18		7/2/2018	NE	29.74	NA	NA	NA	402.25		0.0	*
4Q18		10/2/2018	NE	29.72	NA	NA	NA	402.27		0.0	*
MW-07											
1Q16	443.10	1/4/2016	NE	41.62	NA	NA	NA	401.48	400.18 - 390.18 (42.92 - 52.92)	6007	*
2Q16		4/4/2016	NE	40.71	NA	NA	NA	402.39		4292	*
3Q16		7/5/2016	NE	40.10	NA	NA	NA	403.00		886	*
4Q16		10/3/2016	NE	39.21	NA	NA	NA	403.89		3222	*
1Q17		1/16/2017	NE	38.90	NA	NA	NA	404.20		820	*
2Q17		4/3/2017	NE	39.09	NA	NA	NA	404.01		15000	*
3Q17		7/5/2017	NE	37.82	NA	NA	NA	405.28		139	*
4Q17		10/2/2017	NE	38.37	NA	NA	NA	404.73		15000	*
1Q18		1/4/2018	NE	40.57	NA	NA	NA	402.53		2840	*PID data from 1/2/2018
2Q18		4/2/2018	NE	41.32	NA	NA	NA	401.78		490	*
3Q18		7/2/2018	NE	41.76	NA	NA	NA	401.34		5380	*
4Q18		10/2/2018	NE	41.72	NA	NA	NA	401.38		15000	*
MW-08											
1Q16	434.11	1/4/2016	NE	32.41	NA	NA	NA	401.70	400.51 - 390.51 (33.60 - 43.60)	13.0	*
2Q16		4/4/2016	NE	31.56	NA	NA	NA	402.55		248	*
3Q16		7/5/2016	NE	30.89	NA	NA	NA	403.22		296	*
4Q16		10/4/2016	NE	30.01	NA	NA	NA	404.10		6793	*
1Q17		1/16/2017	NE	29.79	NA	NA	NA	404.32		106	*
2Q17		4/3/2017	NE	30.15	NA	NA	NA	403.96		15000	*
3Q17		7/5/2017	NE	28.55	NA	NA	NA	405.56		370	*
4Q17		10/2/2017	NE	29.28	NA	NA	NA	404.83		15000	*
1Q18		1/2/2018	NE	31.53	NA	NA	NA	402.58		87.6	*
2Q18		4/2/2018	NE	32.24	NA	NA	NA	401.87		169	*
3Q18		7/2/2018	NE	32.54	NA	NA	NA	401.57		231	*
4Q18		10/2/2018	NE	32.47	NA	NA	NA	401.64		1.4	*
MW-09											
1Q16	445.20	1/4/2016	NE	43.03	NA	NA	NA	402.17	398.75 - 388.75 (46.45 - 56.45)	0.0	*
2Q16		4/4/2016	NE	41.87	NA	NA	NA	403.33		0.0	*
3Q16		7/6/2016	NE	40.96	NA	NA	NA	404.24		0.0	*
4Q16		10/3/2016	NE	40.44	NA	NA	NA	404.76		0.2	*
1Q17		1/16/2017	NE	40.06	NA	NA	NA	405.14		11.1	*
2Q17		4/3/2017	NE	40.56	NA	NA	NA	404.64		0.0	*
3Q17		7/5/2017	NE	38.89	NA	NA	NA	406.31		0.0	*
4Q17		10/2/2017	NE	39.22	NA	NA	NA	405.98		0.2	*
1Q18		1/2/2018	NE	41.08	NA	NA	NA	404.12		2.9	*
2Q18		4/3/2018	NE	42.12	NA	NA	NA	403.08	399.16 - 389.16 (46.04 - 56.04)	0.0	*
3Q18		7/2/2018	NE	42.86	NA	NA	NA	402.34		0.0	*
4Q18		10/1/2018	NE	42.91	NA	NA	NA	402.29		0.0	*

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TABLE 1
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
MW-10											
1Q16	445.03	1/4/2016	NE	43.07	NA	NA	NA	401.96	400.60 - 390.60 (44.43 - 54.43)	0.0	*
2Q16		4/4/2016	NE	41.98	NA	NA	NA	403.05		0.0	*
3Q16		7/5/2016	NE	41.00	NA	NA	NA	404.03		0.0	*
4Q16		10/3/2016	NE	40.42	NA	NA	NA	404.61		0.2	*
1Q17		1/16/2017	NE	39.88	NA	NA	NA	405.15		0.0	*
2Q17		4/3/2017	NE	40.32	NA	NA	NA	404.71		0.0	*
3Q17		7/5/2017	NE	38.95	NA	NA	NA	406.08		0.0	*
4Q17		10/2/2017	NE	39.06	NA	NA	NA	405.97		0.3	*
1Q18		1/2/2018	NE	40.94	NA	NA	NA	404.09		6.9	*
2Q18		4/2/2018	NE	42.10	NA	NA	NA	402.93		0.0	*
3Q18		7/2/2018	NE	42.94	NA	NA	NA	402.09		0.0	*
4Q18		10/2/2018	NE	43.08	NA	NA	NA	401.95		0.0	*
MW-11											
1Q16	442.33	1/4/2016	NE	40.69	NA	NA	NA	401.64	400.67 - 390.67 (41.66 - 51.66)	0.0	*
2Q16		4/4/2016	NE	39.53	NA	NA	NA	402.80		0.0	*
3Q16		7/6/2016	NE	38.39	NA	NA	NA	403.94		0.0	*
4Q16		10/3/2016	NE	37.99	NA	NA	NA	404.34		0.5	*
1Q17		1/16/2017	NE	37.63	NA	NA	NA	404.70		0.0	*
2Q17		4/3/2017	NE	38.10	NA	NA	NA	404.23		0.0	*
3Q17		7/5/2017	NE	36.46	NA	NA	NA	405.87		0.0	*
4Q17		10/2/2017	NE	36.69	NA	NA	NA	405.64		0.0	*
1Q18		1/2/2018	NE	38.93	NA	NA	NA	403.40		0.6	*
2Q18		4/2/2018	NE	39.93	NA	NA	NA	402.40		0.0	*
3Q18		7/2/2018	NE	40.59	NA	NA	NA	401.74		0.0	*
4Q18		10/1/2018	NE	40.58	NA	NA	NA	401.75		0.0	*
MW-12											
1Q16	442.60	1/5/2016	NE	40.98	NA	NA	NA	401.62	400.68 - 390.68 (41.92 - 51.92)	0.2	*
2Q16		4/4/2016	NE	39.88	NA	NA	NA	402.72		0.0	*
3Q16		7/6/2016	NE	38.87	NA	NA	NA	403.73		0.0	*
4Q16		10/3/2016	NE	38.43	NA	NA	NA	404.17		0.5	*
1Q17		1/16/2017	NE	38.11	NA	NA	NA	404.49		1.2	*
2Q17		4/3/2017	NE	38.56	NA	NA	NA	404.04		0.0	*
3Q17		7/5/2017	NE	36.84	NA	NA	NA	405.76		8.1	*
4Q17		10/2/2017	NE	37.24	NA	NA	NA	405.36		0.0	*
1Q18		1/2/2018	NE	39.55	NA	NA	NA	403.05		0.8	*
2Q18		4/3/2018	NE	40.38	NA	NA	NA	402.22		0.0	*
3Q18		7/2/2018	NE	41.00	NA	NA	NA	401.60		0.0	*
4Q18		10/1/2018	NE	40.94	NA	NA	NA	401.66		0.0	*
MW-13											
1Q16	430.27	1/5/2016	NE	27.33	NA	NA	NA	402.94	404.70 - 394.70 (25.57 - 35.57)	144	
2Q16		4/5/2016	NE	26.75	NA	NA	NA	403.52		71.4	
3Q16		7/8/2016	NE	26.16	NA	NA	NA	404.11		3.2	
4Q16		10/4/2016	NE	24.99	NA	NA	NA	405.28		86.6	*
1Q17		1/17/2017	NE	25.54	NA	NA	NA	404.73		20.6	*
2Q17		4/5/2017	NE	25.90	NA	NA	NA	404.37		98.7	
3Q17		7/6/2017	NE	23.67	NA	NA	NA	406.60		162	*
4Q17		10/2/2017	NE	24.95	NA	NA	NA	405.32		69.1	*
1Q18		1/3/2018	NE	26.97	NA	NA	NA	403.30		65.2	
2Q18		4/4/2018	NE	27.92	NA	NA	NA	402.35	405.47 - 395.47 (24.80 - 34.80)	0.0	
3Q18		7/3/2018	NE	27.67	NA	NA	NA	402.60		0.0	
4Q18		10/2/2018	NE	27.56	NA	NA	NA	402.71		4398	

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TABLE 1
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
MW-14											
1Q16	434.44	1/6/2016	NE	31.75	NA	NA	NA	402.69	401.02 - 391.02 (33.42 - 43.42)	35.2	*
2Q16		4/5/2016	NE	31.35	NA	NA	NA	403.09		64.1	*
3Q16		7/8/2016	NE	30.72	NA	NA	NA	403.72		48.3	*
4Q16		10/4/2016	NE	29.60	NA	NA	NA	404.84		54.2	*
1Q17		1/17/2017	NE	29.61	NA	NA	NA	404.83		71.0	*
2Q17		4/4/2017	NE	29.91	NA	NA	NA	404.53		84.4	*
3Q17		7/6/2017	NE	28.34	NA	NA	NA	406.10		35.3	*
4Q17		10/3/2017	NE	29.24	NA	NA	NA	405.20		160	*
1Q18		1/4/2018	NE	31.23	NA	NA	NA	403.21		45.2	*
2Q18		4/4/2018	NE	32.17	NA	NA	NA	402.27		40.7	*
3Q18		7/2/2018	NE	32.19	NA	NA	NA	402.25		82.8	*
4Q18		10/3/2018	NE	32.07	NA	NA	NA	402.37		12.0	*
MW-16											
1Q16	443.39	1/5/2016	NE	42.32	NA	NA	NA	401.07	406.33 - 396.33 (37.06 - 47.06)	0.0	
2Q16		4/4/2016	NE	41.19	NA	NA	NA	402.20		0.0	
3Q16		7/6/2016	NE	39.94	NA	NA	NA	403.45		0.0	
4Q16		10/4/2016	NE	39.72	NA	NA	NA	403.67		0.0	
1Q17		1/16/2017	NE	39.15	NA	NA	NA	404.24		0.1	
2Q17		4/3/2017	NE	39.51	NA	NA	NA	403.88		0.0	
3Q17		7/5/2017	NE	38.18	NA	NA	NA	405.21		4.6	
4Q17		10/2/2017	NE	38.15	NA	NA	NA	405.24		0.0	
1Q18		1/2/2018	NE	40.68	NA	NA	NA	402.71		0.8	
2Q18		4/3/2018	NE	41.42	NA	NA	NA	401.97	405.89 - 395.89 (37.50 - 47.50)	0.0	
3Q18		7/2/2018	NE	42.33	NA	NA	NA	401.06		0.0	
4Q18		10/1/2018	NE	42.27	NA	NA	NA	401.12		0.0	
MW-17											
1Q16	441.57	1/4/2016	NE	41.00	NA	NA	NA	400.57	407.28 - 392.28 (34.29 - 49.29)	0.1	
2Q16		4/4/2016	NE	39.67	NA	NA	NA	401.90		0.0	
3Q16		7/5/2016	NE	38.12	NA	NA	NA	403.45		0.0	
4Q16		10/3/2016	NE	38.22	NA	NA	NA	403.35		0.4	
1Q17		1/16/2017	NE	37.42	NA	NA	NA	404.15		144	
2Q17		4/3/2017	NE	37.62	NA	NA	NA	403.95		0.0	
3Q17		7/5/2017	NE	36.74	NA	NA	NA	404.83		0.0	
4Q17		10/2/2017	NE	36.03	NA	NA	NA	405.54		0.0	
1Q18		1/3/2018	NE	38.79	NA	NA	NA	402.78		362	PID data from 1/2/2018
2Q18		4/2/2018	NE	39.67	NA	NA	NA	401.90		0.0	
3Q18		7/2/2018	NE	40.82	NA	NA	NA	400.75		0.0	
4Q18		10/1/2018	NE	40.78	NA	NA	NA	400.79		0.0	
MW-18											
1Q16	442.04	1/4/2016	NE	41.75	NA	NA	NA	400.29	407.12 - 392.12 (34.92 - 49.92)	0.0	
2Q16		4/4/2016	NE	40.45	NA	NA	NA	401.59		0.0	
3Q16		7/5/2016	NE	38.65	NA	NA	NA	403.39		0.0	
4Q16		10/3/2016	NE	38.91	NA	NA	NA	403.13		9.0	
1Q17		1/16/2017	NE	38.08	NA	NA	NA	403.96		2.5	
2Q17		4/3/2017	NE	38.19	NA	NA	NA	403.85		0.0	
3Q17		7/5/2017	NE	37.38	NA	NA	NA	404.66		0.0	
4Q17		10/2/2017	NE	36.62	NA	NA	NA	405.42		0.0	
1Q18		1/2/2018	NE	39.73	NA	NA	NA	402.31		3.2	
2Q18		4/2/2018	NE	40.34	NA	NA	NA	401.70		0.0	
3Q18		7/2/2018	NE	41.47	NA	NA	NA	400.57		0.0	
4Q18		10/1/2018	NE	41.43	NA	NA	NA	400.61		0.0	

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WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
MW-19											
1Q16	442.77	1/4/2016	NE	42.14	NA	NA	NA	400.63	406.43 - 391.43 (36.34 - 51.34)	0.4	
2Q16		4/4/2016	NE	40.43	NA	NA	NA	402.34		0.0	
3Q16		7/5/2016	NE	39.42	NA	NA	NA	403.35		0.0	
4Q16		10/3/2016	NE	39.44	NA	NA	NA	403.33		0.5	
1Q17		1/16/2017	NE	38.72	NA	NA	NA	404.05		5.6	
2Q17		4/3/2017	NE	38.93	NA	NA	NA	403.84		0.0	
3Q17		7/5/2017	NE	37.93	NA	NA	NA	404.84		0.0	
4Q17		10/2/2017	NE	37.51	NA	NA	NA	405.26		0.0	
1Q18		1/4/2018	NE	40.32	NA	NA	NA	402.45		43.8	PID data from 1/2/2018
2Q18		4/3/2018	NE	40.90	NA	NA	NA	401.87		0.0	
3Q18		7/2/2018	NE	42.08	NA	NA	NA	400.69		0.0	
4Q18		10/1/2018	NE	42.04	NA	NA	NA	400.73		0.1	
MW-20											
1Q16	443.67	1/4/2016	NE	42.76	NA	NA	NA	400.91	407.79 - 392.79 (35.88 - 50.88)	0.5	
2Q16		4/4/2016	NE	41.64	NA	NA	NA	402.03		0.0	
3Q16		7/5/2016	NE	40.46	NA	NA	NA	403.21		0.0	
4Q16		10/3/2016	NE	40.19	NA	NA	NA	403.48		0.4	
1Q17		1/16/2017	NE	39.54	NA	NA	NA	404.13		0.1	
2Q17		4/3/2017	NE	39.93	NA	NA	NA	403.74		0.0	
3Q17		7/5/2017	NE	38.69	NA	NA	NA	404.98		38.7	
4Q17		10/2/2017	NE	38.64	NA	NA	NA	405.03		0.0	
1Q18		1/3/2018	NE	41.03	NA	NA	NA	402.64		27.0	PID data from 1/2/2018
2Q18		4/3/2018	NE	41.76	NA	NA	NA	401.91		0.0	
3Q18		7/2/2018	NE	42.88	NA	NA	NA	400.79		0.0	
4Q18		10/2/2018	NE	42.77	NA	NA	NA	400.90		0.0	
MW-21											
1Q16	443.81	1/4/2016	NE	42.53	NA	NA	NA	401.28	408.80 - 393.80 (35.01 - 50.01)	0.2	
2Q16		4/4/2016	NE	41.61	NA	NA	NA	402.20		0.0	
3Q16		7/5/2016	NE	40.89	NA	NA	NA	402.92		0.0	
4Q16		10/3/2016	NE	40.55	NA	NA	NA	403.26		0.3	
1Q17		1/16/2017	NE	39.68	NA	NA	NA	404.13		0.2	
2Q17		4/3/2017	NE	39.95	NA	NA	NA	403.86		0.0	
3Q17		7/5/2017	NE	38.74	NA	NA	NA	405.07		0.0	
4Q17		10/2/2017	NE	39.12	NA	NA	NA	404.69		0.0	
1Q18		1/2/2018	NE	41.44	NA	NA	NA	402.37		2.0	
2Q18		4/3/2018	NE	41.98	NA	NA	NA	401.83		0.1	
3Q18		7/2/2018	NE	42.74	NA	NA	NA	401.07		0.0	
4Q18		10/2/2018	NE	42.70	NA	NA	NA	401.11		8.7	
MW-22											
1Q16	442.16	1/4/2016	NE	41.12	NA	NA	NA	401.04	404.28 - 394.28 (37.88 - 47.88)	0.0	
2Q16		4/4/2016	NE	39.88	NA	NA	NA	402.28		0.0	
3Q16		7/6/2016	NE	38.56	NA	NA	NA	403.60		0.0	
4Q16		10/3/2016	NE	38.44	NA	NA	NA	403.72		1.2	
1Q17		1/16/2017	NE	37.80	NA	NA	NA	404.36		84.4	*
2Q17		4/3/2017	NE	38.20	NA	NA	NA	403.96		4.7	
3Q17		7/5/2017	NE	36.89	NA	NA	NA	405.27		16.5	*
4Q17		10/2/2017	NE	36.74	NA	NA	NA	405.42		8.1	*
1Q18		1/3/2018	NE	39.14	NA	NA	NA	403.02		10.1	PID data from 1/2/2018
2Q18		4/3/2018	NE	40.01	NA	NA	NA	402.15	403.73 - 393.73 (38.43 - 48.43)	0.0	
3Q18		7/2/2018	NE	41.00	NA	NA	NA	401.16		0.0	
4Q18		10/2/2018	NE	40.96	NA	NA	NA	401.20		0.0	

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WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
MW-23											
1Q16	431.41	1/5/2016	NE	29.05	NA	NA	NA	402.36	402.39 - 392.39 (29.02 - 39.02)	0.1	
2Q16		4/4/2016	NE	28.30	NA	NA	NA	403.11		0.0	*
3Q16		7/7/2016	NE	27.21	NA	NA	NA	404.20		0.7	*
4Q16		10/3/2016	NE	26.53	NA	NA	NA	404.88		1.0	*
1Q17		1/16/2017	NE	26.83	NA	NA	NA	404.58		0.7	*
2Q17		4/3/2017	NE	27.40	NA	NA	NA	404.01		0.2	*
3Q17		7/5/2017	NE	25.08	NA	NA	NA	406.33		0.5	*
4Q17		10/2/2017	NE	26.35	NA	NA	NA	405.06		0.0	*
1Q18		1/2/2018	NE	28.34	NA	NA	NA	403.07		0.6	*
2Q18		4/2/2018	NE	29.20	NA	NA	NA	402.21		36.4	
3Q18		7/2/2018	NE	29.19	NA	NA	NA	402.22		0.0	
4Q18		10/1/2018	NE	29.08	NA	NA	NA	402.33		0.0	
MW-24											
1Q16	443.42	1/4/2016	NE	41.94	NA	NA	NA	401.48	404.53 - 394.53 (38.89 - 48.89)	0.0	
2Q16		4/4/2016	NE	40.74	NA	NA	NA	402.68		0.0	
3Q16		7/6/2016	NE	39.68	NA	NA	NA	403.74		0.0	
4Q16		10/3/2016	NE	39.28	NA	NA	NA	404.14		117	
1Q17		1/16/2017	NE	38.97	NA	NA	NA	404.45		11.2	
2Q17		4/3/2017	NE	39.45	NA	NA	NA	403.97		0.8	
3Q17		7/5/2017	NE	37.75	NA	NA	NA	405.67		3.6	*
4Q17		10/2/2017	NE	38.03	NA	NA	NA	405.39		0.0	*
1Q18		1/3/2018	NE	40.22	NA	NA	NA	403.20		0.5	PID data from 1/2/2018
2Q18		4/3/2018	NE	41.17	NA	NA	NA	402.25	403.81 - 393.81 (39.61 - 49.61)	0.2	
3Q18		7/2/2018	NE	41.86	NA	NA	NA	401.56		0.0	
4Q18		10/1/2018	NE	41.83	NA	NA	NA	401.59		1.8	
MW-25											
1Q16	438.35	1/4/2016	NE	36.68	NA	NA	NA	401.67	402.76 - 392.76 (35.59 - 45.59)	132	
2Q16		4/4/2016	NE	35.78	NA	NA	NA	402.57		0.0	
3Q16		7/6/2016	NE	35.02	NA	NA	NA	403.33		32.5	*
4Q16		10/3/2016	NE	34.23	NA	NA	NA	404.12		52.0	*
1Q17		1/16/2017	NE	34.00	NA	NA	NA	404.35		42.6	*
2Q17		4/3/2017	NE	34.33	NA	NA	NA	404.02		83.6	*
3Q17		7/5/2017	NE	32.77	NA	NA	NA	405.58		61.9	*
4Q17		10/2/2017	NE	33.40	NA	NA	NA	404.95		1999	*
1Q18		1/3/2018	NE	35.51	NA	NA	NA	402.84		69.2	*
2Q18		4/2/2018	NE	36.44	NA	NA	NA	401.91		110	
3Q18		7/2/2018	NE	36.82	NA	NA	NA	401.53		0.5	
4Q18		10/2/2018	NE	36.75	NA	NA	NA	401.60		3.9	
MW-26											
1Q16	441.02	1/5/2016	NE	39.55	NA	NA	NA	401.47	402.87 - 392.87 (38.15 - 48.15)	0.7	
2Q16		4/4/2016	NE	38.56	NA	NA	NA	402.46		0.0	
3Q16		7/5/2016	NE	37.76	NA	NA	NA	403.26		0.4	*
4Q16		10/3/2016	NE	37.10	NA	NA	NA	403.92		0.2	*
1Q17		1/16/2017	NE	36.74	NA	NA	NA	404.28		0.2	*
2Q17		4/3/2017	NE	37.09	NA	NA	NA	403.93		0.0	*
3Q17		7/5/2017	NE	35.60	NA	NA	NA	405.42		0.0	*
4Q17		10/2/2017	NE	36.05	NA	NA	NA	404.97		0.0	*
1Q18		1/2/2018	NE	38.33	NA	NA	NA	402.69		5.0	
2Q18		4/4/2018	NE	39.35	NA	NA	NA	401.67		0.0	
3Q18		7/2/2018	NE	39.71	NA	NA	NA	401.31		0.2	
4Q18		10/1/2018	NE	39.60	NA	NA	NA	401.42		0.0	

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WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
MW-27											
1Q16	443.40	1/4/2016	NE	41.02	NA	NA	NA	402.38	403.61 - 393.61 (39.79 - 49.79)	0.0	
2Q16		4/4/2016	NE	39.67	NA	NA	NA	403.73		0.0	*
3Q16		7/6/2016	NE	38.95	NA	NA	NA	404.45		9.2	*
4Q16		10/3/2016	NE	38.60	NA	NA	NA	404.80		0.4	*
1Q17		1/16/2017	NE	38.05	NA	NA	NA	405.35		0.4	*
2Q17		4/3/2017	NE	38.58	NA	NA	NA	404.82		0.0	*
3Q17		7/5/2017	NE	37.35	NA	NA	NA	406.05		0.0	*
4Q17		10/3/2017	NE	37.25	NA	NA	NA	406.15		0.0	*
1Q18		1/2/2018	NE	38.78	NA	NA	NA	404.62		1.7	*
2Q18		4/3/2018	NE	40.19	NA	NA	NA	403.21		0.0	
3Q18		7/2/2018	NE	41.16	NA	NA	NA	402.24		0.0	
4Q18		10/1/2018	NE	41.11	NA	NA	NA	402.29		0.0	
MW-28											
1Q16	443.34	1/4/2016	NE	40.34	NA	NA	NA	403.00	409.73 - 399.73 (33.61 - 43.61)	0.0	
2Q16		4/4/2016	NE	39.18	NA	NA	NA	404.16		0.0	
3Q16		7/6/2016	NE	38.42	NA	NA	NA	404.92		0.0	
4Q16		10/3/2016	NE	37.81	NA	NA	NA	405.53		0.5	
1Q17		1/16/2017	NE	37.14	NA	NA	NA	406.20		7.2	
2Q17		4/3/2017	NE	37.78	NA	NA	NA	405.56		0.0	
3Q17		7/5/2017	NE	36.63	NA	NA	NA	406.71		0.0	
4Q17		10/2/2017	NE	36.61	NA	NA	NA	406.73		0.1	
1Q18		1/2/2018	NE	37.96	NA	NA	NA	405.38		0.9	
2Q18		4/3/2018	NE	39.39	NA	NA	NA	403.95		0.0	
3Q18		7/2/2018	NE	40.14	NA	NA	NA	403.20		0.0	
4Q18		10/1/2018	NE	40.18	NA	NA	NA	403.16		0.0	
P-01											
1Q16	442.73	1/5/2016	NE	31.14	NA	NA	NA	411.59	380.78 - 375.78 (61.95 - 66.95)	0.0	*
2Q16		4/4/2016	NE	30.93	NA	NA	NA	411.80		0.0	*
3Q16		7/7/2016	NM	NM	NA	NA	NA	NA		NM	Unsafe condition at well - Unable to access
4Q16		10/5/2016	NE	27.94	NA	NA	NA	414.79		0.2	*
1Q17		1/17/2017	NE	29.46	NA	NA	NA	413.27		0.0	*
2Q17		4/4/2017	NE	30.25	NA	NA	NA	412.48		0.0	*
3Q17		7/5/2017	NE	26.73	NA	NA	NA	416.00		0.0	*
4Q17		10/3/2017	NE	28.94	NA	NA	NA	413.79		0.0	*
1Q18		1/4/2018	NE	30.05	NA	NA	NA	412.68		0.0	*
2Q18		4/4/2018	NE	30.60	NA	NA	NA	412.13	380.51 - 375.51 (62.22 - 67.22)	0.0	*
3Q18		7/3/2018	NE	31.03	NA	NA	NA	411.70		0.0	*
4Q18		10/3/2018	NE	31.93	NA	NA	NA	410.80		0.1	*
P-4U											
1Q16	442.54	1/4/2016	NE	33.33	NA	NA	NA	409.21	361.39 - 359.39 (81.15 - 83.15)	0.0	*
2Q16		4/6/2016	NM	NM	NA	NA	NA	NA		NM	
3Q16		7/5/2016	NE	32.12	NA	NA	NA	410.42		0.1	*
4Q16		10/5/2016	NE	29.49	NA	NA	NA	413.05		NM	*
1Q17		1/17/2017	NE	30.53	NA	NA	NA	412.01		0.0	*
2Q17		4/4/2017	NE	31.39	NA	NA	NA	411.15		0.0	*
3Q17		7/5/2017	NE	28.12	NA	NA	NA	414.42		5.3	*
4Q17		10/3/2017	NE	30.04	NA	NA	NA	412.50		0.0	*
1Q18		1/4/2018	NE	31.25	NA	NA	NA	411.29		0.0	*
2Q18		4/4/2018	NE	32.40	NA	NA	NA	410.14		0.0	*
3Q18		7/3/2018	NE	32.61	NA	NA	NA	409.93		0.0	*
4Q18		10/3/2018	NE	33.25	NA	NA	NA	409.29		0.0	*

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WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
P-5L											
1Q16	443.84	1/4/2016	NE	32.95	NA	NA	NA	410.89	303.44 - 301.44 (140.40 - 142.40)	0.2	*
2Q16		4/4/2016	NE	32.34	NA	NA	NA	411.50		0.0	*
3Q16		7/5/2016	NE	33.37	NA	NA	NA	410.47		0.8	*
4Q16		10/5/2016	NE	28.83	NA	NA	NA	415.01		0.0	*
1Q17		1/17/2017	NE	30.59	NA	NA	NA	413.25		0.0	*
2Q17		4/4/2017	NE	31.52	NA	NA	NA	412.32		0.0	*
3Q17		7/5/2017	NE	27.33	NA	NA	NA	416.51		2.1	*
4Q17		10/3/2017	NE	30.23	NA	NA	NA	413.61		0.0	*
1Q18		1/3/2018	NE	31.43	NA	NA	NA	412.41		0.0	*
2Q18		4/3/2018	NE	31.85	NA	NA	NA	411.99		0.0	*
3Q18		7/3/2018	NE	32.59	NA	NA	NA	411.25		0.0	*
4Q18		10/3/2018	NE	33.59	NA	NA	NA	410.25		0.0	*
P-5U											
1Q16	444.24	1/4/2016	NE	34.53	NA	NA	NA	409.71	313.61 - 311.61 (130.63 - 132.63)	0.0	*
2Q16		4/4/2016	NE	33.78	NA	NA	NA	410.46		0.0	*
3Q16		7/5/2016	NE	32.08	NA	NA	NA	412.16		0.8	*
4Q16		10/5/2016	NE	30.46	NA	NA	NA	413.78		0.1	*
1Q17		1/17/2017	NE	31.81	NA	NA	NA	412.43		0.0	*
2Q17		4/4/2017	NE	32.69	NA	NA	NA	411.55		0.0	*
3Q17		7/5/2017	NE	29.11	NA	NA	NA	415.13		0.0	*
4Q17		10/3/2017	NE	31.40	NA	NA	NA	412.84		0.0	*
1Q18		1/3/2018	NE	32.44	NA	NA	NA	411.80		0.1	*
2Q18		4/3/2018	NE	33.14	NA	NA	NA	411.10		0.0	*
3Q18		7/3/2018	NE	33.86	NA	NA	NA	410.38		0.0	*
4Q18		10/3/2018	NE	34.77	NA	NA	NA	409.47		0.0	*
P-6U											
1Q16	443.45	1/4/2016	NE	34.19	NA	NA	NA	409.26	362.95 - 360.95 (80.50 - 82.50)	0.0	*
2Q16		4/4/2016	NE	33.17	NA	NA	NA	410.28		0.0	*
3Q16		7/5/2016	NE	31.58	NA	NA	NA	411.87		0.1	*
4Q16		10/5/2016	NE	29.93	NA	NA	NA	413.52		0.0	*
1Q17		1/17/2017	NE	31.19	NA	NA	NA	412.26		0.0	*
2Q17		4/4/2017	NE	32.11	NA	NA	NA	411.34		0.0	*
3Q17		7/5/2017	NE	28.50	NA	NA	NA	414.95		0.6	*
4Q17		10/3/2017	NE	31.82	NA	NA	NA	411.63		0.0	*
1Q18		1/4/2018	NE	32.14	NA	NA	NA	411.31		0.0	*
2Q18		4/3/2018	NE	32.69	NA	NA	NA	410.76		0.0	*
3Q18		7/3/2018	NE	33.39	NA	NA	NA	410.06		0.0	*
4Q18		10/3/2018	NE	34.06	NA	NA	NA	409.39		0.0	*
P-7U											
1Q16	443.91	1/4/2016	NE	34.35	NA	NA	NA	409.56	382.83 - 380.83 (61.08 - 63.08)	0.0	*
2Q16		4/4/2016	NE	33.38	NA	NA	NA	410.53		0.0	*
3Q16		7/7/2016	NE	32.86	NA	NA	NA	411.05		0.9	*
4Q16		10/5/2016	NE	29.98	NA	NA	NA	413.93		0.0	*
1Q17		1/17/2017	NE	31.43	NA	NA	NA	412.48		0.0	*
2Q17		4/4/2017	NE	32.37	NA	NA	NA	411.54		0.1	*
3Q17		7/5/2017	NE	28.52	NA	NA	NA	415.39		5.3	*
4Q17		10/3/2017	NE	31.10	NA	NA	NA	412.81		0.0	*
1Q18		1/3/2018	NE	32.38	NA	NA	NA	411.53		0.0	*
2Q18		4/3/2018	NE	33.01	NA	NA	NA	410.90		0.0	*
3Q18		7/3/2018	NE	33.65	NA	NA	NA	410.26		0.0	*
4Q18		10/3/2018	NE	34.39	NA	NA	NA	409.52		0.0	*

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WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
P-8U											
1Q16	441.85	1/4/2016	NE	34.99	NA	NA	NA	406.86	382.33 - 380.33 (59.52 - 61.52)	0.1	*
2Q16		4/5/2016	NE	33.41	NA	NA	NA	408.44		0.4	*
3Q16		7/5/2016	NE	33.18	NA	NA	NA	408.67		0.2	*
4Q16		10/4/2016	NE	30.74	NA	NA	NA	411.11		0.0	*
1Q17		1/17/2017	NE	31.42	NA	NA	NA	410.43		0.0	*
2Q17		4/3/2017	NE	31.88	NA	NA	NA	409.97		0.0	*
3Q17		7/6/2017	NE	29.86	NA	NA	NA	411.99		0.0	*
4Q17		10/3/2017	NE	30.85	NA	NA	NA	411.00		1.6	*
1Q18		1/4/2018	NE	32.20	NA	NA	NA	409.65		83.5	*
2Q18		4/3/2018	NE	33.13	NA	NA	NA	408.72	381.72 - 379.72 (60.13 - 62.13)	0.0	*
3Q18		7/3/2018	NE	33.88	NA	NA	NA	407.97		0.0	*
4Q18		10/2/2018	NE	34.39	NA	NA	NA	407.46		0.0	*
P-9U											
1Q16	445.04	1/5/2016	NE	39.77	NA	NA	NA	405.27	344.45 - 342.45 (100.59 - 102.59)	0.0	*
2Q16		4/4/2016	NE	37.84	NA	NA	NA	407.20		0.0	*
3Q16		7/5/2016	NE	37.92	NA	NA	NA	407.12		0.2	*
4Q16		10/4/2016	NE	35.83	NA	NA	NA	409.21		0.8	*
1Q17		1/17/2017	NE	35.97	NA	NA	NA	409.07		0.0	*
2Q17		4/3/2017	NE	36.30	NA	NA	NA	408.74		0.0	*
3Q17		7/6/2017	NE	34.22	NA	NA	NA	410.82		0.0	*
4Q17		10/3/2017	NE	35.39	NA	NA	NA	409.65		0.0	*
1Q18		1/4/2018	NE	36.60	NA	NA	NA	408.44		40.5	*
2Q18		4/4/2018	NM	NM	NA	NA	NA	NA		NM	Unsafe condition at well - Unable to access
3Q18		7/3/2018	NE	38.51	NA	NA	NA	406.53		0.0	*
4Q18		10/2/2018	NE	39.11	NA	NA	NA	405.93		0.0	*
P-11L											
1Q16	442.55	1/4/2016	NE	35.47	NA	NA	NA	407.08	332.34 - 330.34 (110.21 - 112.21)	0.0	*
2Q16		4/5/2016	NE	34.70	NA	NA	NA	407.85		0.6	*
3Q16		7/5/2016	NE	34.03	NA	NA	NA	408.52		0.2	*
4Q16		10/5/2016	NE	31.89	NA	NA	NA	410.66		0.2	*
1Q17		1/17/2017	NE	32.26	NA	NA	NA	410.29		0.0	*
2Q17		4/4/2017	NE	33.01	NA	NA	NA	409.54		0.0	*
3Q17		7/6/2017	NE	31.05	NA	NA	NA	411.50		0.0	*
4Q17		10/3/2017	NE	31.66	NA	NA	NA	410.89		0.0	*
1Q18		1/4/2018	NE	32.83	NA	NA	NA	409.72		0.0	*
2Q18		4/3/2018	NE	33.92	NA	NA	NA	408.63		0.0	*
3Q18		7/3/2018	NE	34.66	NA	NA	NA	407.89		0.0	*
4Q18		10/2/2018	NE	35.08	NA	NA	NA	407.47		0.0	*
P-11U											
1Q16	443.17	1/4/2016	NE	36.09	NA	NA	NA	407.08	343.25 - 341.25 (99.92 - 101.92)	0.0	*
2Q16		4/5/2016	NE	34.88	NA	NA	NA	408.29		1.9	*
3Q16		7/5/2016	NE	34.66	NA	NA	NA	408.51		0.2	*
4Q16		10/5/2016	NE	32.53	NA	NA	NA	410.64		0.2	*
1Q17		1/17/2017	NE	32.90	NA	NA	NA	410.27		0.0	*
2Q17		4/4/2017	NE	33.61	NA	NA	NA	409.56		0.7	*
3Q17		7/6/2017	NE	31.65	NA	NA	NA	411.52		0.0	*
4Q17		10/3/2017	NE	32.27	NA	NA	NA	410.90		0.0	*
1Q18		1/4/2018	NE	33.45	NA	NA	NA	409.72		3.8	*
2Q18		4/3/2018	NE	34.50	NA	NA	NA	408.67		0.0	*
3Q18		7/3/2018	NE	35.25	NA	NA	NA	407.92		0.0	*
4Q18		10/2/2018	NE	35.68	NA	NA	NA	407.49		0.0	*

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WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
P-14											
1Q16	442.74	1/5/2016	NE	31.21	NA	NA	NA	411.53	395.41 - 385.41 (47.33 - 57.33)	0.0	*
2Q16		4/4/2016	NE	30.98	NA	NA	NA	411.76		0.0	*
3Q16		7/7/2016	NM	NM	NA	NA	NA	NA		NM	Unsafe condition at well - Unable to access
4Q16		10/5/2016	NE	28.03	NA	NA	NA	414.71		0.0	*
1Q17		1/17/2017	NE	29.55	NA	NA	NA	413.19		0.0	*
2Q17		4/4/2017	NE	30.33	NA	NA	NA	412.41		0.0	*
3Q17		7/5/2017	NE	26.80	NA	NA	NA	415.94		0.0	*
4Q17		10/3/2017	NE	29.00	NA	NA	NA	413.74		0.0	*
1Q18		1/4/2018	NE	30.12	NA	NA	NA	412.62		0.0	*
2Q18		4/4/2018	NE	30.69	NA	NA	NA	412.05	395.27 - 385.27 (47.47 - 57.47)	0.0	*
3Q18		7/3/2018	NE	31.10	NA	NA	NA	411.64		0.0	*
4Q18		10/3/2018	NE	32.01	NA	NA	NA	410.73		0.0	*
P-15											
1Q16	443.69	1/4/2016	NE	34.22	NA	NA	NA	409.47	398.24 - 388.24 (45.45 - 55.45)	0.0	*
2Q16		4/5/2016	NE	32.98	NA	NA	NA	410.71		0.0	*
3Q16		7/5/2016	NE	32.77	NA	NA	NA	410.92		0.1	*
4Q16		10/5/2016	NE	30.13	NA	NA	NA	413.56		0.0	*
1Q17		1/17/2017	NE	31.20	NA	NA	NA	412.49		0.0	*
2Q17		4/4/2017	NE	32.12	NA	NA	NA	411.57		0.0	*
3Q17		7/5/2017	NE	28.75	NA	NA	NA	414.94		1.6	*
4Q17		10/3/2017	NE	30.70	NA	NA	NA	412.99		0.0	*
1Q18		1/4/2018	NE	31.93	NA	NA	NA	411.76		0.0	*
2Q18		4/4/2018	NE	33.19	NA	NA	NA	410.50		0.0	*
3Q18		7/3/2018	NE	33.28	NA	NA	NA	410.41		0.0	*
4Q18		10/3/2018	NE	33.86	NA	NA	NA	409.83		0.0	*
P-16											
1Q16	442.68	1/4/2016	NE	33.11	NA	NA	NA	409.57	396.94 - 386.94 (45.74 - 55.74)	1.1	*
2Q16		4/4/2016	NE	31.78	NA	NA	NA	410.90		0.0	*
3Q16		7/5/2016	NE	32.71	NA	NA	NA	409.97		0.2	*
4Q16		10/5/2016	NE	28.75	NA	NA	NA	413.93		0.0	*
1Q17		1/17/2017	NE	30.08	NA	NA	NA	412.60		0.0	*
2Q17		4/4/2017	NE	30.99	NA	NA	NA	411.69		0.0	*
3Q17		7/5/2017	NE	27.40	NA	NA	NA	415.28		4.2	*
4Q17		10/3/2017	NE	29.75	NA	NA	NA	412.93		0.0	*
1Q18		1/4/2018	NE	31.07	NA	NA	NA	411.61		0.0	*
2Q18		4/3/2018	NE	31.66	NA	NA	NA	411.02		0.0	*
3Q18		7/3/2018	NE	32.29	NA	NA	NA	410.39		0.0	*
4Q18		10/3/2018	NE	32.99	NA	NA	NA	409.69		0.0	*
P-43											
1Q16	444.44	1/4/2016	NE	36.96	NA	NA	NA	407.48	380.88 - 370.88 (63.56 - 73.56)	0.0	*
2Q16		4/5/2016	NE	35.73	NA	NA	NA	408.71		0.0	*
3Q16		7/5/2016	NE	35.52	NA	NA	NA	408.92		0.7	*
4Q16		10/5/2016	NE	33.34	NA	NA	NA	411.10		0.2	*
1Q17		1/17/2017	NE	33.71	NA	NA	NA	410.73		0.0	*
2Q17		4/4/2017	NE	34.52	NA	NA	NA	409.92		0.0	*
3Q17		7/6/2017	NE	31.87	NA	NA	NA	412.57		0.0	*
4Q17		10/3/2017	NE	33.15	NA	NA	NA	411.29		0.0	*
1Q18		1/4/2018	NE	34.34	NA	NA	NA	410.10		0.0	*
2Q18		4/3/2018	NE	35.37	NA	NA	NA	409.07		0.0	*
3Q18		7/3/2018	NE	36.11	NA	NA	NA	408.33		0.0	*
4Q18		10/2/2018	NE	36.53	NA	NA	NA	407.91		0.0	*

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WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
P-53											
1Q16	446.41	1/6/2016	NE	42.55	NA	NA	NA	403.86	407.91 - 382.91 (38.50 - 63.50)	0.1	
2Q16		4/6/2016	NE	41.41	NA	NA	NA	405.00		0.0	
3Q16		7/5/2016	NE	40.94	NA	NA	NA	405.47		0.0	
4Q16		10/4/2016	NE	40.12	NA	NA	NA	406.29		0.0	
1Q17		1/16/2017	NE	39.63	NA	NA	NA	406.78		5.8	
2Q17		4/3/2017	NE	40.04	NA	NA	NA	406.37		0.0	
3Q17		7/5/2017	NE	38.70	NA	NA	NA	407.71		0.0	
4Q17		10/3/2017	NE	38.92	NA	NA	NA	407.49		0.0	
1Q18		1/2/2018	NE	40.11	NA	NA	NA	406.30		0.5	
2Q18		4/3/2018	NE	41.38	NA	NA	NA	405.03		0.0	
3Q18		7/2/2018	NE	42.12	NA	NA	NA	404.29		0.0	
4Q18		10/2/2018	NE	42.54	NA	NA	NA	403.87		0.0	
P-54											
1Q16	442.32	1/4/2016	NE	40.60	NA	NA	NA	401.72	404.32 - 379.32 (38.00 - 63.00)	1.6	
2Q16		4/4/2016	NE	39.43	NA	NA	NA	402.89		0.0	
3Q16		7/6/2016	NE	38.47	NA	NA	NA	403.85		0.0	
4Q16		10/3/2016	NE	37.96	NA	NA	NA	404.36		0.4	*
1Q17		1/16/2017	NE	37.80	NA	NA	NA	404.52		0.2	*
2Q17		4/3/2017	NE	38.28	NA	NA	NA	404.04		0.0	
3Q17		7/5/2017	NE	36.41	NA	NA	NA	405.91		0.0	*
4Q17		10/2/2017	NE	36.88	NA	NA	NA	405.44		0.0	*
1Q18		1/2/2018	NE	39.02	NA	NA	NA	403.30		0.4	
2Q18		4/3/2018	NE	39.94	NA	NA	NA	402.38		0.0	
3Q18		7/2/2018	NE	40.51	NA	NA	NA	401.81		0.0	
4Q18		10/2/2018	NE	40.50	NA	NA	NA	401.82		0.0	
P-55R											
1Q16	443.79	1/4/2016	42.26	42.36	401.43	401.53	0.10	401.51	403.36 - 393.36 (40.43 - 50.43)	38.4	
2Q16		4/4/2016	40.09	40.15	403.64	403.70	0.06	403.69		148	*
3Q16		7/5/2016	39.93	40.13	403.66	403.86	0.20	403.82		78.0	*
4Q16		10/3/2016	39.28	39.45	404.34	404.51	0.17	404.48		394	*
1Q17		1/16/2017	38.82	39.30	404.49	404.97	0.48	404.87		133	*
2Q17		4/3/2017	39.06	39.34	404.45	404.73	0.28	404.67		155	*
3Q17		7/5/2017	37.88	37.97	405.82	405.91	0.09	405.89		162	*
4Q17		10/2/2017	37.81	37.98	405.81	405.98	0.17	405.95		104	*
1Q18		1/2/2018	40.30	40.38	403.41	403.49	0.08	403.47		260	*
2Q18		4/2/2018	39.20	41.25	402.54	404.59	2.05	404.18		238	*
3Q18		7/2/2018	41.51	42.12	401.67	402.28	0.61	402.16		152	
4Q18		10/1/2018	41.49	42.18	401.61	402.30	0.69	402.16		152.6	
P-56											
1Q16	446.14	1/4/2016	NE	45.32	NA	NA	NA	400.82	405.32 - 380.32 (40.82 - 65.82)	0.0	
2Q16		4/4/2016	NE	44.15	NA	NA	NA	401.99		0.0	
3Q16		7/5/2016	NE	43.03	NA	NA	NA	403.11		0.2	
4Q16		10/3/2016	NE	42.72	NA	NA	NA	403.42		0.0	
1Q17		1/16/2017	NE	42.01	NA	NA	NA	404.13		180	
2Q17		4/3/2017	NE	42.43	NA	NA	NA	403.71		0.0	
3Q17		7/5/2017	NE	41.18	NA	NA	NA	404.96		0.2	
4Q17		10/2/2017	NE	41.05	NA	NA	NA	405.09		91.2	
1Q18		1/3/2018	NE	43.51	NA	NA	NA	402.63		209	
2Q18		4/3/2018	NE	44.24	NA	NA	NA	401.90		0.0	
3Q18		7/2/2018	NE	45.34	NA	NA	NA	400.80		0.0	
4Q18		10/1/2018	NE	45.27	NA	NA	NA	400.87		0.0	

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TABLE 1
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
P-57											
1Q16	446.96	1/4/2016	NE	45.75	NA	NA	NA	401.21	402.77 - 392.77 (44.19 - 54.19)	0.0	
2Q16		4/4/2016	NE	44.80	NA	NA	NA	402.16		0.4	
3Q16		7/5/2016	NE	44.20	NA	NA	NA	402.76		119	
4Q16		10/3/2016	NE	43.40	NA	NA	NA	403.56		141	*
1Q17		1/16/2017	NE	42.89	NA	NA	NA	404.07		135	*
2Q17		4/3/2017	NE	43.21	NA	NA	NA	403.75		140	*
3Q17		7/5/2017	NE	41.92	NA	NA	NA	405.04		132	*
4Q17		10/2/2017	NE	42.35	NA	NA	NA	404.61		47.2	*
1Q18		1/2/2018	NE	44.59	NA	NA	NA	402.37		190	
2Q18		4/3/2018	NE	45.10	NA	NA	NA	401.86		1.3	
3Q18		7/2/2018	NE	45.89	NA	NA	NA	401.07		1.7	
4Q18		10/2/2018	NE	45.86	NA	NA	NA	401.10		0.2	
P-58											
1Q16	444.94	1/4/2016	NE	43.50	NA	NA	NA	401.44	404.73 - 379.73 (40.21 - 65.21)	0.0	
2Q16		4/4/2016	NE	42.75	NA	NA	NA	402.19		0.1	
3Q16		7/5/2016	NE	42.21	NA	NA	NA	402.73		0.1	
4Q16		10/3/2016	NE	41.25	NA	NA	NA	403.69		0.0	
1Q17		1/16/2017	NE	40.78	NA	NA	NA	404.16		135	
2Q17		4/3/2017	NE	40.91	NA	NA	NA	404.03		0.0	
3Q17		7/5/2017	NE	39.81	NA	NA	NA	405.13		11.4	*
4Q17		10/2/2017	40.32	40.35	404.59	404.62	0.03	404.61		5.1	
1Q18		1/2/2018	42.53	42.55	402.39	402.41	0.02	402.41		180	
2Q18		4/2/2018	NE	43.19	NA	NA	NA	401.75		0.0	
3Q18		7/2/2018	NE	43.70	NA	NA	NA	401.24		0.0	
		7/12/2018	43.63	43.64	401.30	401.31	0.01	401.31		0.0	
4Q18		10/1/2018	NE	43.66	NA	NA	NA	401.28		0.0	
P-59											
1Q16	446.86	1/4/2016	NE	46.43	NA	NA	NA	400.43	398.95 - 373.95 (47.91 - 72.91)	135	*
2Q16		4/4/2016	NE	45.22	NA	NA	NA	401.64		249	*
3Q16		7/5/2016	NE	43.67	NA	NA	NA	403.19		239	*
4Q16		10/3/2016	NE	43.65	NA	NA	NA	403.21		424	*
1Q17		1/16/2017	NE	42.83	NA	NA	NA	404.03		221	*
2Q17		4/3/2017	NE	43.06	NA	NA	NA	403.80		359	*
3Q17		7/5/2017	NE	42.08	NA	NA	NA	404.78		322	*
4Q17		10/2/2017	NE	41.57	NA	NA	NA	405.29		189	*
1Q18		1/4/2018	NE	44.44	NA	NA	NA	402.42		3119	*
2Q18		4/3/2018	NE	44.99	NA	NA	NA	401.87		108	*
3Q18		7/2/2018	NE	46.26	NA	NA	NA	400.60		214	*
4Q18		10/1/2018	NE	46.19	NA	NA	NA	400.67		179	*
P-60											
1Q16	446.69	1/4/2016	45.73	45.79	400.90	400.96	0.06	400.95	403.24 - 383.24 (43.45 - 63.45)	7.0	
2Q16		4/4/2016	44.45	44.50	402.19	402.24	0.05	402.23		6.8	
3Q16		7/5/2016	43.13	43.22	403.47	403.56	0.09	403.54		108	*
4Q16		10/3/2016	43.00	43.05	403.64	403.69	0.05	403.68		145	*
1Q17		1/16/2017	42.25	42.31	404.38	404.44	0.06	404.43		59.7	*
2Q17		4/3/2017	42.49	42.52	404.17	404.20	0.03	404.19		43.2	*
3Q17		7/5/2017	41.49	41.51	405.18	405.20	0.02	405.20		15.0	*
4Q17		10/2/2017	41.12	41.15	405.54	405.57	0.03	405.56		34.9	*
1Q18		1/2/2018	43.54	43.56	403.13	403.15	0.02	403.15		118	
2Q18		4/3/2018	NE	44.25	NA	NA	NA	402.44	402.04 - 382.04 (44.65 - 64.65)	15.6	
3Q18		7/2/2018	45.61	45.62	401.07	401.08	0.01	401.08		40.7	
4Q18		10/1/2018	45.61	45.63	401.06	401.08	0.02	401.08		36.7	

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WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
P-60-11											
1Q16	446.26	1/4/2016	NE	44.51	NA	NA	NA	401.75	413.11 - 383.11 (33.15 - 63.15)	0.4	
2Q16		4/4/2016	NE	43.08	NA	NA	NA	403.18		0.0	
3Q16		7/5/2016	NE	42.21	NA	NA	NA	404.05		1.4	
4Q16		10/3/2016	NE	41.90	NA	NA	NA	404.36		27.9	
1Q17		1/16/2017	NE	41.22	NA	NA	NA	405.04		0.0	
2Q17		4/3/2017	NE	41.62	NA	NA	NA	404.64		0.0	
3Q17		7/5/2017	NE	41.75	NA	NA	NA	404.51		0.5	
4Q17		10/2/2017	NE	40.30	NA	NA	NA	405.96		0.0	
1Q18		1/2/2018	NE	42.22	NA	NA	NA	404.04		0.7	
2Q18		4/2/2018	NE	43.48	NA	NA	NA	402.78		0.0	
3Q18		7/2/2018	NE	44.30	NA	NA	NA	401.96		0.0	
4Q18		10/1/2018	NE	44.22	NA	NA	NA	402.04		0.0	
P-60-12											
1Q16	443.43	1/4/2016	NE	42.58	NA	NA	NA	400.85	383.43 - 373.43 (60.00 - 70.00)	0.3	*
2Q16		4/4/2016	NE	41.31	NA	NA	NA	402.12		9.9	*
3Q16		7/5/2016	NE	39.94	NA	NA	NA	403.49		36.2	*
4Q16		10/3/2016	NE	39.77	NA	NA	NA	403.66		11.3	*
1Q17		1/16/2017	NE	39.00	NA	NA	NA	404.43		23.4	*
2Q17		4/3/2017	NE	39.21	NA	NA	NA	404.22		23.5	*
3Q17		7/5/2017	NE	38.26	NA	NA	NA	405.17		2.1	*
4Q17		10/2/2017	NE	37.80	NA	NA	NA	405.63		10.6	*
1Q18		1/2/2018	NE	40.40	NA	NA	NA	403.03		26.6	*
2Q18		4/2/2018	NE	41.34	NA	NA	NA	402.09		11.1	*
3Q18		7/2/2018	NE	42.39	NA	NA	NA	401.04		9.4	*
4Q18		10/2/2018	NE	42.38	NA	NA	NA	401.05		24.4	*
P-60-13											
1Q16	442.92	1/4/2016	NE	40.65	NA	NA	NA	402.27	402.92 - 382.92 (40.00 - 60.00)	2.7	
2Q16		4/4/2016	NE	39.72	NA	NA	NA	403.20		0.2	*
3Q16		7/5/2016	NE	39.06	NA	NA	NA	403.86		0.2	*
4Q16		10/3/2016	NE	38.78	NA	NA	NA	404.14		0.0	*
1Q17		1/16/2017	NE	38.18	NA	NA	NA	404.74		102	*
2Q17		4/3/2017	NE	38.62	NA	NA	NA	404.30		0.0	*
3Q17		7/5/2017	NE	37.70	NA	NA	NA	405.22		0.0	*
4Q17		10/2/2017	NE	37.31	NA	NA	NA	405.61		0.0	*
1Q18		1/2/2018	NE	39.04	NA	NA	NA	403.88		48.3	*
2Q18		4/2/2018	NE	39.97	NA	NA	NA	402.95		0.0	*
3Q18		7/2/2018	NE	40.34	NA	NA	NA	402.58		0.0	
4Q18		10/2/2018	NE	40.30	NA	NA	NA	402.62		0.0	
P-60-S											
1Q16	446.84	1/4/2016	NE	45.25	NA	NA	NA	401.59	410.36 - 395.36 (36.48 - 51.48)	0.1	
2Q16		4/4/2016	NE	43.78	NA	NA	NA	403.06		0.0	
3Q16		7/5/2016	NE	42.84	NA	NA	NA	404.00		0.1	
4Q16		10/3/2016	NE	42.82	NA	NA	NA	404.02		0.3	
1Q17		1/16/2017	NE	41.91	NA	NA	NA	404.93		38.7	
2Q17		4/3/2017	NE	42.50	NA	NA	NA	404.34		0.0	
3Q17		7/5/2017	NE	41.47	NA	NA	NA	405.37		0.1	
4Q17		10/2/2017	NE	41.07	NA	NA	NA	405.77		0.7	
1Q18		1/2/2018	NE	42.82	NA	NA	NA	404.02		1.5	
2Q18		4/3/2018	43.73	43.74	403.10	403.11	0.01	403.11		0.0	
3Q18		7/2/2018	44.87	44.93	401.91	401.97	0.06	401.96		0.0	
4Q18		10/1/2018	44.88	44.91	401.93	401.96	0.03	401.95		13.3	

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TABLE 1
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WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
P-61											
1Q16	444.47	1/5/2016	43.91	43.95	400.52	400.56	0.04	400.55	398.80 - 373.80 (45.68 - 70.68)	1.3	*
2Q16		4/4/2016	42.77	42.82	401.65	401.70	0.05	401.69		40.4	*
3Q16		7/6/2016	NE	41.63	NA	NA	NA	402.84		27.3	*
4Q16		10/4/2016	NE	41.11	NA	NA	NA	403.36		17.7	*
1Q17		1/16/2017	NE	40.19	NA	NA	NA	404.28		113	*
2Q17		4/3/2017	40.50	40.61	403.86	403.97	0.11	403.95		8.2	*
3Q17		7/6/2017	39.60	39.71	404.76	404.87	0.11	404.85		935	*
4Q17		10/2/2017	39.43	39.61	404.86	405.04	0.18	405.00		20.1	*
1Q18		1/2/2018	41.78	41.84	402.63	402.69	0.06	402.68		313	*
2Q18		4/4/2018	NM	NM	NA	NA	NA	NA		NM	Unsafe condition at well - Unable to access
3Q18		7/2/2018	43.77	44.20	400.27	400.70	0.43	400.61		91.3	*
4Q18		10/2/2018	43.89	43.93	400.54	400.58	0.04	400.57		237	*
P-62											
1Q16	442.43	1/5/2016	41.40	42.20	400.23	401.03	0.80	400.87	400.96 - 375.96 (41.47 - 66.47)	0.0	
2Q16		4/6/2016	NM	NM	NA	NA	NA	NA		NM	Unsafe condition at well - Unable to access
3Q16		7/6/2016	39.34	40.09	402.34	403.09	0.75	402.94		0.1	*
4Q16		10/4/2016	38.63	38.70	403.73	403.80	0.07	403.79		268	*
1Q17		1/16/2017	NE	37.81	NA	NA	NA	404.62		119	*
2Q17		4/3/2017	38.04	38.13	404.30	404.39	0.09	404.37		188	*
3Q17		7/5/2017	37.28	37.33	405.10	405.15	0.05	405.14		32.0	*
4Q17		10/3/2017	37.49	37.52	404.91	404.94	0.03	404.93		201	*
1Q18		1/3/2018	39.05	39.09	403.34	403.38	0.04	403.37		345	*
2Q18		4/2/2018	40.03	41.01	401.42	402.40	0.98	402.20		151	*
3Q18		7/2/2018	41.38	42.49	399.94	401.05	1.11	400.83		0.0	
4Q18		10/3/2018	41.43	42.42	400.01	401.00	0.99	400.80		0.4	
P-63											
1Q16	445.85	1/5/2016	45.06	45.09	400.76	400.79	0.03	400.78	398.56 - 373.56 (47.29 - 72.29)	261	*
2Q16		4/4/2016	43.83	43.86	401.99	402.02	0.03	402.01		12.1	*
3Q16		7/6/2016	NE	43.46	NA	NA	NA	402.39		5.3	*
4Q16		10/4/2016	42.14	42.17	403.68	403.71	0.03	403.70		6.0	*
1Q17		1/17/2017	41.58	41.62	404.23	404.27	0.04	404.26		52.7	*
2Q17		4/3/2017	41.66	41.69	404.16	404.19	0.03	404.18		106	*
3Q17		7/6/2017	40.97	41.01	404.84	404.88	0.04	404.87		208	*
4Q17		10/3/2017	41.32	41.35	404.50	404.53	0.03	404.52		113	*
1Q18		1/3/2018	42.27	42.29	403.56	403.58	0.02	403.58		33.8	*
2Q18		4/4/2018	44.09	44.11	401.74	401.76	0.02	401.76		36.5	*
3Q18		7/3/2018	45.41	45.43	400.42	400.44	0.02	400.44		222	*
4Q18		10/2/2018	45.59	45.62	400.23	400.26	0.03	400.25		70.1	*
P-64											
1Q16	446.89	1/5/2016	46.39	46.43	400.46	400.50	0.04	400.49	399.66 - 374.66 (47.23 - 72.23)	205	*
2Q16		4/4/2016	44.96	45.00	401.89	401.93	0.04	401.92		55.5	*
3Q16		7/6/2016	44.78	44.86	402.03	402.11	0.08	402.09		13.4	*
4Q16		10/4/2016	43.21	43.29	403.60	403.68	0.08	403.66		16.0	*
1Q17		1/17/2017	NE	42.64	NA	NA	NA	404.25		399	*
2Q17		4/4/2017	43.10	43.18	403.71	403.79	0.08	403.77		71.8	*
3Q17		7/6/2017	42.09	42.16	404.73	404.80	0.07	404.79		332	*
4Q17		10/3/2017	NE	42.60	NA	NA	NA	404.29		215	*
1Q18		1/3/2018	43.20	43.23	403.66	403.69	0.03	403.68		278	*
2Q18		4/4/2018	45.14	45.19	401.70	401.75	0.05	401.74		184	*
3Q18		7/3/2018	46.69	46.73	400.16	400.20	0.04	400.19		269	*
4Q18		10/2/2018	46.94	46.99	399.90	399.95	0.05	399.94		178	*

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WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
P-65											
1Q16	444.60	1/5/2016	NE	43.78	NA	NA	NA	400.82	397.58 - 372.58 (47.02 - 72.02)	4.0	*
2Q16		4/4/2016	NE	42.26	NA	NA	NA	402.34		0.3	*
3Q16		7/7/2016	NE	42.05	NA	NA	NA	402.55		NM	*
4Q16		10/4/2016	40.75	40.78	403.82	403.85	0.03	403.84		17.1	*
1Q17		1/16/2017	NE	40.08	NA	NA	NA	404.52		7.6	*
2Q17		4/3/2017	NE	40.08	NA	NA	NA	404.52		70.7	*
3Q17		7/6/2017	NE	39.89	NA	NA	NA	404.71		65.6	*
4Q17		10/3/2017	NE	40.14	NA	NA	NA	404.46		83.2	*
1Q18		1/3/2018	NE	41.10	NA	NA	NA	403.50		5.0	*
2Q18		4/4/2018	NE	43.02	NA	NA	NA	401.58		3.5	*
3Q18		7/3/2018	NE	43.58	NA	NA	NA	401.02		24.9	*
4Q18		10/2/2018	NE	43.91	NA	NA	NA	400.69		4.0	*
P-66											
1Q16	436.81	1/6/2016	NE	34.68	NA	NA	NA	402.13	402.09 - 377.09 (34.72 - 59.72)	321	*
2Q16		4/5/2016	NE	34.34	NA	NA	NA	402.47		10.3	*
3Q16		7/8/2016	NE	33.74	NA	NA	NA	403.07		76.2	*
4Q16		10/4/2016	NE	32.67	NA	NA	NA	404.14		68.1	*
1Q17		1/17/2017	NE	32.41	NA	NA	NA	404.40		88.1	*
2Q17		4/4/2017	NE	32.55	NA	NA	NA	404.26		112	*
3Q17		7/6/2017	NE	31.32	NA	NA	NA	405.49		29.9	*
4Q17		10/2/2017	NE	31.96	NA	NA	NA	404.85		870	*
1Q18		1/4/2018	NE	34.06	NA	NA	NA	402.75		68.7	*
2Q18		4/4/2018	NE	35.12	NA	NA	NA	401.69		3.7	
3Q18		7/2/2018	NE	35.20	NA	NA	NA	401.61		0.0	
4Q18		10/3/2018	NE	35.03	NA	NA	NA	401.78		8.0	
P-67											
1Q16	444.10	1/5/2016	NE	41.06	NA	NA	NA	403.04	402.12 - 377.12 (41.98 - 66.98)	0.4	*
2Q16		4/5/2016	NE	40.41	NA	NA	NA	403.69		42.1	*
3Q16		7/8/2016	NE	39.83	NA	NA	NA	404.27		9.9	*
4Q16		10/4/2016	NE	38.63	NA	NA	NA	405.47		13.1	*
1Q17		1/17/2017	NE	38.50	NA	NA	NA	405.60		35.6	*
2Q17		4/4/2017	NE	38.85	NA	NA	NA	405.25		4.3	*
3Q17		7/6/2017	NE	37.52	NA	NA	NA	406.58		4.9	*
4Q17		10/2/2017	NE	38.10	NA	NA	NA	406.00		366	*
1Q18		1/4/2018	39.98	39.99	404.11	404.12	0.01	404.12		36.7	*
2Q18		4/4/2018	NE	41.04	NA	NA	NA	403.06		6.0	*
3Q18		7/2/2018	41.21	41.24	402.86	402.89	0.03	402.88		0.0	*
4Q18		10/3/2018	41.12	41.14	402.96	402.98	0.02	402.98		0.0	*
P-68											
1Q16	445.18	1/5/2016	44.35	44.40	400.78	400.83	0.05	400.82	399.92 - 374.92 (45.26 - 70.26)	70.0	*
2Q16		4/4/2016	43.15	43.23	401.95	402.03	0.08	402.01		197	*
3Q16		7/5/2016	40.80	41.86	403.32	404.38	1.06	404.17		197	*
4Q16		10/4/2016	42.52	42.59	402.59	402.66	0.07	402.65		183	*
1Q17		1/16/2017	40.70	40.71	404.47	404.48	0.01	404.48		101	*
2Q17		4/3/2017	41.02	41.07	404.11	404.16	0.05	404.15		77.8	*
3Q17		7/5/2017	40.10	40.12	405.06	405.08	0.02	405.08		181	*
4Q17		10/2/2017	39.54	39.56	405.62	405.64	0.02	405.64		125	*
1Q18		1/3/2018	42.05	42.07	403.11	403.13	0.02	403.13		137	*
2Q18		4/3/2018	42.89	42.94	402.24	402.29	0.05	402.28	401.42 - 376.42 (43.76 - 68.76)	92.0	*
3Q18		7/2/2018	44.25	44.32	400.86	400.93	0.07	400.92		136	
4Q18		10/2/2018	44.22	44.31	400.87	400.96	0.09	400.94		169	

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TABLE 1
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
P-69											
1Q16	443.40	1/6/2016	NM	NM	NA	NA	NA	NA	402.58 - 377.58 (40.82 - 65.82)	NM	Unsafe condition at well - Unable to access
2Q16		4/4/2016	NE	41.84	NA	NA	NA	401.56		0.8	
3Q16		7/6/2016	NE	40.31	NA	NA	NA	403.09		238	*
4Q16		10/4/2016	NE	40.22	NA	NA	NA	403.18		122	*
1Q17		1/16/2017	NE	39.31	NA	NA	NA	404.09		337	*
2Q17		4/3/2017	NE	39.55	NA	NA	NA	403.85		66.6	*
3Q17		7/5/2017	NE	38.76	NA	NA	NA	404.64		142	*
4Q17		10/2/2017	NE	38.04	NA	NA	NA	405.36		210	*
1Q18		1/3/2018	NE	40.76	NA	NA	NA	402.64		120	*
2Q18		4/4/2018	NE	42.00	NA	NA	NA	401.40		0.0	
3Q18		7/2/2018	NE	43.00	NA	NA	NA	400.40		0.0	
4Q18		10/2/2018	NE	42.95	NA	NA	NA	400.45		0.0	
P-70											
1Q16	442.95	1/5/2016	42.22	42.47	400.48	400.73	0.25	400.68	398.28 - 373.28 (44.67 - 69.67)	170	*
2Q16		4/4/2016	41.07	41.11	401.84	401.88	0.04	401.87		213	*
3Q16		7/6/2016	NE	39.92	NA	NA	NA	403.03		389	*
4Q16		10/4/2016	39.40	39.45	403.50	403.55	0.05	403.54		345	*
1Q17		1/16/2017	38.52	38.57	404.38	404.43	0.05	404.42		289	*
2Q17		4/3/2017	38.81	38.84	404.11	404.14	0.03	404.13		132	*
3Q17		7/6/2017	38.00	38.03	404.92	404.95	0.03	404.94		2525	*
4Q17		10/2/2017	37.73	37.76	405.19	405.22	0.03	405.21		187	*
1Q18		1/2/2018	40.03	40.06	402.89	402.92	0.03	402.91		282	*
2Q18		4/2/2018	40.94	40.98	401.97	402.01	0.04	402.00		90.4	*
3Q18		7/2/2018	42.23	42.26	400.69	400.72	0.03	400.71		238	*
4Q18		10/2/2018	42.25	42.27	400.68	400.70	0.02	400.70		297	*
P-71											
1Q16	444.94	1/6/2016	NE	43.06	NA	NA	NA	401.88	402.33 - 377.33 (42.61 - 67.61)	68.2	
2Q16		4/4/2016	NE	42.27	NA	NA	NA	402.67		19.4	*
3Q16		7/7/2016	NE	41.75	NA	NA	NA	403.19		74.9	*
4Q16		10/4/2016	NE	40.76	NA	NA	NA	404.18		78.0	*
1Q17		1/16/2017	NE	40.05	NA	NA	NA	404.89		0.0	*
2Q17		4/3/2017	NE	40.43	NA	NA	NA	404.51		32.3	*
3Q17		7/6/2017	NE	39.66	NA	NA	NA	405.28		555	*
4Q17		10/3/2017	NE	40.01	NA	NA	NA	404.93		82.3	*
1Q18		1/3/2018	NE	41.42	NA	NA	NA	403.52		6.0	*
2Q18		4/4/2018	NE	42.99	NA	NA	NA	401.95		50.4	
3Q18		7/3/2018	NE	43.36	NA	NA	NA	401.58		41.2	
4Q18		10/2/2018	NE	43.61	NA	NA	NA	401.33		108	
P-72											
1Q16	444.49	1/6/2016	NE	42.67	NA	NA	NA	401.82	398.72 - 373.72 (45.77 - 70.77)	16.5	*
2Q16		4/4/2016	NE	41.82	NA	NA	NA	402.67		1.8	*
3Q16		7/6/2016	NE	41.55	NA	NA	NA	402.94		0.4	*
4Q16		10/4/2016	NE	40.53	NA	NA	NA	403.96		0.6	*
1Q17		1/16/2017	NE	39.55	NA	NA	NA	404.94		14.4	*
2Q17		4/3/2017	NE	39.66	NA	NA	NA	404.83		11.3	*
3Q17		7/6/2017	NE	39.27	NA	NA	NA	405.22		32.9	*
4Q17		10/3/2017	NE	39.69	NA	NA	NA	404.80		6.9	*
1Q18		1/3/2018	NE	40.84	NA	NA	NA	403.65		40.0	*
2Q18		4/4/2018	NE	42.81	NA	NA	NA	401.68		2.6	*
3Q18		7/3/2018	NE	42.90	NA	NA	NA	401.59		2.3	*
4Q18		10/3/2018	43.01	43.02	401.47	401.48	0.01	401.48		7.2	*

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TABLE 1
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
P-73											
1Q16	443.86	1/6/2016	NE	42.55	NA	NA	NA	401.31	402.27 - 377.27 (41.59 - 66.59)	0.0	
2Q16		4/4/2016	NE	42.44	NA	NA	NA	401.42		0.0	
3Q16		7/7/2016	NE	41.83	NA	NA	NA	402.03		NM	
4Q16		10/4/2016	NE	40.81	NA	NA	NA	403.05		20.0	*
1Q17		1/16/2017	NE	40.00	NA	NA	NA	403.86		112	*
2Q17		4/3/2017	NE	39.55	NA	NA	NA	404.31		81.4	*
3Q17		7/6/2017	NE	39.59	NA	NA	NA	404.27		848	*
4Q17		10/3/2017	NE	40.25	NA	NA	NA	403.61		127	*
1Q18		1/3/2018	NE	41.93	NA	NA	NA	401.93		67.8	
2Q18		4/4/2018	NE	43.21	NA	NA	NA	400.65		0.0	
3Q18		7/3/2018	NE	43.43	NA	NA	NA	400.43		0.0	
4Q18		10/3/2018	NE	43.24	NA	NA	NA	400.62		1.8	
P-74											
1Q16	442.72	1/6/2016	NE	40.80	NA	NA	NA	401.92	398.29 - 373.29 (44.43 - 69.43)	0.4	*
2Q16		4/4/2016	NE	41.16	NA	NA	NA	401.56		0.3	*
3Q16		7/6/2016	NE	39.63	NA	NA	NA	403.09		0.0	*
4Q16		10/4/2016	NE	39.51	NA	NA	NA	403.21		9.7	*
1Q17		1/16/2017	NE	38.64	NA	NA	NA	404.08		0.0	*
2Q17		4/3/2017	NE	38.88	NA	NA	NA	403.84		0.0	*
3Q17		7/5/2017	NE	38.04	NA	NA	NA	404.68		0.0	*
4Q17		10/2/2017	NE	37.43	NA	NA	NA	405.29		0.0	*
1Q18		1/3/2018	NE	40.21	NA	NA	NA	402.51		1.6	*
2Q18		4/4/2018	NE	39.81	NA	NA	NA	402.91	398.89 - 373.89 (43.83 - 68.83)	0.0	*
3Q18		7/2/2018	NE	42.35	NA	NA	NA	400.37		0.0	*
4Q18		10/2/2018	NE	42.18	NA	NA	NA	400.54		1.1	*
P-75											
1Q16	446.42	1/5/2016	NE	44.70	NA	NA	NA	401.72	403.29 - 378.29 (43.13 - 68.13)	1.0	
2Q16		4/5/2016	NE	44.33	NA	NA	NA	402.09		0.2	
3Q16		7/8/2016	NE	43.81	NA	NA	NA	402.61		0.0	
4Q16		10/4/2016	NE	42.64	NA	NA	NA	403.78		9.9	*
1Q17		1/17/2017	NE	42.25	NA	NA	NA	404.17		33.6	*
2Q17		4/4/2017	NE	42.19	NA	NA	NA	404.23		30.9	*
3Q17		7/6/2017	NE	42.45	NA	NA	NA	403.97		12.4	*
4Q17		10/2/2017	NE	41.90	NA	NA	NA	404.52		57.8	*
1Q18		1/4/2018	NE	44.01	NA	NA	NA	402.41		3.0	
2Q18		4/4/2018	NE	45.06	NA	NA	NA	401.36		0.0	
3Q18		7/2/2018	NE	45.15	NA	NA	NA	401.27		0.0	
4Q18		10/3/2018	NE	45.06	NA	NA	NA	401.36		14.4	
P-82A											
1Q16	435.02	1/5/2016	NE	27.72	NA	NA	NA	407.30	401.81 - 386.81 (33.21 - 48.21)	0.0	*
2Q16		4/5/2016	NE	27.66	NA	NA	NA	407.36		0.0	*
3Q16		7/7/2016	NE	26.72	NA	NA	NA	408.30		0.0	*
4Q16		10/5/2016	NE	25.73	NA	NA	NA	409.29		0.0	*
1Q17		1/16/2017	NE	26.17	NA	NA	NA	408.85		0.0	*
2Q17		4/4/2017	NE	26.88	NA	NA	NA	408.14		0.0	*
3Q17		7/6/2017	NE	24.70	NA	NA	NA	410.32		0.0	*
4Q17		10/3/2017	NE	25.97	NA	NA	NA	409.05		0.0	*
1Q18		1/3/2018	NE	27.54	NA	NA	NA	407.48		0.0	*
2Q18		4/3/2018	NE	27.83	NA	NA	NA	407.19		0.0	*
3Q18		7/2/2018	NE	28.14	NA	NA	NA	406.88		0.0	*
4Q18		10/3/2018	NE	28.38	NA	NA	NA	406.64		0.0	*

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TABLE 1
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WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
P-82B											
1Q16	434.48	1/5/2016	NE	27.41	NA	NA	NA	407.07	370.88 - 368.88 (63.60 - 65.60)	0.0	*
2Q16		4/5/2016	NE	27.39	NA	NA	NA	407.09		0.2	*
3Q16		7/7/2016	NE	26.49	NA	NA	NA	407.99		0.0	*
4Q16		10/5/2016	NE	25.46	NA	NA	NA	409.02		0.0	*
1Q17		1/16/2017	NE	25.88	NA	NA	NA	408.60		0.0	*
2Q17		4/4/2017	NE	26.61	NA	NA	NA	407.87		0.0	*
3Q17		7/6/2017	NE	24.42	NA	NA	NA	410.06		0.0	*
4Q17		10/3/2017	NE	25.70	NA	NA	NA	408.78		0.0	*
1Q18		1/3/2018	NE	27.26	NA	NA	NA	407.22		0.0	*
2Q18		4/3/2018	NE	27.54	NA	NA	NA	406.94	371.68 - 369.68 (62.80 - 64.80)	0.0	*
3Q18		7/2/2018	NE	27.85	NA	NA	NA	406.63		0.0	*
4Q18		10/3/2018	NE	28.09	NA	NA	NA	406.39		0.0	*
P-82C											
1Q16	434.21	1/5/2016	NE	27.42	NA	NA	NA	406.79	351.44 - 349.44 (82.77 - 84.77)	0.0	*
2Q16		4/5/2016	NE	27.47	NA	NA	NA	406.74		0.0	*
3Q16		7/7/2016	NE	26.26	NA	NA	NA	407.95		0.0	*
4Q16		10/5/2016	NE	25.20	NA	NA	NA	409.01		0.0	*
1Q17		1/16/2017	NE	25.60	NA	NA	NA	408.61		0.0	*
2Q17		4/4/2017	NE	26.30	NA	NA	NA	407.91		0.0	*
3Q17		7/6/2017	NE	24.12	NA	NA	NA	410.09		0.0	*
4Q17		10/3/2017	NE	25.41	NA	NA	NA	408.80		0.0	*
1Q18		1/3/2018	NE	26.98	NA	NA	NA	407.23		0.0	*
2Q18		4/3/2018	NE	27.22	NA	NA	NA	406.99		0.0	*
3Q18		7/2/2018	NE	27.65	NA	NA	NA	406.56		0.0	*
4Q18		10/3/2018	NE	27.79	NA	NA	NA	406.42		0.0	*
P-82D											
1Q16	434.89	1/5/2016	NE	28.14	NA	NA	NA	406.75	323.47 - 321.47 (111.42 - 113.42)	0.0	*
2Q16		4/5/2016	NE	27.72	NA	NA	NA	407.17		0.0	*
3Q16		7/7/2016	NE	26.98	NA	NA	NA	407.91		0.0	*
4Q16		10/5/2016	NE	25.95	NA	NA	NA	408.94		0.0	*
1Q17		1/16/2017	NE	26.40	NA	NA	NA	408.49		0.0	*
2Q17		4/4/2017	NE	27.09	NA	NA	NA	407.80		0.0	*
3Q17		7/6/2017	NE	24.90	NA	NA	NA	409.99		0.0	*
4Q17		10/3/2017	NE	26.20	NA	NA	NA	408.69		0.0	*
1Q18		1/3/2018	NE	27.78	NA	NA	NA	407.11		0.0	*
2Q18		4/3/2018	NE	27.99	NA	NA	NA	406.90	323.35 - 321.35 (111.54 - 113.54)	0.0	*
3Q18		7/2/2018	NE	28.35	NA	NA	NA	406.54		0.0	*
4Q18		10/3/2018	NE	28.57	NA	NA	NA	406.32		0.0	*
P-83A											
1Q16	445.36	1/5/2016	NE	42.50	NA	NA	NA	402.86	398.71 - 383.71 (46.65 - 61.65)	0.1	*
2Q16		4/4/2016	NE	41.74	NA	NA	NA	403.62		0.0	*
3Q16		7/7/2016	NE	41.34	NA	NA	NA	404.02		1.3	*
4Q16		10/3/2016	NE	39.79	NA	NA	NA	405.57		0.0	*
1Q17		1/16/2017	NE	39.25	NA	NA	NA	406.11		0.0	*
2Q17		4/3/2017	NE	39.56	NA	NA	NA	405.80		0.0	*
3Q17		7/6/2017	NE	38.15	NA	NA	NA	407.21		0.0	*
4Q17		10/3/2017	NE	38.88	NA	NA	NA	406.48		0.0	*
1Q18		1/3/2018	NE	39.76	NA	NA	NA	405.60		0.0	*
2Q18		4/2/2018	NE	40.74	NA	NA	NA	404.62		0.0	*
3Q18		7/2/2018	NE	42.59	NA	NA	NA	402.77		0.0	*
4Q18		10/1/2018	NE	43.03	NA	NA	NA	402.33		0.0	*

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TABLE 1
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WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
P-83B											
1Q16	445.55	1/5/2016	NE	42.81	NA	NA	NA	402.74	375.90 - 373.90 (69.65 - 71.65)	0.0	*
2Q16		4/4/2016	NE	42.03	NA	NA	NA	403.52		0.0	*
3Q16		7/7/2016	NE	41.76	NA	NA	NA	403.79		0.0	*
4Q16		10/3/2016	NE	40.23	NA	NA	NA	405.32		1.4	*
1Q17		1/16/2017	NE	39.48	NA	NA	NA	406.07		0.4	*
2Q17		4/3/2017	NE	39.83	NA	NA	NA	405.72		11.0	*
3Q17		7/6/2017	NE	38.71	NA	NA	NA	406.84		0.0	*
4Q17		10/3/2017	NE	39.13	NA	NA	NA	406.42		0.0	*
1Q18		1/3/2018	NE	40.01	NA	NA	NA	405.54		0.6	*
2Q18		4/2/2018	NE	41.01	NA	NA	NA	404.54	371.75 - 369.75 (73.80 - 75.80)	0.0	*
3Q18		7/2/2018	NE	42.83	NA	NA	NA	402.72		0.0	*
4Q18		10/1/2018	NE	43.29	NA	NA	NA	402.26		0.0	*
P-83C											
1Q16	445.78	1/5/2016	NE	42.93	NA	NA	NA	402.85	353.39 - 351.39 (92.39 - 94.39)	0.1	*
2Q16		4/4/2016	NE	42.50	NA	NA	NA	403.28		0.2	*
3Q16		7/7/2016	NE	47.76	NA	NA	NA	398.02		0.0	*
4Q16		10/3/2016	NE	40.19	NA	NA	NA	405.59		0.0	*
1Q17		1/16/2017	NE	39.63	NA	NA	NA	406.15		0.6	*
2Q17		4/3/2017	NE	39.96	NA	NA	NA	405.82		1.4	*
3Q17		7/6/2017	NE	38.56	NA	NA	NA	407.22		0.0	*
4Q17		10/3/2017	NE	39.27	NA	NA	NA	406.51		0.0	*
1Q18		1/3/2018	NE	40.16	NA	NA	NA	405.62		0.0	*
2Q18		4/2/2018	NE	41.15	NA	NA	NA	404.63		0.0	*
3Q18		7/2/2018	NE	42.99	NA	NA	NA	402.79		0.0	*
4Q18		10/1/2018	NE	43.44	NA	NA	NA	402.34		0.0	*
P-83D											
1Q16	445.70	1/5/2016	NE	42.91	NA	NA	NA	402.79	311.99 - 309.99 (133.71 - 135.71)	0.0	*
2Q16		4/4/2016	NE	42.43	NA	NA	NA	403.27		0.0	*
3Q16		7/7/2016	NE	41.72	NA	NA	NA	403.98		0.0	*
4Q16		10/3/2016	NE	40.15	NA	NA	NA	405.55		0.0	*
1Q17		1/16/2017	NE	39.59	NA	NA	NA	406.11		1.2	*
2Q17		4/3/2017	NE	39.94	NA	NA	NA	405.76		0.0	*
3Q17		7/6/2017	NE	38.51	NA	NA	NA	407.19		0.0	*
4Q17		10/3/2017	NE	39.25	NA	NA	NA	406.45		0.0	*
1Q18		1/3/2018	NE	40.11	NA	NA	NA	405.59		0.0	*
2Q18		4/2/2018	NE	41.13	NA	NA	NA	404.57	311.90 - 309.90 (133.80 - 135.80)	0.0	*
3Q18		7/2/2018	NE	43.96	NA	NA	NA	401.74		0.0	*
4Q18		10/1/2018	NE	43.41	NA	NA	NA	402.29		0.0	*
P-84A											
1Q16	446.49	1/5/2016	NE	43.45	NA	NA	NA	403.04	397.99 - 382.99 (48.50 - 63.50)	0.0	*
2Q16		4/5/2016	NE	42.37	NA	NA	NA	404.12		0.0	*
3Q16		7/6/2016	NE	41.86	NA	NA	NA	404.63		0.0	*
4Q16		10/5/2016	NE	40.91	NA	NA	NA	405.58		0.6	*
1Q17		1/17/2017	NE	40.34	NA	NA	NA	406.15		0.0	*
2Q17		4/4/2017	NE	40.80	NA	NA	NA	405.69		0.0	*
3Q17		7/5/2017	NM	NM	NA	NA	NA	NA		NM	Inaccess ble due to construction
4Q17		10/3/2017	NE	39.69	NA	NA	NA	406.80		0.0	*
1Q18		1/3/2018	NE	40.84	NA	NA	NA	405.65		0.1	*
2Q18		4/4/2018	NE	42.22	NA	NA	NA	404.27	397.57 - 382.57 (48.92 - 63.92)	0.0	*
3Q18		7/3/2018	NE	43.16	NA	NA	NA	403.33		0.0	*
4Q18		10/3/2018	NE	43.55	NA	NA	NA	402.94		0.0	*

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QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
P-84B											
1Q16	446.21	1/5/2016	NE	43.18	NA	NA	NA	403.03	372.71 - 370.71 (73.50 - 75.50)	0.6	*
2Q16		4/5/2016	NE	42.33	NA	NA	NA	403.88		0.0	*
3Q16		7/6/2016	NE	41.62	NA	NA	NA	404.59		0.0	*
4Q16		10/5/2016	NE	40.63	NA	NA	NA	405.58		0.0	*
1Q17		1/17/2017	NE	40.08	NA	NA	NA	406.13		0.0	*
2Q17		4/4/2017	NE	40.54	NA	NA	NA	405.67		0.0	*
3Q17		7/5/2017	NM	NM	NA	NA	NA	NA		NM	Inaccess ble due to construction
4Q17		10/3/2017	NE	39.43	NA	NA	NA	406.78		0.0	*
1Q18		1/3/2018	NE	40.56	NA	NA	NA	405.65		0.1	*
2Q18		4/4/2018	NE	41.94	NA	NA	NA	404.27		0.0	*
3Q18		7/3/2018	NE	42.90	NA	NA	NA	403.31		0.0	*
4Q18		10/3/2018	NE	43.28	NA	NA	NA	402.93		0.0	*
P-84C											
1Q16	446.22	1/5/2016	NE	43.49	NA	NA	NA	402.73	352.17 - 350.17 (94.05 - 96.05)	0.0	*
2Q16		4/5/2016	NE	42.28	NA	NA	NA	403.94		0.0	*
3Q16		7/6/2016	NE	41.61	NA	NA	NA	404.61		0.0	*
4Q16		10/5/2016	NE	40.66	NA	NA	NA	405.56		7.5	*
1Q17		1/17/2017	NE	40.08	NA	NA	NA	406.14		0.0	*
2Q17		4/4/2017	NE	40.54	NA	NA	NA	405.68		0.0	*
3Q17		7/5/2017	NM	NM	NA	NA	NA	NA		NM	Inaccess ble due to construction
4Q17		10/3/2017	NE	39.42	NA	NA	NA	406.80		0.0	*
1Q18		1/3/2018	NE	40.57	NA	NA	NA	405.65		0.0	*
2Q18		4/4/2018	NE	41.96	NA	NA	NA	404.26		0.0	*
3Q18		7/3/2018	NE	43.89	NA	NA	NA	402.33		0.0	*
4Q18		10/3/2018	NE	43.28	NA	NA	NA	402.94		0.0	*
P-84D											
1Q16	446.24	1/5/2016	NE	43.51	NA	NA	NA	402.73	325.09 - 323.09 (121.15 - 123.15)	0.6	*
2Q16		4/5/2016	NE	42.26	NA	NA	NA	403.98		0.0	*
3Q16		7/6/2016	NE	41.63	NA	NA	NA	404.61		0.0	*
4Q16		10/5/2016	NE	40.65	NA	NA	NA	405.59		6.0	*
1Q17		1/17/2017	NM	NM	NA	NA	NA	NA		NM	
2Q17		4/4/2017	NE	40.55	NA	NA	NA	405.69		0.0	*
3Q17		7/5/2017	NM	NM	NA	NA	NA	NA		NM	Inaccess ble due to construction
4Q17		10/3/2017	NE	39.45	NA	NA	NA	406.79		0.0	*
1Q18		1/3/2018	NE	40.58	NA	NA	NA	405.66		0.1	*
2Q18		4/4/2018	NE	41.97	NA	NA	NA	404.27	325.41 - 323.41 (120.83 - 122.83)	0.0	*
3Q18		7/3/2018	NE	42.89	NA	NA	NA	403.35		0.0	*
4Q18		10/3/2018	NE	43.28	NA	NA	NA	402.96		0.0	*
P-88A											
1Q16	443.09	1/5/2016	NE	34.35	NA	NA	NA	408.74	404.69 - 389.69 (38.40 - 53.40)	0.0	*
2Q16		4/5/2016	NE	33.21	NA	NA	NA	409.88		0.2	*
3Q16		7/7/2016	NE	32.80	NA	NA	NA	410.29		0.0	*
4Q16		10/5/2016	NE	31.75	NA	NA	NA	411.34		0.0	*
1Q17		1/17/2017	NE	31.75	NA	NA	NA	411.34		0.0	*
2Q17		4/4/2017	NE	32.36	NA	NA	NA	410.73		0.0	*
3Q17		7/6/2017	NE	30.57	NA	NA	NA	412.52		0.0	*
4Q17		10/2/2017	NE	31.10	NA	NA	NA	411.99		0.0	*
1Q18		1/4/2018	NE	32.60	NA	NA	NA	410.49		0.0	*
2Q18		4/4/2018	NE	34.04	NA	NA	NA	409.05		0.0	*
3Q18		7/2/2018	NE	33.86	NA	NA	NA	409.23		0.0	*
4Q18		10/3/2018	NE	34.01	NA	NA	NA	409.08		0.0	*

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TABLE 1
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
P-88B											
1Q16	443.16	1/5/2016	NE	34.41	NA	NA	NA	408.75	371.16 - 369.16 (72.00 - 74.00)	0.0	*
2Q16		4/5/2016	NE	33.43	NA	NA	NA	409.73		0.3	*
3Q16		7/7/2016	NE	32.92	NA	NA	NA	410.24		0.0	*
4Q16		10/5/2016	NE	31.82	NA	NA	NA	411.34		0.0	*
1Q17		1/17/2017	NE	31.81	NA	NA	NA	411.35		3.5	*
2Q17		4/4/2017	NE	32.43	NA	NA	NA	410.73		0.0	*
3Q17		7/6/2017	NE	30.64	NA	NA	NA	412.52		0.0	*
4Q17		10/2/2017	NE	31.15	NA	NA	NA	412.01		0.0	*
1Q18		1/4/2018	NE	32.67	NA	NA	NA	410.49		0.0	*
2Q18		4/4/2018	NE	34.09	NA	NA	NA	409.07	371.51 - 369.51 (71.65 - 73.65)	0.0	*
3Q18		7/2/2018	NE	33.84	NA	NA	NA	409.32		0.0	*
4Q18		10/3/2018	NE	34.08	NA	NA	NA	409.08		0.1	*
P-88C											
1Q16	443.13	1/5/2016	NE	34.39	NA	NA	NA	408.74	350.83 - 348.83 (92.30 - 94.30)	0.0	*
2Q16		4/5/2016	NE	33.20	NA	NA	NA	409.93		0.2	*
3Q16		7/7/2016	NE	32.87	NA	NA	NA	410.26		0.0	*
4Q16		10/5/2016	NE	31.75	NA	NA	NA	411.38		0.0	*
1Q17		1/17/2017	NE	31.77	NA	NA	NA	411.36		0.0	*
2Q17		4/4/2017	NE	32.38	NA	NA	NA	410.75		0.0	*
3Q17		7/6/2017	NE	30.60	NA	NA	NA	412.53		0.0	*
4Q17		10/2/2017	NE	31.10	NA	NA	NA	412.03		0.0	*
1Q18		1/4/2018	NE	32.62	NA	NA	NA	410.51		0.0	*
2Q18		4/4/2018	NE	34.05	NA	NA	NA	409.08		0.0	*
3Q18		7/2/2018	NE	33.88	NA	NA	NA	409.25		0.0	*
4Q18		10/3/2018	NE	34.02	NA	NA	NA	409.11		0.0	*
P-88D											
1Q16	443.20	1/5/2016	NE	34.61	NA	NA	NA	408.59	329.50 - 327.50 (113.70 - 115.70)	0.2	*
2Q16		4/5/2016	NE	33.82	NA	NA	NA	409.38		0.0	*
3Q16		7/7/2016	NE	32.98	NA	NA	NA	410.22		0.0	*
4Q16		10/5/2016	NE	31.97	NA	NA	NA	411.23		0.0	*
1Q17		1/17/2017	NE	31.91	NA	NA	NA	411.29		0.0	*
2Q17		4/4/2017	NE	32.54	NA	NA	NA	410.66		0.0	*
3Q17		7/6/2017	NE	30.69	NA	NA	NA	412.51		0.0	*
4Q17		10/2/2017	NE	31.29	NA	NA	NA	411.91		0.0	*
1Q18		1/4/2018	NE	32.82	NA	NA	NA	410.38		0.0	*
2Q18		4/4/2018	NE	34.17	NA	NA	NA	409.03	331.03 - 329.03 (112.17 - 114.17)	0.0	*
3Q18		7/2/2018	NE	34.09	NA	NA	NA	409.11		0.0	*
4Q18		10/3/2018	NE	34.26	NA	NA	NA	408.94		0.0	*
P-89B											
1Q16	447.44	1/5/2016	NE	42.16	NA	NA	NA	405.28	370.08 - 368.08 (77.36 - 79.36)	0.0	*
2Q16		4/4/2016	NE	40.69	NA	NA	NA	406.75		0.0	*
3Q16		7/5/2016	NE	40.72	NA	NA	NA	406.72		0.1	*
4Q16		10/5/2016	NE	38.84	NA	NA	NA	408.60		0.2	*
1Q17		1/17/2017	NE	38.76	NA	NA	NA	408.68		0.0	*
2Q17		4/4/2017	NE	39.32	NA	NA	NA	408.12		0.0	*
3Q17		7/6/2017	NE	37.49	NA	NA	NA	409.95		0.0	*
4Q17		10/3/2017	NE	38.17	NA	NA	NA	409.27		0.0	*
1Q18		1/4/2018	NE	39.23	NA	NA	NA	408.21		0.0	*
2Q18		4/3/2018	NE	40.47	NA	NA	NA	406.97		0.0	*
3Q18		7/3/2018	NE	41.39	NA	NA	NA	406.05		0.0	*
4Q18		10/2/2018	NE	41.74	NA	NA	NA	405.70		0.0	*

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TABLE 1
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WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
P-89C											
1Q16	447.76	1/5/2016	NE	42.52	NA	NA	NA	405.24	350.13 - 348.13 (97.63 - 99.63)	0.0	*
2Q16		4/4/2016	NE	41.04	NA	NA	NA	406.72		0.0	*
3Q16		7/5/2016	NE	41.05	NA	NA	NA	406.71		0.1	*
4Q16		10/5/2016	NE	39.63	NA	NA	NA	408.13		0.2	*
1Q17		1/17/2017	NE	39.11	NA	NA	NA	408.65		0.0	*
2Q17		4/4/2017	NE	39.66	NA	NA	NA	408.10		0.0	*
3Q17		7/6/2017	NE	37.85	NA	NA	NA	409.91		0.0	*
4Q17		10/3/2017	NE	38.53	NA	NA	NA	409.23		0.0	*
1Q18		1/4/2018	NE	39.65	NA	NA	NA	408.11		0.0	*
2Q18		4/3/2018	NE	40.79	NA	NA	NA	406.97		0.0	*
3Q18		7/3/2018	NE	42.09	NA	NA	NA	405.67		0.0	*
4Q18		10/2/2018	NE	42.11	NA	NA	NA	405.65		0.0	*
P-89D											
1Q16	447.63	1/5/2016	NE	42.56	NA	NA	NA	405.07	307.29 - 305.29 (140.34 - 142.34)	0.0	*
2Q16		4/4/2016	NE	40.94	NA	NA	NA	406.69		0.1	*
3Q16		7/5/2016	NE	41.08	NA	NA	NA	406.55		0.1	*
4Q16		10/5/2016	NE	39.18	NA	NA	NA	408.45		0.2	*
1Q17		1/17/2017	NE	39.03	NA	NA	NA	408.60		0.0	*
2Q17		4/4/2017	NE	39.51	NA	NA	NA	408.12		0.0	*
3Q17		7/6/2017	NE	37.84	NA	NA	NA	409.79		0.0	*
4Q17		10/3/2017	NE	38.48	NA	NA	NA	409.15		0.0	*
1Q18		1/4/2018	NE	39.48	NA	NA	NA	408.15		2.0	*
2Q18		4/3/2018	NE	40.95	NA	NA	NA	406.68		0.0	*
3Q18		7/3/2018	NE	41.76	NA	NA	NA	405.87		0.0	*
4Q18		10/2/2018	NE	42.15	NA	NA	NA	405.48		0.0	*
P-91A											
1Q16	447.24	1/5/2016	47.78	47.82	399.42	399.46	0.04	399.45	395.72 - 380.72 (51.51 - 66.51)	42.3	*
2Q16		4/4/2016	46.49	46.53	400.71	400.75	0.04	400.74		4.1	*
3Q16		7/7/2016	NE	44.12	NA	NA	NA	403.12		13.1	*
4Q16		10/4/2016	44.59	44.61	402.63	402.65	0.02	402.65		4.7	*
1Q17		1/16/2017	NE	43.81	NA	NA	NA	403.43		139	*
2Q17		4/4/2017	44.61	44.64	402.60	402.63	0.03	402.62		43.8	*
3Q17		7/6/2017	43.18	43.21	404.03	404.06	0.03	404.05		304	*
4Q17		10/3/2017	43.79	43.80	403.44	403.45	0.01	403.45		106	*
1Q18		1/2/2018	44.43	44.45	402.79	402.81	0.02	402.81		25.8	*
2Q18		4/3/2018	NE	45.39	NA	NA	NA	401.85		43.1	*
3Q18		7/2/2018	NE	48.52	NA	NA	NA	398.72		151	*
4Q18		10/1/2018	NE	48.70	NA	NA	NA	398.54		5.6	*
P-91B											
1Q16	447.28	1/5/2016	NE	47.88	NA	NA	NA	399.40	372.59 - 370.59 (74.69 - 76.69)	21.9	*
2Q16		4/4/2016	NE	46.67	NA	NA	NA	400.61		1.2	*
3Q16		7/7/2016	NE	46.56	NA	NA	NA	400.72		0.2	*
4Q16		10/4/2016	NE	44.72	NA	NA	NA	402.56		0.7	*
1Q17		1/16/2017	NE	43.93	NA	NA	NA	403.35		2.0	*
2Q17		4/4/2017	NE	44.74	NA	NA	NA	402.54		6.7	*
3Q17		7/6/2017	NE	43.26	NA	NA	NA	404.02		28.7	*
4Q17		10/3/2017	NE	43.88	NA	NA	NA	403.40		8.4	*
1Q18		1/2/2018	NE	44.23	NA	NA	NA	403.05		102	*
2Q18		4/3/2018	NE	45.45	NA	NA	NA	401.83		0.5	*
3Q18		7/2/2018	NE	48.69	NA	NA	NA	398.59		11.0	*
4Q18		10/1/2018	NE	48.88	NA	NA	NA	398.40		12.1	*

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WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
P-91C											
1Q16	447.07	1/5/2016	NE	47.63	NA	NA	NA	399.44	352.34 - 350.34 (94.73 - 96.73)	0.4	*
2Q16		4/4/2016	NE	46.39	NA	NA	NA	400.68		0.7	*
3Q16		7/7/2016	NE	46.32	NA	NA	NA	400.75		0.0	*
4Q16		10/4/2016	NE	44.47	NA	NA	NA	402.60		0.4	*
1Q17		1/16/2017	NE	43.62	NA	NA	NA	403.45		0.2	*
2Q17		4/4/2017	NE	44.51	NA	NA	NA	402.56		0.0	*
3Q17		7/6/2017	NE	43.03	NA	NA	NA	404.04		0.0	*
4Q17		10/3/2017	NE	43.66	NA	NA	NA	403.41		0.4	*
1Q18		1/2/2018	NE	44.00	NA	NA	NA	403.07		9.5	*
2Q18		4/3/2018	NE	45.21	NA	NA	NA	401.86		0.0	*
3Q18		7/2/2018	NE	48.44	NA	NA	NA	398.63		0.0	*
4Q18		10/1/2018	NE	48.61	NA	NA	NA	398.46		0.0	*
P-91D											
1Q16	447.06	1/5/2016	NE	47.64	NA	NA	NA	399.42	278.74 - 276.74 (168.32 - 170.32)	0.6	*
2Q16		4/4/2016	NE	44.01	NA	NA	NA	403.05		2.0	*
3Q16		7/7/2016	NE	46.31	NA	NA	NA	400.75		0.0	*
4Q16		10/4/2016	NE	44.46	NA	NA	NA	402.60		0.3	*
1Q17		1/16/2017	NE	43.67	NA	NA	NA	403.39		1.2	*
2Q17		4/4/2017	NE	44.50	NA	NA	NA	402.56		0.1	*
3Q17		7/6/2017	NE	43.02	NA	NA	NA	404.04		0.0	*
4Q17		10/3/2017	NE	43.64	NA	NA	NA	403.42		0.0	*
1Q18		1/2/2018	NE	43.98	NA	NA	NA	403.08		3.4	*
2Q18		4/3/2018	NE	45.20	NA	NA	NA	401.86		0.0	*
3Q18		7/2/2018	NE	48.41	NA	NA	NA	398.65		0.0	*
4Q18		10/1/2018	NE	48.56	NA	NA	NA	398.50		0.0	*
P-92A											
1Q16	446.24	1/5/2016	45.91	45.93	400.31	400.33	0.02	400.33	398.67 - 383.67 (47.57 - 62.57)	77.1	*
2Q16		4/4/2016	44.17	44.21	402.03	402.07	0.04	402.06		72.9	*
3Q16		7/6/2016	NE	44.12	NA	NA	NA	402.12		16.0	*
4Q16		10/4/2016	42.63	42.71	403.53	403.61	0.08	403.59		11.5	*
1Q17		1/17/2017	42.19	42.22	404.02	404.05	0.03	404.04		42.0	*
2Q17		4/4/2017	42.38	42.40	403.84	403.86	0.02	403.86		55.5	*
3Q17		7/6/2017	41.87	41.89	404.35	404.37	0.02	404.37		215	*
4Q17		10/3/2017	42.12	42.15	404.09	404.12	0.03	404.11		83.7	*
1Q18		1/3/2018	42.91	42.94	403.30	403.33	0.03	403.32		119	*
2Q18		4/4/2018	44.83	44.84	401.40	401.41	0.01	401.41		31.5	*
3Q18		7/3/2018	NE	45.69	NA	NA	NA	400.55		4.0	*
4Q18		10/2/2018	46.04	46.06	400.18	400.20	0.02	400.20		33.8	*
P-92B											
1Q16	446.18	1/5/2016	NE	45.88	NA	NA	NA	400.30	372.53 - 370.53 (73.65 - 75.65)	0.0	*
2Q16		4/4/2016	NE	44.17	NA	NA	NA	402.01		0.3	*
3Q16		7/6/2016	NE	44.10	NA	NA	NA	402.08		0.1	*
4Q16		10/4/2016	NE	42.53	NA	NA	NA	403.65		0.0	*
1Q17		1/17/2017	NE	42.18	NA	NA	NA	404.00		0.0	*
2Q17		4/4/2017	NE	42.36	NA	NA	NA	403.82		0.0	*
3Q17		7/6/2017	NE	41.85	NA	NA	NA	404.33		1.3	*
4Q17		10/3/2017	NE	42.10	NA	NA	NA	404.08		0.0	*
1Q18		1/3/2018	NE	42.89	NA	NA	NA	403.29		0.2	*
2Q18		4/4/2018	NE	44.79	NA	NA	NA	401.39		0.0	*
3Q18		7/3/2018	NE	45.65	NA	NA	NA	400.53		0.5	*
4Q18		10/2/2018	NE	46.01	NA	NA	NA	400.17		0.1	*

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TABLE 1
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
P-92C											
1Q16	446.17	1/5/2016	NE	45.88	NA	NA	NA	400.29	353.21 - 348.21 (92.96 - 97.96)	9.1	*
2Q16		4/4/2016	NE	44.15	NA	NA	NA	402.02		2.1	*
3Q16		7/6/2016	NE	44.10	NA	NA	NA	402.07		11.3	*
4Q16		10/4/2016	NE	42.52	NA	NA	NA	403.65		0.0	*
1Q17		1/17/2017	NE	42.16	NA	NA	NA	404.01		1.8	*
2Q17		4/4/2017	NE	42.35	NA	NA	NA	403.82		1.5	*
3Q17		7/6/2017	NE	41.85	NA	NA	NA	404.32		0.6	*
4Q17		10/3/2017	NE	42.10	NA	NA	NA	404.07		0.1	*
1Q18		1/3/2018	NE	42.88	NA	NA	NA	403.29		1.2	*
2Q18		4/4/2018	NE	44.76	NA	NA	NA	401.41		0.0	*
3Q18		7/3/2018	NE	45.60	NA	NA	NA	400.57		0.3	*
4Q18		10/2/2018	NE	45.97	NA	NA	NA	400.20		2.5	*
P-92D											
1Q16	446.00	1/5/2016	NE	45.77	NA	NA	NA	400.23	305.00 - 303.00 (141.00 - 143.00)	0.0	*
2Q16		4/4/2016	NE	44.01	NA	NA	NA	401.99		0.3	*
3Q16		7/6/2016	NE	43.99	NA	NA	NA	402.01		0.3	*
4Q16		10/4/2016	NE	42.38	NA	NA	NA	403.62		0.0	*
1Q17		1/17/2017	NE	42.04	NA	NA	NA	403.96		0.0	*
2Q17		4/4/2017	NE	42.19	NA	NA	NA	403.81		0.6	*
3Q17		7/6/2017	NE	41.73	NA	NA	NA	404.27		0.0	*
4Q17		10/3/2017	NE	41.97	NA	NA	NA	404.03		0.0	*
1Q18		1/3/2018	NE	42.70	NA	NA	NA	403.30		0.2	*
2Q18		4/4/2018	NE	44.61	NA	NA	NA	401.39		0.0	*
3Q18		7/3/2018	NE	45.50	NA	NA	NA	400.50		0.0	*
4Q18		10/2/2018	NE	45.88	NA	NA	NA	400.12		0.1	*
P-93A											
1Q16	445.12	1/4/2016	NE	43.94	NA	NA	NA	401.18	402.05 - 392.05 (43.07 - 53.07)	0.0	
2Q16		4/4/2016	NE	43.08	NA	NA	NA	402.04		1.0	
3Q16		7/5/2016	NE	42.42	NA	NA	NA	402.70		3.7	*
4Q16		10/3/2016	NE	41.58	NA	NA	NA	403.54		1.9	*
1Q17		1/16/2017	NE	41.04	NA	NA	NA	404.08		7.6	*
2Q17		4/3/2017	NE	41.16	NA	NA	NA	403.96		51.2	*
3Q17		7/5/2017	NE	40.10	NA	NA	NA	405.02		0.0	*
4Q17		10/2/2017	NE	40.53	NA	NA	NA	404.59		152	*
1Q18		1/4/2018	NE	42.79	NA	NA	NA	402.33		12.8	*
2Q18		4/2/2018	NE	43.58	NA	NA	NA	401.54		21.1	
3Q18		7/2/2018	NE	44.03	NA	NA	NA	401.09		0.0	
4Q18		10/2/2018	NE	43.98	NA	NA	NA	401.14		0.0	
P-93B											
1Q16	446.52	1/4/2016	NE	45.30	NA	NA	NA	401.22	371.92 - 369.92 (74.60 - 76.60)	18.9	*
2Q16		4/4/2016	NE	44.54	NA	NA	NA	401.98		2.3	*
3Q16		7/5/2016	NE	43.75	NA	NA	NA	402.77		0.5	*
4Q16		10/3/2016	NE	42.93	NA	NA	NA	403.59		0.0	*
1Q17		1/16/2017	NE	42.41	NA	NA	NA	404.11		0.1	*
2Q17		4/3/2017	NE	42.51	NA	NA	NA	404.01		0.0	*
3Q17		7/5/2017	NE	41.45	NA	NA	NA	405.07		0.0	*
4Q17		10/2/2017	NE	41.88	NA	NA	NA	404.64		0.0	*
1Q18		1/3/2018	NE	44.25	NA	NA	NA	402.27		0.0	*
2Q18		4/2/2018	NE	44.94	NA	NA	NA	401.58	371.64 - 369.64 (74.88 - 76.88)	0.0	*
3Q18		7/2/2018	NE	45.60	NA	NA	NA	400.92		0.5	*
4Q18		10/2/2018	NE	45.36	NA	NA	NA	401.16		0.0	*

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WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
P-93C											
1Q16	446.28	1/4/2016	NE	45.04	NA	NA	NA	401.24	353.81 - 348.81 (92.47 - 97.47)	0.1	*
2Q16		4/4/2016	NE	44.20	NA	NA	NA	402.08		0.2	*
3Q16		7/5/2016	NE	43.57	NA	NA	NA	402.71		0.6	*
4Q16		10/3/2016	NE	41.73	NA	NA	NA	404.55		0.0	*
1Q17		1/16/2017	NE	42.20	NA	NA	NA	404.08		12.6	*
2Q17		4/3/2017	NE	42.31	NA	NA	NA	403.97		0.0	*
3Q17		7/5/2017	NE	41.26	NA	NA	NA	405.02		0.0	*
4Q17		10/2/2017	NE	41.68	NA	NA	NA	404.60		0.0	*
1Q18		1/3/2018	NE	43.77	NA	NA	NA	402.51		0.3	*
2Q18		4/2/2018	NE	44.78	NA	NA	NA	401.50	353.40 - 348.40 (92.88 - 97.88)	0.0	*
3Q18		7/2/2018	NE	45.28	NA	NA	NA	401.00		0.0	*
4Q18		10/2/2018	NE	45.19	NA	NA	NA	401.09		0.0	*
P-93D											
1Q16	446.73	1/4/2016	NE	45.45	NA	NA	NA	401.28	320.98 - 318.98 (125.75 - 127.75)	0.0	*
2Q16		4/4/2016	NE	44.61	NA	NA	NA	402.12		0.0	*
3Q16		7/5/2016	NE	43.97	NA	NA	NA	402.76		1.1	*
4Q16		10/3/2016	NE	43.12	NA	NA	NA	403.61		0.0	*
1Q17		1/16/2017	NE	42.59	NA	NA	NA	404.14		0.0	*
2Q17		4/3/2017	NE	42.72	NA	NA	NA	404.01		0.0	*
3Q17		7/5/2017	NE	41.65	NA	NA	NA	405.08		0.0	*
4Q17		10/2/2017	NE	42.10	NA	NA	NA	404.63		0.0	*
1Q18		1/3/2018	NE	44.19	NA	NA	NA	402.54		0.0	*
2Q18		4/2/2018	NE	45.12	NA	NA	NA	401.61		0.0	*
3Q18		7/2/2018	NE	45.67	NA	NA	NA	401.06		0.0	*
4Q18		10/2/2018	NE	45.57	NA	NA	NA	401.16		0.0	*
P-94											
1Q16	445.14	1/5/2016	NE	38.98	NA	NA	NA	406.16	399.29 - 384.29 (45.85 - 60.85)	0.0	*
2Q16		4/4/2016	NE	37.14	NA	NA	NA	408.00		0.0	*
3Q16		7/6/2016	NE	37.06	NA	NA	NA	408.08		1.1	*
4Q16		10/3/2016	NE	34.80	NA	NA	NA	410.34		0.0	*
1Q17		1/16/2017	NE	35.04	NA	NA	NA	410.10		0.0	*
2Q17		4/3/2017	NE	35.64	NA	NA	NA	409.50		0.0	*
3Q17		7/6/2017	NE	33.00	NA	NA	NA	412.14		0.0	*
4Q17		10/3/2017	NE	34.60	NA	NA	NA	410.54		0.0	*
1Q18		1/3/2018	NE	35.80	NA	NA	NA	409.34		0.0	*
2Q18		4/2/2018	NE	37.09	NA	NA	NA	408.05	398.90 - 383.90 (46.24 - 61.24)	0.0	*
3Q18		7/2/2018	NE	37.80	NA	NA	NA	407.34		0.0	*
4Q18		10/1/2018	NE	38.36	NA	NA	NA	406.78		0.0	*
P-95											
1Q16	443.42	1/5/2016	NE	32.50	NA	NA	NA	410.92	406.90 - 391.90 (36.52 - 51.52)	0.2	*
2Q16		4/5/2016	NE	31.37	NA	NA	NA	412.05		0.0	*
3Q16		7/7/2016	NE	30.95	NA	NA	NA	412.47		0.0	*
4Q16		10/5/2016	NE	29.72	NA	NA	NA	413.70		0.1	*
1Q17		1/17/2017	NE	29.71	NA	NA	NA	413.71		6.8	*
2Q17		4/4/2017	NE	30.40	NA	NA	NA	413.02		0.0	*
3Q17		7/6/2017	NE	28.61	NA	NA	NA	414.81		0.0	*
4Q17		10/2/2017	NE	29.02	NA	NA	NA	414.40		0.0	*
1Q18		1/4/2018	NE	30.53	NA	NA	NA	412.89		0.0	*
2Q18		4/4/2018	NE	32.02	NA	NA	NA	411.40		0.0	*
3Q18		7/2/2018	NE	31.87	NA	NA	NA	411.55		0.0	*
4Q18		10/3/2018	NE	32.03	NA	NA	NA	411.39		0.1	*

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WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
P-102											
1Q16	444.97	1/5/2016	NE	35.79	NA	NA	NA	409.18	402.22 - 382.22 (42.75 - 62.75)	0.0	*
2Q16		4/5/2016	NE	34.74	NA	NA	NA	410.23		3.6	*
3Q16		7/8/2016	NE	34.54	NA	NA	NA	410.43		17.8	*
4Q16		10/5/2016	NE	33.01	NA	NA	NA	411.96		105	*
1Q17		1/17/2017	NE	33.00	NA	NA	NA	411.97		22.3	*
2Q17		4/4/2017	NE	33.68	NA	NA	NA	411.29		107	*
3Q17		7/6/2017	NE	31.80	NA	NA	NA	413.17		15.6	*
4Q17		10/2/2017	NE	32.19	NA	NA	NA	412.78		631	*
1Q18		1/4/2018	NE	33.41	NA	NA	NA	411.56		363	*
2Q18		4/4/2018	NE	35.06	NA	NA	NA	409.91		0.2	*
3Q18		7/2/2018	NE	35.09	NA	NA	NA	409.88		0.0	*
4Q18		10/3/2018	NE	35.32	NA	NA	NA	409.65		6.3	*
P-114R											
1Q16	429.26	1/6/2016	NE	25.73	NA	NA	NA	403.53	406.25 - 396.25 (23.01 - 33.01)	41.7	
2Q16		4/5/2016	NE	25.64	NA	NA	NA	403.62		28.1	
3Q16		7/8/2016	NE	24.95	NA	NA	NA	404.31		0.0	
4Q16		10/4/2016	NE	23.74	NA	NA	NA	405.52		51.0	
1Q17		1/17/2017	NE	24.81	NA	NA	NA	404.45		1.9	
2Q17		4/5/2017	NE	24.93	NA	NA	NA	404.33		0.7	
3Q17		7/6/2017	NE	22.38	NA	NA	NA	406.88		43.7	*
4Q17		10/2/2017	NE	24.21	NA	NA	NA	405.05		0.0	
1Q18		1/3/2018	NE	26.16	NA	NA	NA	403.10		9.0	
2Q18		4/9/2018	NE	26.76	NA	NA	NA	402.50		0.1	
3Q18		7/2/2018	NE	26.50	NA	NA	NA	402.76		0.0	
4Q18		10/2/2018	NE	26.26	NA	NA	NA	403.00		0.0	
P-115											
1Q16	433.36	1/5/2016	NE	29.61	NA	NA	NA	403.75	401.06 - 381.06 (32.30 - 52.30)	0.0	*
2Q16		4/5/2016	NE	29.64	NA	NA	NA	403.72		0.0	*
3Q16		7/8/2016	NE	28.87	NA	NA	NA	404.49		0.0	*
4Q16		10/4/2016	NE	27.61	NA	NA	NA	405.75		0.2	*
1Q17		1/17/2017	NE	28.88	NA	NA	NA	404.48		1.9	*
2Q17		4/5/2017	NE	29.20	NA	NA	NA	404.16		0.0	*
3Q17		7/6/2017	NE	26.28	NA	NA	NA	407.08		0.0	*
4Q17		10/2/2017	NE	28.33	NA	NA	NA	405.03		0.0	*
1Q18		1/3/2018	NE	30.22	NA	NA	NA	403.14		0.0	*
2Q18		4/4/2018	NE	31.03	NA	NA	NA	402.33		0.0	*
3Q18		7/2/2018	NE	30.38	NA	NA	NA	402.98		0.0	*
4Q18		10/2/2018	NE	30.07	NA	NA	NA	403.29		0.0	*
P-116											
1Q16	436.63	1/5/2016	NE	32.85	NA	NA	NA	403.78	399.19 - 379.19 (37.44 - 57.44)	0.0	*
2Q16		4/5/2016	NE	33.01	NA	NA	NA	403.62		0.0	*
3Q16		7/8/2016	NE	32.23	NA	NA	NA	404.40		0.0	*
4Q16		10/4/2016	NE	30.96	NA	NA	NA	405.67		0.1	*
1Q17		1/17/2017	NE	32.37	NA	NA	NA	404.26		0.1	*
2Q17		4/5/2017	NE	32.66	NA	NA	NA	403.97		0.0	*
3Q17		7/6/2017	NE	29.61	NA	NA	NA	407.02		2.9	*
4Q17		10/2/2017	NE	32.17	NA	NA	NA	404.46		0.0	*
1Q18		1/3/2018	NE	33.69	NA	NA	NA	402.94		0.0	*
2Q18		4/4/2018	NE	34.47	NA	NA	NA	402.16		0.0	*
3Q18		7/2/2018	NE	33.74	NA	NA	NA	402.89		0.0	*
4Q18		10/2/2018	NE	33.38	NA	NA	NA	403.25		0.0	*

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WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
P-117											
1Q16	432.71	1/6/2016	NE	28.77	NA	NA	NA	403.94	399.78 - 379.78 (32.93 - 52.93)	0.0	*
2Q16		4/5/2016	NE	29.18	NA	NA	NA	403.53		0.0	*
3Q16		7/8/2016	NE	28.39	NA	NA	NA	404.32		0.0	*
4Q16		10/4/2016	NE	27.13	NA	NA	NA	405.58		0.1	*
1Q17		1/17/2017	NE	28.55	NA	NA	NA	404.16		0.0	*
2Q17		4/5/2017	NE	28.93	NA	NA	NA	403.78		0.0	*
3Q17		7/6/2017	NE	25.78	NA	NA	NA	406.93		0.0	*
4Q17		10/2/2017	NE	28.08	NA	NA	NA	404.63		0.0	*
1Q18		1/3/2018	NE	29.90	NA	NA	NA	402.81		0.0	*
2Q18		4/4/2018	NE	30.68	NA	NA	NA	402.03		0.0	*
3Q18		7/2/2018	NE	29.92	NA	NA	NA	402.79		0.0	*
4Q18		10/2/2018	NE	29.56	NA	NA	NA	403.15		0.0	*
P-118											
1Q16	431.31	1/5/2016	NE	27.15	NA	NA	NA	404.16	400.19 - 384.26 (31.12 - 47.05)	0.0	*
2Q16		4/5/2016	NE	28.17	NA	NA	NA	403.14		0.0	*
3Q16		7/8/2016	NE	27.12	NA	NA	NA	404.19		0.7	*
4Q16		10/4/2016	NE	25.78	NA	NA	NA	405.53		0.1	*
1Q17		1/17/2017	NE	27.61	NA	NA	NA	403.70		0.6	*
2Q17		4/5/2017	NE	27.92	NA	NA	NA	403.39		0.0	*
3Q17		7/6/2017	NE	24.45	NA	NA	NA	406.86		0.0	*
4Q17		10/2/2017	NE	27.19	NA	NA	NA	404.12		0.0	*
1Q18		1/3/2018	NE	28.99	NA	NA	NA	402.32		0.0	*
2Q18		4/4/2018	NE	29.57	NA	NA	NA	401.74		0.0	*
3Q18		7/2/2018	NE	28.63	NA	NA	NA	402.68		0.0	*
4Q18		10/3/2018	NE	28.11	NA	NA	NA	403.20		0.0	*
P-119											
1Q16	431.90	1/5/2016	NE	28.52	NA	NA	NA	403.38	401.23 - 385.30 (30.67 - 46.60)	0.0	*
2Q16		4/5/2016	NE	28.28	NA	NA	NA	403.62		0.0	*
3Q16		7/8/2016	NE	27.61	NA	NA	NA	404.29		0.0	*
4Q16		10/4/2016	NE	26.32	NA	NA	NA	405.58		0.1	*
1Q17		1/17/2017	NE	26.92	NA	NA	NA	404.98		0.0	*
2Q17		4/5/2017	NE	27.14	NA	NA	NA	404.76		0.0	*
3Q17		7/6/2017	NE	25.06	NA	NA	NA	406.84		1.5	*
4Q17		10/2/2017	NE	26.38	NA	NA	NA	405.52		0.0	*
1Q18		1/3/2018	NE	28.27	NA	NA	NA	403.63		0.0	*
2Q18		4/4/2018	NE	29.24	NA	NA	NA	402.66		0.0	*
3Q18		7/2/2018	NE	29.03	NA	NA	NA	402.87		0.0	*
4Q18		10/2/2018	NE	28.88	NA	NA	NA	403.02		0.0	*
P-120											
1Q16	432.82	1/5/2016	NE	28.19	NA	NA	NA	404.63	401.44 - 385.51 (31.38 - 47.31)	0.0	*
2Q16		4/5/2016	NE	28.30	NA	NA	NA	404.52		0.0	*
3Q16		7/8/2016	NE	27.59	NA	NA	NA	405.23		0.0	*
4Q16		10/4/2016	NE	26.24	NA	NA	NA	406.58		0.0	*
1Q17		1/17/2017	NE	27.37	NA	NA	NA	405.45		0.0	*
2Q17		4/5/2017	NE	27.55	NA	NA	NA	405.27		0.0	*
3Q17		7/6/2017	NE	25.10	NA	NA	NA	407.72		0.4	*
4Q17		10/2/2017	NE	26.84	NA	NA	NA	405.98		0.0	*
1Q18		1/3/2018	NE	28.69	NA	NA	NA	404.13		0.0	*
2Q18		4/4/2018	NE	29.48	NA	NA	NA	403.34		0.0	*
3Q18		7/2/2018	NE	29.04	NA	NA	NA	403.78		0.0	*
4Q18		10/2/2018	NE	28.90	NA	NA	NA	403.92		0.0	*

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TABLE 1
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
P-129											
1Q16	432.43	1/6/2016	NE	26.90	NA	NA	NA	405.53	400.46 - 384.53 (31.97 - 47.90)	0.0	*
2Q16		4/5/2016	NE	30.18	NA	NA	NA	402.25		0.0	*
3Q16		7/8/2016	NE	28.77	NA	NA	NA	403.66		0.0	*
4Q16		10/4/2016	NE	27.31	NA	NA	NA	405.12		0.4	*
1Q17		1/17/2017	NE	30.09	NA	NA	NA	402.34		0.0	*
2Q17		4/5/2017	NE	30.17	NA	NA	NA	402.26		0.0	*
3Q17		7/6/2017	NE	26.09	NA	NA	NA	406.34		0.0	*
4Q17		10/2/2017	NE	29.86	NA	NA	NA	402.57		0.0	*
1Q18		1/3/2018	NE	31.67	NA	NA	NA	400.76		0.0	*
2Q18		4/4/2018	NE	31.58	NA	NA	NA	400.85		0.0	*
3Q18		7/3/2018	NE	29.91	NA	NA	NA	402.52		0.0	*
4Q18		10/2/2018	NE	29.62	NA	NA	NA	402.81		0.0	*
ROST-3-MW											
1Q16	442.29	1/4/2016	NE	40.84	NA	NA	NA	401.45	404.48 - 394.48 (37.81 - 47.81)	1.2	
2Q16		4/4/2016	NE	39.64	NA	NA	NA	402.65		0.0	
3Q16		7/6/2016	NE	38.51	NA	NA	NA	403.78		191	
4Q16		10/3/2016	NE	38.20	NA	NA	NA	404.09		320	
1Q17		1/11/2017	NE	37.67	NA	NA	NA	404.62		182	*
2Q17		4/3/2017	NE	38.13	NA	NA	NA	404.16		248	
3Q17		7/5/2017	NE	36.64	NA	NA	NA	405.65		212	*
4Q17		10/2/2017	NE	36.72	NA	NA	NA	405.57		1045	*
1Q18		1/3/2018	NE	38.80	NA	NA	NA	403.49		296	
2Q18		4/2/2018	NE	39.89	NA	NA	NA	402.40		1.3	
3Q18		7/2/2018	NE	40.72	NA	NA	NA	401.57		0.0	
4Q18		10/1/2018	NE	40.78	NA	NA	NA	401.51		0.0	
ROST-4-PZ											
1Q16	442.13	1/4/2016	NE	40.10	NA	NA	NA	402.03	407.20 - 397.20 (34.93 - 44.93)	0.0	
2Q16		4/4/2016	NE	38.75	NA	NA	NA	403.38		0.0	
3Q16		7/5/2016	NE	37.98	NA	NA	NA	404.15		0.1	
4Q16		10/3/2016	NE	37.67	NA	NA	NA	404.46		0.5	
1Q17		1/16/2017	NE	36.96	NA	NA	NA	405.17		8.2	
2Q17		4/3/2017	NE	37.35	NA	NA	NA	404.78		0.0	
3Q17		7/5/2017	NE	36.55	NA	NA	NA	405.58		0.0	
4Q17		10/2/2017	NE	36.12	NA	NA	NA	406.01		0.3	
1Q18		1/2/2018	NE	37.88	NA	NA	NA	404.25		60.7	
2Q18		4/2/2018	NE	39.15	NA	NA	NA	402.98		0.0	
3Q18		7/2/2018	NE	39.77	NA	NA	NA	402.36		0.0	
4Q18		10/1/2018	NE	39.81	NA	NA	NA	402.32		0.0	
ROST-4-PZ(A)											
1Q16	442.11	1/4/2016	NE	39.78	NA	NA	NA	402.33	407.34 - 397.34 (34.77 - 44.77)	0.0	
2Q16		4/4/2016	NE	38.18	NA	NA	NA	403.93		8.6	
3Q16		7/5/2016	NE	36.89	NA	NA	NA	405.22		0.0	
4Q16		10/3/2016	NE	36.52	NA	NA	NA	405.59		0.3	
1Q17		1/16/2017	NE	36.23	NA	NA	NA	405.88		0.3	
2Q17		4/3/2017	NE	36.80	NA	NA	NA	405.31		0.0	
3Q17		7/5/2017	NE	35.80	NA	NA	NA	406.31		0.0	
4Q17		10/2/2017	NE	35.42	NA	NA	NA	406.69		2.3	
1Q18		1/2/2018	NE	37.16	NA	NA	NA	404.95		1.3	
2Q18		4/2/2018	NE	38.53	NA	NA	NA	403.58		0.0	
3Q18		7/2/2018	NE	39.59	NA	NA	NA	402.52		0.0	
4Q18		10/2/2018	NE	39.67	NA	NA	NA	402.44		0.0	

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TABLE 1
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WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
ROST-4-PZ(B)											
1Q16	442.38	1/4/2016	NE	40.06	NA	NA	NA	402.32	407.33 - 397.33 (35.05 - 45.05)	0.0	
2Q16		4/4/2016	NE	38.54	NA	NA	NA	403.84		0.7	
3Q16		7/5/2016	NE	37.89	NA	NA	NA	404.49		0.0	
4Q16		10/3/2016	NE	37.54	NA	NA	NA	404.84		0.5	
1Q17		1/16/2017	NE	36.96	NA	NA	NA	405.42		12.0	
2Q17		4/3/2017	NE	37.43	NA	NA	NA	404.95		0.0	
3Q17		7/5/2017	NE	36.53	NA	NA	NA	405.85		0.0	
4Q17		10/2/2017	NE	36.09	NA	NA	NA	406.29		0.7	
1Q18		1/2/2018	NE	37.85	NA	NA	NA	404.53		0.9	
2Q18		4/2/2018	NE	39.30	NA	NA	NA	403.08		0.0	
3Q18		7/2/2018	NE	40.02	NA	NA	NA	402.36		0.0	
4Q18		10/1/2018	NE	39.82	NA	NA	NA	402.56		0.0	
ROST-4-PZ(C)											
1Q16	442.66	1/4/2016	NE	41.11	NA	NA	NA	401.55	407.71 - 397.71 (34.95 - 44.95)	0.0	
2Q16		4/4/2016	NE	39.73	NA	NA	NA	402.93		0.0	
3Q16		7/6/2016	NE	38.77	NA	NA	NA	403.89		0.0	
4Q16		10/3/2016	NE	38.55	NA	NA	NA	404.11		2.8	
1Q17		1/16/2017	NE	37.88	NA	NA	NA	404.78		9.8	
2Q17		4/3/2017	NE	38.24	NA	NA	NA	404.42		0.0	
3Q17		7/5/2017	NE	37.23	NA	NA	NA	405.43		0.0	
4Q17		10/2/2017	NE	36.99	NA	NA	NA	405.67		0.2	
1Q18		1/2/2018	NE	38.75	NA	NA	NA	403.91		30.9	
2Q18		4/2/2018	NE	39.98	NA	NA	NA	402.68		0.0	
3Q18		7/2/2018	NE	40.88	NA	NA	NA	401.78		0.0	
4Q18		10/1/2018	NE	40.93	NA	NA	NA	401.73		0.0	
ROST-4-PZ(D)											
1Q16	442.98	1/4/2016	NE	40.95	NA	NA	NA	402.03	408.01 - 398.01 (34.97 - 44.97)	0.0	
2Q16		4/4/2016	NE	39.60	NA	NA	NA	403.38		0.0	
3Q16		7/6/2016	NE	38.67	NA	NA	NA	404.31		0.0	
4Q16		10/3/2016	NE	38.41	NA	NA	NA	404.57		14.1	
1Q17		1/16/2017	NE	37.68	NA	NA	NA	405.30		71.9	
2Q17		4/3/2017	NE	38.09	NA	NA	NA	404.89		0.0	
3Q17		7/5/2017	NE	37.17	NA	NA	NA	405.81		0.0	
4Q17		10/2/2017	NE	36.85	NA	NA	NA	406.13		0.1	
1Q18		1/2/2018	NE	38.63	NA	NA	NA	404.35		0.0	
2Q18		4/2/2018	NE	39.82	NA	NA	NA	403.16		0.0	
3Q18		7/2/2018	NE	40.77	NA	NA	NA	402.21		0.0	
4Q18		10/1/2018	NE	40.23	NA	NA	NA	402.75		0.0	
ROST-4-PZ(E)											
1Q16	441.96	1/4/2016	NE	39.68	NA	NA	NA	402.28	407.21 - 397.21 (34.75 - 44.75)	4.4	
2Q16		4/4/2016	NE	38.63	NA	NA	NA	403.33		0.0	
3Q16		7/5/2016	NE	37.86	NA	NA	NA	404.10		0.1	
4Q16		10/3/2016	NE	37.61	NA	NA	NA	404.35		0.8	
1Q17		1/16/2017	NE	36.94	NA	NA	NA	405.02		0.0	
2Q17		4/3/2017	NE	37.28	NA	NA	NA	404.68		0.0	
3Q17		7/5/2017	NE	36.48	NA	NA	NA	405.48		0.0	
4Q17		10/2/2017	NE	36.10	NA	NA	NA	405.86		0.3	
1Q18		1/2/2018	NE	37.85	NA	NA	NA	404.11		11.1	
2Q18		4/3/2018	NE	38.78	NA	NA	NA	403.18		0.0	
3Q18		7/2/2018	NE	39.54	NA	NA	NA	402.42		0.0	
4Q18		10/1/2018	NE	39.59	NA	NA	NA	402.37		0.0	

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WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
ROST-4-PZ(F)											
1Q16	442.12	1/4/2016	NE	39.77	NA	NA	NA	402.35	407.59 - 397.59 (34.53 - 44.53)	0.0	
2Q16		4/4/2016	NE	38.75	NA	NA	NA	403.37		0.0	
3Q16		7/5/2016	NE	38.10	NA	NA	NA	404.02		0.0	
4Q16		10/3/2016	NE	37.85	NA	NA	NA	404.27		1.6	
1Q17		1/16/2017	NE	37.20	NA	NA	NA	404.92		0.0	
2Q17		4/3/2017	NE	37.63	NA	NA	NA	404.49		0.0	
3Q17		7/5/2017	NE	36.67	NA	NA	NA	405.45		0.0	
4Q17		10/2/2017	NE	36.25	NA	NA	NA	405.87		0.0	
1Q18		1/2/2018	NE	38.07	NA	NA	NA	404.05		0.7	
2Q18		4/3/2018	NE	38.97	NA	NA	NA	403.15		0.0	
3Q18		7/2/2018	NE	39.57	NA	NA	NA	402.55		0.0	
4Q18		10/1/2018	NE	39.59	NA	NA	NA	402.53		0.0	
ROST-4-PZ(G)											
1Q16	442.13	1/4/2016	NE	41.02	NA	NA	NA	401.11	407.85 - 397.85 (34.28 - 44.28)	0.7	
2Q16		4/4/2016	NE	39.81	NA	NA	NA	402.32		0.0	
3Q16		7/6/2016	NE	38.34	NA	NA	NA	403.79		0.0	
4Q16		10/3/2016	NE	38.29	NA	NA	NA	403.84		0.4	
1Q17		1/16/2017	NE	37.57	NA	NA	NA	404.56		52.7	
2Q17		4/3/2017	NE	37.93	NA	NA	NA	404.20		0.4	
3Q17		7/5/2017	NE	36.77	NA	NA	NA	405.36		9.2	
4Q17		10/2/2017	NE	36.43	NA	NA	NA	405.70		272	
1Q18		1/2/2018	NE	38.97	NA	NA	NA	403.16		77.4	
2Q18		4/2/2018	NE	39.84	NA	NA	NA	402.29		0.2	
3Q18		7/2/2018	NE	40.87	NA	NA	NA	401.26		0.0	
4Q18		10/1/2018	NE	40.94	NA	NA	NA	401.19		0.0	
S-1											
1Q16	443.90	1/5/2016	42.59	42.62	401.28	401.31	0.03	401.30	Unknown	242	
2Q16		4/4/2016	41.66	41.98	401.92	402.24	0.32	402.18		156	
3Q16		7/6/2016	NE	39.12	NA	NA	NA	404.78		61.6	
4Q16		10/4/2016	40.22	40.26	403.64	403.68	0.04	403.67		97.1	
1Q17		1/16/2017	39.30	39.37	404.53	404.60	0.07	404.59		420	
2Q17		4/3/2017	39.35	39.41	404.49	404.55	0.06	404.54		356	
3Q17		7/6/2017	39.02	39.08	404.82	404.88	0.06	404.87		602	
4Q17		10/3/2017	39.45	39.61	404.29	404.45	0.16	404.42		163	
1Q18		1/3/2018	40.78	40.85	403.05	403.12	0.07	403.11		185	
2Q18		4/4/2018	42.44	42.50	401.40	401.46	0.06	401.45		191	
3Q18		7/3/2018	42.88	42.95	400.95	401.02	0.07	401.01		168	
4Q18		10/2/2018	42.90	43.02	400.88	401.00	0.12	400.98		176	
T-1											
1Q16	445.40	1/4/2016	NE	43.11	NA	NA	NA	402.29	398.40 - 388.40 (47.00 - 57.00)	0.0	*
2Q16		4/4/2016	NE	42.04	NA	NA	NA	403.36		0.0	*
3Q16		7/7/2016	NM	NM	NA	NA	NA	NA		NM	Unsafe condition at well - Unable to access
4Q16		10/3/2016	NE	40.52	NA	NA	NA	404.88		4.2	*
1Q17		1/16/2017	NE	40.05	NA	NA	NA	405.35		0.0	*
2Q17		4/3/2017	NE	40.51	NA	NA	NA	404.89		0.0	*
3Q17		7/5/2017	NE	39.11	NA	NA	NA	406.29		0.0	*
4Q17		10/2/2017	NE	39.30	NA	NA	NA	406.10		2.3	*
1Q18		1/2/2018	NE	41.16	NA	NA	NA	404.24		8.0	*
2Q18		4/2/2018	NE	42.22	NA	NA	NA	403.18		0.0	*
3Q18		7/2/2018	NE	43.16	NA	NA	NA	402.24		0.0	*
4Q18		10/2/2018	NE	43.33	NA	NA	NA	402.07		0.0	*

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WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
T-2											
1Q16	443.21	1/5/2016	NE	41.40	NA	NA	NA	401.81	392.72 - 372.56 (50.49 - 70.64)	0.0	*
2Q16		4/4/2016	NE	40.28	NA	NA	NA	402.93		3.5	*
3Q16		7/5/2016	NE	39.67	NA	NA	NA	403.54		0.1	*
4Q16		10/3/2016	NE	38.69	NA	NA	NA	404.52		0.0	*
1Q17		1/16/2017	NE	37.95	NA	NA	NA	405.26		0.0	*
2Q17		4/3/2017	NE	38.30	NA	NA	NA	404.91		0.0	*
3Q17		7/5/2017	NE	37.21	NA	NA	NA	406.00		0.0	*
4Q17		10/3/2017	NE	37.54	NA	NA	NA	405.67		0.0	*
1Q18		1/2/2018	NE	38.82	NA	NA	NA	404.39		0.0	*
2Q18		4/2/2018	NE	40.07	NA	NA	NA	403.14		0.0	*
3Q18		7/2/2018	NE	41.40	NA	NA	NA	401.81		0.0	*
4Q18		10/1/2018	NE	41.69	NA	NA	NA	401.52		0.0	*
T-3											
1Q16	449.03	1/5/2016	NE	48.55	NA	NA	NA	400.48	403.81 - 388.81 (45.22 - 60.22)	0.1	
2Q16		4/4/2016	NE	47.07	NA	NA	NA	401.96		0.8	
3Q16		7/5/2016	NE	46.89	NA	NA	NA	402.14		0.2	
4Q16		10/4/2016	NE	45.41	NA	NA	NA	403.62		0.0	
1Q17		1/17/2017	NE	44.71	NA	NA	NA	404.32		0.0	*
2Q17		4/3/2017	NE	45.05	NA	NA	NA	403.98		0.0	*
3Q17		7/6/2017	NE	44.04	NA	NA	NA	404.99		0.0	*
4Q17		10/3/2017	NE	44.42	NA	NA	NA	404.61		0.0	*
1Q18		1/2/2018	45.43	45.44	403.59	403.60	0.01	403.60		7.6	
2Q18		4/4/2018	NE	46.94	NA	NA	NA	402.09		0.1	
3Q18		7/2/2018	NE	48.85	NA	NA	NA	400.18		0.0	
4Q18		10/1/2018	NE	49.26	NA	NA	NA	399.77		0.0	
T-4											
1Q16	446.63	1/5/2016	NE	46.73	NA	NA	NA	399.90	398.32 - 383.32 (48.31 - 63.31)	0.2	*
2Q16		4/4/2016	NE	44.77	NA	NA	NA	401.86		0.1	*
3Q16		7/7/2016	NE	45.04	NA	NA	NA	401.59		0.0	*
4Q16		10/4/2016	NE	42.80	NA	NA	NA	403.83		0.0	*
1Q17		1/17/2017	NE	42.50	NA	NA	NA	404.13		0.0	*
2Q17		4/4/2017	NE	42.98	NA	NA	NA	403.65		12.4	*
3Q17		7/6/2017	NE	41.92	NA	NA	NA	404.71		0.0	*
4Q17		10/3/2017	NE	42.65	NA	NA	NA	403.98		0.0	*
1Q18		1/4/2018	NE	43.21	NA	NA	NA	403.42		10.4	*
2Q18		4/4/2018	NE	45.12	NA	NA	NA	401.51		0.0	*
3Q18		7/3/2018	NE	46.96	NA	NA	NA	399.67		0.0	*
4Q18		10/2/2018	NE	47.04	NA	NA	NA	399.59		0.1	*
T-5											
1Q16	443.47	1/6/2016	NE	41.74	NA	NA	NA	401.73	395.14 - 378.59 (48.33 - 64.88)	6.9	*
2Q16		4/4/2016	NE	40.47	NA	NA	NA	403.00		0.3	*
3Q16		7/6/2016	NE	40.30	NA	NA	NA	403.17		4.3	*
4Q16		10/5/2016	NE	38.99	NA	NA	NA	404.48		28.5	*
1Q17		1/16/2017	NE	38.38	NA	NA	NA	405.09		2.6	*
2Q17		4/3/2017	NE	38.36	NA	NA	NA	405.11		0.0	*
3Q17		7/6/2017	NE	38.07	NA	NA	NA	405.40		9.4	*
4Q17		10/3/2017	NE	38.38	NA	NA	NA	405.09		40.9	*
1Q18		1/3/2018	NE	39.45	NA	NA	NA	404.02		3.0	*
2Q18		4/4/2018	NM	NM	NA	NA	NA	NA		NM	Unsafe condition at well - Unable to access
3Q18		7/3/2018	NE	41.59	NA	NA	NA	401.88		2.2	*
4Q18		10/2/2018	NE	41.87	NA	NA	NA	401.60		5.7	*

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TABLE 1
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
T-6											
1Q16	446.61	1/4/2016	NE	45.40	NA	NA	NA	401.21	394.85 - 380.60 (51.76 - 66.01)	0.3	*
2Q16		4/4/2016	NE	44.43	NA	NA	NA	402.18		0.3	*
3Q16		7/5/2016	NE	43.81	NA	NA	NA	402.80		0.3	*
4Q16		10/3/2016	NE	43.09	NA	NA	NA	403.52		4.0	*
1Q17		1/16/2017	NE	42.50	NA	NA	NA	404.11		5.6	*
2Q17		4/3/2017	NE	42.71	NA	NA	NA	403.90		2.3	*
3Q17		7/5/2017	NE	41.60	NA	NA	NA	405.01		0.1	*
4Q17		10/2/2017	NE	41.92	NA	NA	NA	404.69		0.2	*
1Q18		1/2/2018	NE	44.30	NA	NA	NA	402.31		2.0	*
2Q18		4/3/2018	NE	44.81	NA	NA	NA	401.80		0.7	*
3Q18		7/2/2018	NE	45.61	NA	NA	NA	401.00		0.1	*
4Q18		10/1/2018	NE	45.58	NA	NA	NA	401.03		0.0	*
T-7											
1Q16	444.04	1/5/2016	NE	41.02	NA	NA	NA	403.02	395.32 - 380.32 (48.72 - 63.72)	4.3	*
2Q16		4/5/2016	NE	40.38	NA	NA	NA	403.66		3.4	*
3Q16		7/8/2016	NE	39.84	NA	NA	NA	404.20		1.1	*
4Q16		10/4/2016	NE	38.65	NA	NA	NA	405.39		0.5	*
1Q17		1/17/2017	NE	38.52	NA	NA	NA	405.52		2.5	*
2Q17		4/4/2017	NE	38.84	NA	NA	NA	405.20		0.8	*
3Q17		7/6/2017	NE	37.53	NA	NA	NA	406.51		0.0	*
4Q17		10/2/2017	NE	38.09	NA	NA	NA	405.95		0.0	*
1Q18		1/4/2018	39.98	39.99	404.05	404.06	0.01	404.06		2.5	*
2Q18		4/4/2018	NE	41.13	NA	NA	NA	402.91		3.5	*
3Q18		7/2/2018	NE	41.17	NA	NA	NA	402.87		0.0	*
4Q18		10/3/2018	NE	41.08	NA	NA	NA	402.96		0.0	*
T-12											
1Q16	444.80	1/4/2016	NE	44.43	NA	NA	NA	400.37	397.97 - 371.97 (46.83 - 72.83)	0.2	*
2Q16		4/4/2016	NE	43.10	NA	NA	NA	401.70		0.7	*
3Q16		7/5/2016	NE	41.39	NA	NA	NA	403.41		16.1	*
4Q16		10/3/2016	NE	41.61	NA	NA	NA	403.19		7.8	*
1Q17		1/16/2017	NE	40.70	NA	NA	NA	404.10		1.7	*
2Q17		4/3/2017	NE	40.86	NA	NA	NA	403.94		0.9	*
3Q17		7/5/2017	NE	40.06	NA	NA	NA	404.74		0.7	*
4Q17		10/2/2017	NE	39.15	NA	NA	NA	405.65		0.3	*
1Q18		1/3/2018	NE	42.06	NA	NA	NA	402.74		6.1	*
2Q18		4/2/2018	NE	43.06	NA	NA	NA	401.74		3.8	*
3Q18		7/2/2018	NE	44.21	NA	NA	NA	400.59		0.1	*
4Q18		10/1/2018	NE	44.18	NA	NA	NA	400.62		1.2	*
T-13											
1Q16	443.96	1/4/2016	NE	41.04	NA	NA	NA	402.92	396.46 - 370.46 (47.50 - 73.50)	0.0	*
2Q16		4/4/2016	NE	40.04	NA	NA	NA	403.92		0.0	*
3Q16		7/5/2016	NE	39.25	NA	NA	NA	404.71		0.2	*
4Q16		10/3/2016	NE	38.56	NA	NA	NA	405.40		0.5	*
1Q17		1/16/2017	NE	38.06	NA	NA	NA	405.90		0.4	*
2Q17		4/3/2017	NE	38.50	NA	NA	NA	405.46		0.0	*
3Q17		7/5/2017	NE	37.10	NA	NA	NA	406.86		0.0	*
4Q17		10/3/2017	NE	37.38	NA	NA	NA	406.58		0.0	*
1Q18		1/2/2018	NE	38.96	NA	NA	NA	405.00		3.7	*
2Q18		4/2/2018	NE	39.93	NA	NA	NA	404.03	400.15 - 374.15 (43.81 - 69.81)	0.0	*
3Q18		7/2/2018	NE	40.85	NA	NA	NA	403.11		0.0	*
4Q18		10/1/2018	NE	41.24	NA	NA	NA	402.72		0.1	*

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TABLE 1
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
T-15											
1Q16	445.14	1/5/2016	NE	43.20	NA	NA	NA	401.94	397.10 - 371.10 (48.04 - 74.04)	0.0	*
2Q16		4/4/2016	NE	42.13	NA	NA	NA	403.01		0.7	*
3Q16		7/5/2016	NE	41.64	NA	NA	NA	403.50		2.1	*
4Q16		10/3/2016	NE	40.44	NA	NA	NA	404.70		5.2	*
1Q17		1/16/2017	NE	39.71	NA	NA	NA	405.43		0.0	*
2Q17		4/3/2017	NE	40.08	NA	NA	NA	405.06		0.0	*
3Q17		7/6/2017	NE	38.98	NA	NA	NA	406.16		0.0	*
4Q17		10/3/2017	NE	39.39	NA	NA	NA	405.75		0.0	*
1Q18		1/3/2018	NE	40.36	NA	NA	NA	404.78		0.0	*
2Q18		4/2/2018	41.62	41.71	403.43	403.52	0.09	403.50		0.0	*Gauging result anomalous
		6/8/2018	NE	42.98	NA	NA	NA	402.16		0.0	*
3Q18		7/2/2018	NE	43.32	NA	NA	NA	401.82		0.0	*
4Q18		10/1/2018	NE	43.53	NA	NA	NA	401.61		0.0	*
T-17											
1Q16	446.01	1/5/2016	NE	42.21	NA	NA	NA	403.80	401.91 - 375.91 (44.10 - 70.10)	0.1	*
2Q16		4/4/2016	NE	40.37	NA	NA	NA	405.64		0.0	*
3Q16		7/5/2016	NE	40.41	NA	NA	NA	405.60		0.2	*
4Q16		10/3/2016	NE	38.45	NA	NA	NA	407.56		0.0	*
1Q17		1/16/2017	NE	38.11	NA	NA	NA	407.90		0.0	*
2Q17		4/3/2017	NE	38.42	NA	NA	NA	407.59		0.0	*
3Q17		7/6/2017	NE	36.63	NA	NA	NA	409.38		2.6	*
4Q17		10/3/2017	NE	37.78	NA	NA	NA	408.23		0.0	*
1Q18		1/3/2018	NE	38.74	NA	NA	NA	407.27		0.8	*
2Q18		4/3/2018	NE	40.01	NA	NA	NA	406.00		0.0	*
3Q18		7/2/2018	NE	41.25	NA	NA	NA	404.76		0.0	*
4Q18		10/1/2018	NE	41.70	NA	NA	NA	404.31		0.0	*
T-19											
1Q16	446.79	1/5/2016	NE	46.83	NA	NA	NA	399.96	396.02 - 370.02 (50.77 - 76.77)	8.5	*
2Q16		4/4/2016	NE	44.80	NA	NA	NA	401.99		3.1	*
3Q16		7/7/2016	NE	45.11	NA	NA	NA	401.68		16.3	*
4Q16		10/4/2016	NE	42.40	NA	NA	NA	404.39		0.6	*
1Q17		1/17/2017	NE	42.63	NA	NA	NA	404.16		3.1	*
2Q17		4/4/2017	NE	43.04	NA	NA	NA	403.75		18.5	*
3Q17		7/6/2017	NE	42.15	NA	NA	NA	404.64		92.6	*
4Q17		10/3/2017	NE	42.74	NA	NA	NA	404.05		4.9	*
1Q18		1/4/2018	NE	43.34	NA	NA	NA	403.45		236	*
2Q18		4/4/2018	NE	45.19	NA	NA	NA	401.60		7.6	*
3Q18		7/3/2018	NE	46.77	NA	NA	NA	400.02		11.1	*
4Q18		10/2/2018	NE	46.97	NA	NA	NA	399.82		22.9	*
T-21											
1Q16	443.99	1/5/2016	NE	32.70	NA	NA	NA	411.29	412.03 - 386.03 (31.96 - 57.96)	0.0	
2Q16		4/5/2016	NE	31.70	NA	NA	NA	412.29		0.0	*
3Q16		7/7/2016	NE	31.08	NA	NA	NA	412.91		0.0	*
4Q16		10/5/2016	NE	29.87	NA	NA	NA	414.12		0.0	*
1Q17		1/17/2017	NE	29.97	NA	NA	NA	414.02		0.0	*
2Q17		4/4/2017	NE	30.65	NA	NA	NA	413.34		0.0	*
3Q17		7/6/2017	NE	28.80	NA	NA	NA	415.19		0.0	*
4Q17		10/2/2017	NE	29.28	NA	NA	NA	414.71		0.0	*
1Q18		1/4/2018	NE	30.74	NA	NA	NA	413.25		0.0	*
2Q18		4/4/2018	NE	32.13	NA	NA	NA	411.86		0.0	
3Q18		7/2/2018	NE	32.04	NA	NA	NA	411.95		0.0	
4Q18		10/3/2018	NE	32.25	NA	NA	NA	411.74		0.0	

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TABLE 1
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WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
T-22											
1Q16	442.19	1/5/2016	NE	33.86	NA	NA	NA	408.33	410.64 - 384.94 (31.55 - 57.25)	0.0	
2Q16		4/5/2016	NE	33.11	NA	NA	NA	409.08		0.0	
3Q16		7/7/2016	NE	32.47	NA	NA	NA	409.72		0.0	
4Q16		10/4/2016	NE	31.49	NA	NA	NA	410.70		0.1	*
1Q17		1/17/2017	NE	31.82	NA	NA	NA	410.37		0.0	
2Q17		4/4/2017	NE	32.43	NA	NA	NA	409.76		0.0	
3Q17		7/6/2017	NE	30.35	NA	NA	NA	411.84		0.0	*
4Q17		10/2/2017	NE	31.25	NA	NA	NA	410.94		0.0	*
1Q18		1/4/2018	NE	32.91	NA	NA	NA	409.28		1.0	
2Q18		4/4/2018	NE	33.96	NA	NA	NA	408.23		0.0	
3Q18		7/2/2018	NE	33.76	NA	NA	NA	408.43		0.0	
4Q18		10/3/2018	NE	33.96	NA	NA	NA	408.23		0.0	
T-23											
1Q16	432.69	1/5/2016	NE	25.98	NA	NA	NA	406.71	405.46 - 379.46 (27.23 - 53.23)	0.0	*
2Q16		4/5/2016	NE	26.00	NA	NA	NA	406.69		0.0	*
3Q16		7/7/2016	NE	25.07	NA	NA	NA	407.62		0.0	*
4Q16		10/5/2016	NE	24.18	NA	NA	NA	408.51		0.0	*
1Q17		1/16/2017	NE	24.61	NA	NA	NA	408.08		0.0	*
2Q17		4/4/2017	NM	NM	NA	NA	NA	NA		NM	Unable to locate well due to landscaping
3Q17		7/6/2017	NE	23.15	NA	NA	NA	409.54		0.0	*
4Q17		10/3/2017	NE	24.50	NA	NA	NA	408.19		0.0	*
1Q18		1/3/2018	NE	26.07	NA	NA	NA	406.62		0.0	*
2Q18		4/4/2018	NM	NM	NA	NA	NA	NA		NM	Unable to locate well due to landscaping
3Q18		7/2/2018	NE	26.63	NA	NA	NA	406.06		0.0	*
4Q18		10/3/2018	NE	26.83	NA	NA	NA	405.86		0.0	*
T-24											
1Q16	443.81	1/5/2016	42.70	43.50	400.31	401.11	0.80	400.95	402.31 - 376.66 (41.50 - 67.15)	0.0	
2Q16		4/5/2016	41.61	42.16	401.65	402.20	0.55	402.09		2.6	
3Q16		7/6/2016	NE	40.54	NA	NA	NA	403.27		0.1	*
4Q16		10/4/2016	NE	39.88	NA	NA	NA	403.93		6.0	*
1Q17		1/16/2017	NE	39.11	NA	NA	NA	404.70		9.0	*
2Q17		4/3/2017	39.41	39.97	403.84	404.40	0.56	404.29		0.0	*
3Q17		7/5/2017	38.53	38.65	405.16	405.28	0.12	405.26		1.6	*
4Q17		10/2/2017	38.40	38.49	405.32	405.41	0.09	405.39		0.0	*
1Q18		1/2/2018	40.49	40.57	403.24	403.32	0.08	403.30		7.2	*
2Q18		4/2/2018	41.53	41.62	402.19	402.28	0.09	402.26		0.6	
3Q18		7/2/2018	42.79	42.87	400.94	401.02	0.08	401.00		0.4	
4Q18		10/2/2018	42.79	43.08	400.73	401.02	0.29	400.96		0.4	
T-28											
1Q16	444.43	1/5/2016	NE	41.60	NA	NA	NA	402.83	Unknown	0.0	
2Q16		4/4/2016	NE	40.39	NA	NA	NA	404.04		0.0	
3Q16		7/7/2016	NE	40.35	NA	NA	NA	404.08		0.0	
4Q16		10/3/2016	NE	38.60	NA	NA	NA	405.83		0.0	
1Q17		1/16/2017	NE	38.05	NA	NA	NA	406.38		0.0	
2Q17		4/3/2017	NE	38.42	NA	NA	NA	406.01		0.0	
3Q17		7/6/2017	NE	36.85	NA	NA	NA	407.58		0.0	
4Q17		10/3/2017	NE	37.73	NA	NA	NA	406.70		0.0	
1Q18		1/3/2018	NE	38.57	NA	NA	NA	405.86		0.0	
2Q18		4/2/2018	NE	39.84	NA	NA	NA	404.59		0.0	
3Q18		7/2/2018	NE	41.39	NA	NA	NA	403.04		0.0	
4Q18		10/1/2018	NE	41.88	NA	NA	NA	402.55		0.0	

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WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
T-37											
1Q16	447.25	1/5/2016	NE	42.01	NA	NA	NA	405.24	398.40 - 378.40 (48.85 - 68.85)	0.1	*
2Q16		4/4/2016	NE	40.54	NA	NA	NA	406.71		0.1	*
3Q16		7/5/2016	NE	40.55	NA	NA	NA	406.70		0.1	*
4Q16		10/5/2016	NE	38.67	NA	NA	NA	408.58		0.2	*
1Q17		1/17/2017	NE	38.58	NA	NA	NA	408.67		0.0	*
2Q17		4/4/2017	NE	39.15	NA	NA	NA	408.10		0.5	*
3Q17		7/6/2017	NE	37.34	NA	NA	NA	409.91		0.0	*
4Q17		10/3/2017	NE	38.02	NA	NA	NA	409.23		0.0	*
1Q18		1/4/2018	NE	39.08	NA	NA	NA	408.17		0.1	*
2Q18		4/3/2018	NE	40.33	NA	NA	NA	406.92		0.0	*
3Q18		7/3/2018	NE	41.26	NA	NA	NA	405.99		0.0	*
4Q18		10/2/2018	NE	41.59	NA	NA	NA	405.66		0.1	*
T-38											
1Q16	445.67	1/5/2016	NE	38.52	NA	NA	NA	407.15	396.53 - 376.53 (49.14 - 69.14)	0.0	*
2Q16		4/4/2016	NE	37.67	NA	NA	NA	408.00		0.0	*
3Q16		7/5/2016	NE	37.57	NA	NA	NA	408.10		0.1	*
4Q16		10/5/2016	NE	35.60	NA	NA	NA	410.07		0.2	*
1Q17		1/17/2017	NE	35.86	NA	NA	NA	409.81		0.0	*
2Q17		4/4/2017	NE	36.49	NA	NA	NA	409.18		0.0	*
3Q17		7/6/2017	NE	34.15	NA	NA	NA	411.52		0.0	*
4Q17		10/3/2017	NE	35.02	NA	NA	NA	410.65		0.0	*
1Q18		1/4/2018	NE	36.13	NA	NA	NA	409.54		22.5	*
2Q18		4/3/2018	NE	37.21	NA	NA	NA	408.46		0.0	*
3Q18		7/3/2018	NE	37.95	NA	NA	NA	407.72		0.0	*
4Q18		10/2/2018	NE	38.32	NA	NA	NA	407.35		0.0	*
T-62											
1Q16	431.99	1/5/2016	NE	27.87	NA	NA	NA	404.12	412.28 - 382.28 (19.71 - 49.71)	61.2	
2Q16		4/5/2016	NE	27.74	NA	NA	NA	404.25		0.1	
3Q16		7/8/2016	NE	27.04	NA	NA	NA	404.95		0.0	
4Q16		10/4/2016	NE	25.75	NA	NA	NA	406.24		0.3	
1Q17		1/17/2017	NE	26.70	NA	NA	NA	405.29		0.0	
2Q17		4/5/2017	NE	27.25	NA	NA	NA	404.74		0.0	
3Q17		7/6/2017	NE	24.51	NA	NA	NA	407.48		0.5	
4Q17		10/2/2017	NE	26.21	NA	NA	NA	405.78		0.0	
1Q18		1/3/2018	NE	28.34	NA	NA	NA	403.65		0.0	
2Q18		4/4/2018	NE	29.20	NA	NA	NA	402.79		0.0	
3Q18		7/2/2018	NE	28.77	NA	NA	NA	403.22		0.0	
4Q18		10/2/2018	NE	28.78	NA	NA	NA	403.21		0.0	
T-63											
1Q16	431.43	1/5/2016	NE	27.22	NA	NA	NA	404.21	411.45 - 381.45 (19.98 - 49.98)	0.3	
2Q16		4/5/2016	NE	27.33	NA	NA	NA	404.10		0.0	
3Q16		7/8/2016	NE	26.55	NA	NA	NA	404.88		0.0	
4Q16		10/4/2016	NE	25.42	NA	NA	NA	406.01		0.1	
1Q17		1/17/2017	NE	26.49	NA	NA	NA	404.94		0.0	
2Q17		4/5/2017	NE	27.02	NA	NA	NA	404.41		0.0	
3Q17		7/6/2017	NE	23.88	NA	NA	NA	407.55		0.0	
4Q17		10/2/2017	NE	25.98	NA	NA	NA	405.45		0.0	
1Q18		1/3/2018	NE	27.82	NA	NA	NA	403.61		0.0	
2Q18		4/4/2018	NE	28.86	NA	NA	NA	402.57		0.0	
3Q18		7/2/2018	NE	28.83	NA	NA	NA	402.60		0.0	
4Q18		10/2/2018	NE	27.93	NA	NA	NA	403.50		0.0	

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TABLE 1
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WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	Comments
T-64											
1Q16	428.93	1/5/2016	NM	NM	NA	NA	NA	NA	409.12 - 379.12 (19.81 - 49.81)	NM	Unsafe condition at well - Unable to access
2Q16		4/5/2016	NE	25.26	NA	NA	NA	403.67		0.0	
3Q16		7/8/2016	NE	24.24	NA	NA	NA	404.69		0.0	
4Q16		10/4/2016	NE	23.11	NA	NA	NA	405.82		153	
1Q17		1/17/2017	NE	24.91	NA	NA	NA	404.02		0.0	
2Q17		4/5/2017	NE	25.13	NA	NA	NA	403.80		0.0	
3Q17		7/6/2017	NE	21.57	NA	NA	NA	407.36		0.0	
4Q17		10/2/2017	NE	24.24	NA	NA	NA	404.69		0.0	
1Q18		1/3/2018	NE	26.04	NA	NA	NA	402.89		0.0	
2Q18		4/4/2018	NM	NM	NA	NA	NA	NA		NM	Unsafe condition at well - Unable to access
3Q18		7/2/2018	NE	25.63	NA	NA	NA	403.30		0.0	
4Q18		10/2/2018	NE	25.47	NA	NA	NA	403.46		0.0	

NOTES:

1) Elevations presented in this table are relative to the 1988 NAVD datum.

2) The corrected water level elevations presented in this table were corrected by a specific gravity of 0.80 for the wells in which LNAPL was identified.

3) PID values measured with a 10.6 electron volt (eV) lamp photoionization detector.

4) btoc = Below Top of Casing; ppm = parts per million; NA = Not Applicable; NE = Not Encountered; NM = Not Measured

5) * Indicates that the LNAPL and/or water level is above the top of the screened zone of the well.

6) Table includes comprehensive groundwater monitoring well gauging data for the last 12 quarters from the combined Village of Roxana Interim Groundwater Monitoring Program and the WRB Refining LP Wood River Refinery Program.

7) The screened interval for certain monitoring wells was adjusted based on an evaluation of the results of annual bottom depth gauging conducted in 1Q18.

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TABLE 2
SUMMARY OF GROUNDWATER MONITORING WELL FIELD PARAMETERS

WELL ID & EVENT	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
MW-01							
1Q16	6.68	17 92	1 344	19 95	0.05	63.0	
2Q16	6.81	18.71	1 544	9.40	0.00	20.0	
3Q16	6.79	20 30	1 310	18.10	0.21	52.0	
4Q16	6.87	18 30	1.460	23 57	0.10	-30.0	
1Q17	6.77	17.43	1.106	13.19	0.03	208 0	
2Q17	6.85	18 34	1.420	16 81	0.00	-73.0	
3Q17	6.76	20 98	1.472	14.42	0.11	-15.0	
4Q17	6.78	19 33	1 331	6.10	0.10	23.0	
1Q18	6.73	18 20	1.197	0.00	0.45	146 6	
2Q18	6.73	17 20	1 263	22 20	0.05	8.9	
3Q18	6.71	21 60	1.147	6.50	0.14	144 8	
4Q18	6.57	19.40	1 060	2.40	0.69	126.4	
MW-02							
1Q16	6.84	19 51	1 590	21 92	0.00	-180 0	
2Q16	6.77	20 24	1.750	13 62	0.00	-314 0	
3Q16	6.88	21.14	1 293	21 62	0.06	-105 0	
4Q16	7.09	20.46	1 549	11 28	0.00	-236 0	
1Q17	7.09	18 30	1 294	14.73	0.03	-155 0	
2Q17	7.16	18.41	1 294	6.91	0.00	-195 0	
3Q17	7.03	21 53	1.717	33 97	0.00	-275 0	
4Q17	7.02	19.70	1 220	5.50	0.00	-156 0	
1Q18	7.02	18 80	1 537	14.10	0.22	-207 8	
2Q18	7.08	17 30	1 553	10.40	0.38	-116.1	
3Q18	7.00	21.10	1 910	16 20	2.20	-175.7	
4Q18	7.12	19.10	1 344	3.90	0.63	-114 3	
MW-03							
1Q16	6.94	18 29	1 302	13 88	0.07	-128 0	
2Q16	7.00	17 98	1 372	4.51	0.06	-156 0	
3Q16	7.18	20.71	1 304	16 82	0.05	-182 0	
4Q16	7.03	19 96	1 571	37 09	0.00	-145 0	
1Q17	6.85	17 98	1 049	49 63	0.02	-146 0	
2Q17	6.94	18.74	1 371	1.33	0.09	126 0	
3Q17	6.92	21 31	1 295	5.49	0.03	-143 0	
4Q17	7.16	20 00	1 380	28.70	0.02	-140 3	
1Q18	6.76	17 60	1 205	4.20	0.18	-45.0	
2Q18	6.94	17 60	1 601	7.80	0.47	-138 9	
3Q18	6.85	20.10	1 299	6.60	1.30	-125 9	
4Q18	6.63	19.10	1 534	1.20	0.54	-49.0	

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TABLE 2
SUMMARY OF GROUNDWATER MONITORING WELL FIELD PARAMETERS

WELL ID & EVENT	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
MW-04							
1Q16	6.84	17 92	1 296	*	0.04	-101 0	
2Q16	6.87	18.76	1 524	4.21	0.01	-123 0	
3Q16	6.97	19 59	1 374	6.42	0.00	-124 0	
4Q16	6.94	19 30	1.428	20 61	0.06	-142 0	
1Q17	6.82	17 67	1 351	5.68	0.06	-115 0	
2Q17	6.87	18 33	1 362	4.35	0.06	4.0	
3Q17	6.88	20.41	1 281	8.49	0.00	-128 0	
4Q17	6.96	19.41	1 291	13.19	0.04	-121 0	
1Q18	6.98	17 50	1.106	8.70	0.23	-161 0	
2Q18	6.78	17.70	1.168	6.50	0.01	-58.4	
3Q18	6.76	20.70	1.192	17 60	0.18	-65.2	
4Q18	6.65	19.10	1 316	8.90	0.60	84.0	
MW-05							
1Q16	6.70	17.10	1 503	21 55	0.11	-87.0	
2Q16	6.84	17 96	1 316	5.62	0.09	-131 0	
3Q16	6.90	20 29	1 384	8.69	0.06	-154 0	
4Q16	6.87	19.18	1 341	11 01	0.03	-143 0	
1Q17	6.87	15.78	0 807	6.10	0.07	-122 0	
2Q17	6.86	20 23	1.133	3.63	0.07	-153 0	
3Q17	6.78	21.17	1 076	12 94	0.02	-124 0	
4Q17	6.95	18.48	0.760	4.70	0.03	-136 0	
1Q18	6.68	18 60	1 316	8.80	0.26	-152.7	
2Q18	6.85	16 80	1.145	40 30	0.39	-116 0	
3Q18	6.62	20.70	1 247	9.50	3.40	-117 8	
4Q18	6.38	18 00	0 915	0.40	0.69	142.7	
MW-06A							
1Q16	6.60	15 88	1.412	34 53	0.00	-76.0	
2Q16	6.72	18.75	1 383	10.75	0.00	-125 0	
3Q16	6.90	20 89	1.172	24 84	0.18	-267 0	
4Q16	6.87	19.44	1.147	7.93	0.08	-122 0	
1Q17	6.92	18 80	0 987	9.75	8.79	-94.0	
2Q17	6.81	20 33	1 013	3.18	0.02	179 0	
3Q17	6.72	21 82	1.167	45 38	0.01	-126 0	
4Q17	6.75	20 60	1.117	8.89	0.04	-114 0	
1Q18	6.26	18.10	1.120	5.20	0.15	11.0	
2Q18	6.41	18.10	1.177	45 50	0.49	-16.2	
3Q18	6.57	20.70	1 993	49.70	2.20	-69.0	
4Q18	6.80	20 50	1 050	111.00	0.57	-83.9	

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TABLE 2
SUMMARY OF GROUNDWATER MONITORING WELL FIELD PARAMETERS

WELL ID & EVENT	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
MW-06B							
1Q16	6.78	17 51	1 064	1.19	0.03	-55.0	
2Q16	7.01	18 24	0 947	1.02	0.06	-114 0	
3Q16	7.08	20.48	0 869	5.50	0.19	-238 0	
4Q16	7.02	19.74	0 840	3.87	0.11	-111 0	
1Q17	7.19	18.73	0.753	4.10	8.78	-91.0	
2Q17	7.16	19 83	0 852	0.78	0.05	174 0	
3Q17	7.05	20 84	0 943	5.09	0.09	-120 0	
4Q17	7.07	20 27	0 905	2.95	0.07	-113 0	
1Q18	6.77	18 80	0 877	8.50	0.24	40.0	
2Q18	6.91	18 00	1 033	11 00	0.57	-102 8	
3Q18	7.14	20 60	0.771	1.50	2.20	-117 2	
4Q18	7.06	19.70	0 806	0.00	0.68	-50.7	
MW-06C							
1Q16	6.92	17 04	1 056	14.46	0.17	-78.0	
2Q16	7.03	18.16	1 032	1.57	0.00	-142 0	
3Q16	7.38	19 99	0 886	9.34	0.09	-278 0	
4Q16	7.15	20.17	1 008	1.97	0.10	-144 0	
1Q17	7.10	18 23	0 913	2.52	8.80	-105 0	
2Q17	7.12	18 60	0 983	0.30	0.07	166 0	
3Q17	7.00	20.44	1 076	10.73	0.10	-133 0	
4Q17	7.08	19.78	0 920	3.24	0.00	-139 0	
1Q18	6.65	17.40	0 973	0.60	0.20	45.6	
2Q18	6.74	17.40	1.183	3.20	0.36	-114 8	
3Q18	7.13	20.70	0 841	4.30	3.00	-133 6	
4Q18	6.94	19.70	0.790	5.40	0.67	-63.3	
MW-06D							
1Q16	6.94	17 29	1.129	40.73	0.09	-85.0	
2Q16	7.00	17 67	1.162	17 65	0.00	-150 0	
3Q16	7.30	19.71	1 029	10.15	0.13	-253 0	
4Q16	7.16	19.46	1 241	36 29	0.01	-151 0	
1Q17	6.94	17 80	1 078	12 57	*	-110 0	
2Q17	7.12	18 95	1 318	16 95	0.04	171 0	
3Q17	6.92	20.14	1 241	49 06	0.09	-139 0	
4Q17	7.22	20 30	1 392	18 30	0.20	-111 0	
1Q18	6.76	17 50	1 567	3.50	0.18	-16.3	
2Q18	6.92	17.70	1.708	39.10	0.54	-125.4	
3Q18	7.11	20 30	1.179	8.80	2.00	-131 9	
4Q18	7.07	19.10	1 092	26 80	0.69	-74.4	

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WELL ID & EVENT	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
MW-07							
1Q16	6.38	18 84	1 608	*	0.07	-66.0	
2Q16	6.71	19 24	1 551	27.73	0.09	-81.0	
3Q16	6.77	19 98	1 668	11 63	0.00	-83.0	
4Q16	6.78	20.75	1.422	24.73	0.13	-92.0	
1Q17	6.71	15.42	1.442	111.50	0.21	-83.0	
2Q17	6.68	18 26	1.454	3.28	0.13	38.0	
3Q17	6.59	21 25	1 553	9.56	0.06	-101 0	
4Q17	6.71	20 53	1.490	36 84	0.06	-76.0	
1Q18	6.69	17.10	1.479	27 20	0.38	-100.1	
2Q18	6.57	17 90	1 388	33 90	0.03	-30.4	
3Q18	6.60	21.70	1 622	31 80	0.10	-56.3	
4Q18	6.69	20 90	1 690	14 00	0.69	-28.8	
MW-08							
1Q16	6.21	18 80	1.472	*	0.08	-64.0	
2Q16	6.72	20 32	1 682	6.56	0.12	-84.0	
3Q16	6.80	21 34	1 693	8.41	0.00	-91.0	
4Q16	6.81	21 24	1.743	31.41	0.07	-107 0	
1Q17	6.74	18.78	1 635	11 08	0.12	-110 0	
2Q17	6.69	19 87	1 550	3.88	0.07	30.0	
3Q17	6.80	22 93	1 375	9.08	0.01	-105 0	
4Q17	6.79	20 62	1 573	7.62	0.03	-100 0	
1Q18	6.74	18 50	1.479	4.80	0.20	-132 2	
2Q18	6.58	18 60	1 509	0.30	0.00	-41.9	
3Q18	6.72	21 80	1 526	3.00	0.14	-71.4	
4Q18	6.78	20.40	1.493	0.50	0.56	-60.7	
MW-09							
1Q16	6.71	16 60	1 670	8.76	0.07	-28.0	
2Q16	6.68	17.49	1 514	5.13	0.00	-70.0	
3Q16	6.92	20.10	1 277	15 67	0.10	-95.0	
4Q16	6.79	17 62	1.455	14.71	0.11	-69.0	
1Q17	6.93	17 59	1 073	17 99	0.06	159 0	
2Q17	6.79	19 36	1.406	4.02	0.03	-65.0	
3Q17	6.68	19 35	1 517	20.76	0.02	-76.0	
4Q17	6.80	18 86	1.416	9.92	0.00	-68.0	
1Q18	6.75	17.10	1 311	26 90	0.24	-89.5	
2Q18	6.66	17.10	1 302	9.20	0.08	-34.3	
3Q18	6.79	20.10	1 279	19 80	0.25	19.8	
4Q18	6.78	18 90	1.194	4.10	0.76	22.3	

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TABLE 2
SUMMARY OF GROUNDWATER MONITORING WELL FIELD PARAMETERS

WELL ID & EVENT	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
MW-10							
1Q16	6.97	17.41	1 527	13 37	0.05	-97.0	
2Q16	6.93	18.18	1 801	3.47	0.00	-118 0	
3Q16	7.15	20.73	1.168	45 23	0.01	-159 0	
4Q16	7.02	19 36	2 046	16.44	0.07	-125 0	
1Q17	7.04	17 38	1 644	27 80	0.01	162 0	
2Q17	6.92	19.40	2 082	47.49	0.00	-76.0	
3Q17	6.94	21 89	1 994	25 53	0.07	-133 0	
4Q17	7.09	20.16	1 651	5.97	0.00	-137 0	
1Q18	7.03	17 90	1.489	24.70	0.24	-126 2	
2Q18	7.02	18.10	1 932	17 00	0.06	-73.7	
3Q18	6.88	20.40	2.105	31.10	0.12	-36.7	
4Q18	6.92	19.70	1.793	28 20	0.68	17.4	
MW-11							
1Q16	6.76	14 63	1 397	7.59	0.13	-43.0	
2Q16	6.75	16 36	1.436	7.73	0.16	-90.0	
3Q16	6.76	19 02	1 245	3.03	0.09	-103 0	
4Q16	6.82	17.79	1 534	6.21	0.11	-98.0	
1Q17	6.82	16.45	1 204	6.15	0.07	16.0	
2Q17	6.77	17 67	1 561	1.19	0.05	-77.0	
3Q17	6.74	21.17	1 516	14 91	0.15	-116 0	
4Q17	6.77	18.40	1 597	5.91	0.00	-99.0	
1Q18	6.66	16 90	1 652	40 30	0.27	-22.3	
2Q18	6.80	15 30	1 928	31.10	0.56	-40.5	
3Q18	6.68	19.70	2 022	47.70	0.70	-81.3	
4Q18	6.81	17 20	1.446	12.10	0.84	-53.4	
MW-12							
1Q16	6.87	17 51	1 335	47 05	0.21	79.0	
2Q16	6.83	18 02	1 602	8.72	0.21	91.0	
3Q16	6.83	19 63	1 240	7.49	0.12	140 0	
4Q16	6.95	19.17	1 295	5.98	0.08	87.0	
1Q17	6.73	16 81	1 061	3.98	0.13	147 0	
2Q17	7.42	20.12	1 564	17 22	0.20	116 0	
3Q17	6.88	21 01	1 048	16 55	0.05	-59.0	
4Q17	6.94	19.71	1.123	2.76	0.08	109 0	
1Q18	6.80	18.10	1 050	9.20	0.25	121 6	
2Q18	6.89	18 20	0 914	3.10	0.19	60.9	
3Q18	6.74	20 30	0 940	0.90	0.17	183 5	
4Q18	6.89	19.40	1 022	6.50	0.72	99.3	

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SUMMARY OF GROUNDWATER MONITORING WELL FIELD PARAMETERS

WELL ID & EVENT	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
MW-13							
1Q16	6.74	18 55	1 389	*	0.21	-103 0	
2Q16	6.69	19 00	1.731	10.77	0.19	-111 0	
3Q16	6.79	20 66	1 366	6.20	0.00	-264 0	
4Q16	6.81	20 22	1.441	26.44	0.12	-119 0	
1Q17	6.70	17.16	1.168	15 96	0.04	-125 0	
2Q17	6.74	20 84	1 389	2.78	0.00	-92.0	
3Q17	6.72	21.14	1.432	3.13	0.11	-146 0	
4Q17	6.62	20.10	1 388	25 92	0.04	-110 0	
1Q18	6.50	18.70	1.493	3.90	0.14	-3.3	
2Q18	6.45	19 30	1.466	13 60	0.09	-81.3	
3Q18	6.60	22 00	1.490	17 60	0.14	-105.4	
4Q18	6.60	19 60	1 389	15.40	0.61	-33.3	
MW-14							
1Q16	6.84	18.40	0 888	*	0.00	-97.0	
2Q16	6.68	19 91	1 319	10 63	0.00	-92.0	
3Q16	6.85	21.48	1 044	11 52	0.00	-204 0	
4Q16	6.79	17.71	1.118	13 86	0.00	-73.0	
1Q17	6.76	18.10	1 012	26.18	0.18	-89.0	
2Q17	6.82	20 68	1 650	0.00	0.04	-35.0	
3Q17	6.77	21 68	1 641	9.69	0.05	-73.0	
4Q17	6.84	21 29	0 989	1.97	0.06	-67.0	
1Q18	6.75	17 30	1.457	4.80	0.29	198 2	
2Q18	6.41	17.10	2 016	5.00	0.43	-57.3	
3Q18	6.59	22 20	1 510	1.00	1.98	-66.2	
4Q18	6.95	17 60	1.138	4.90	0.82	100 3	
MW-16							
1Q16	6.76	17 39	1 980	*	0.01	-75.0	
2Q16	6.52	17.77	2 817	0.72	0.00	73.0	
3Q16	6.71	19.40	1 380	4.89	0.37	-25.0	
4Q16	6.83	19.49	1 540	10.15	0.18	-41.0	
1Q17	6.75	17 01	1.194	2.08	0.31	90.0	
2Q17	7.40	20 90	1.785	24.70	0.13	-58.0	
3Q17	6.77	22 58	1.475	86 56	0.27	-89.0	
4Q17	6.86	19 63	1.196	19.13	0.19	-54.0	
1Q18	6.85	17 90	1 078	31 30	0.49	-51.8	
2Q18	6.51	17 90	1 289	35.40	0.64	-33.6	
3Q18	6.89	20 50	1 060	11.10	0.60	-135.4	
4Q18	6.76	19 50	1.171	10.10	0.58	-50.3	

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SUMMARY OF GROUNDWATER MONITORING WELL FIELD PARAMETERS

WELL ID & EVENT	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
MW-22							
1Q16	6.58	19 24	1 378	14 96	0.00	-82.0	
2Q16	6.68	21.14	1.453	13.48	0.03	-135 0	
3Q16	6.81	22.19	1 280	9.21	0.09	-95.0	
4Q16	6.76	21.13	1.492	21 54	0.03	-91.0	
1Q17	7.03	19 09	1.183	3.78	0.02	162 0	
2Q17	6.91	20.47	1.193	2.48	0.06	-110 0	
3Q17	6.84	23.10	1.192	6.36	0.01	-83.0	
4Q17	6.91	20 20	1 218	12.49	0.11	-83.0	
1Q18	6.73	19 60	1 219	6.60	0.25	-125.1	
2Q18	6.64	18 90	1.462	9.90	0.43	-85.4	
3Q18	6.60	21 80	1 398	16 20	1.40	-103 5	
4Q18	6.72	18 60	1 044	1.10	0.86	110 2	
MW-23							
1Q16	6.66	16 86	1 212	25 28	0.05	-94.0	
2Q16	6.65	17 54	1 201	19 93	0.05	-134 0	
3Q16	6.78	20.46	1 077	20.76	0.02	-113 0	
4Q16	6.65	19.14	1 265	34 01	0.03	-93.0	
1Q17	6.53	18 20	1.120	28 38	0.00	-50.0	
2Q17	6.42	17.76	1 260	45 01	0.02	177 0	
3Q17	7.31	20 08	1 062	63.73	0.00	-156 0	
4Q17	6.64	19 00	1 332	35 90	0.01	-66.6	
1Q18	6.28	16.40	1 272	39 50	0.15	61.3	
2Q18	6.27	16 90	1 064	49 60	0.00	-13.6	
3Q18	6.69	21 30	1 004	62 00	0.18	-89.1	
4Q18	6.66	19.10	0 958	37 00	0.57	-47.0	
MW-24							
1Q16	6.78	16 61	1 538	5.06	0.82	109 0	
2Q16	6.84	17 98	1.793	11 30	1.92	102 0	
3Q16	6.98	19 99	1.164	5.73	0.53	97.0	
4Q16	6.92	20 22	1 313	10.10	0.30	103 0	
1Q17	6.98	17 09	1 324	5.77	0.26	17.1	
2Q17	7.00	18 97	1 611	7.19	0.16	34.0	
3Q17	6.83	21.41	1.491	88.10	0.05	-121 0	Field parameters are suspect.
4Q17	7.07	20 21	1 811	3.91	0.25	85.0	
1Q18	7.05	17 60	1 687	5.80	0.83	134 9	
2Q18	6.80	16 80	2 026	22 80	0.63	45.1	
3Q18	6.69	20.10	1 809	49 80	2.90	126.7	
4Q18	6.61	19 60	2 020	51 60	0.70	79.3	

TABLE 2
SUMMARY OF GROUNDWATER MONITORING WELL FIELD PARAMETERS

WELL ID & EVENT	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
MW-25							
1Q16	6.37	19 02	1.100	*	0.02	-89.0	
2Q16	6.93	20.48	1 299	10 24	0.04	-132 0	
3Q16	7.14	20 30	1.102	6.31	0.00	-135 0	
4Q16	6.96	21 08	1 219	6.03	0.10	-140 0	
1Q17	6.80	17.70	1 211	8.81	0.08	-119 0	
2Q17	6.87	18 58	1 282	0.54	0.01	33.0	
3Q17	6.95	23.17	1 248	7.70	0.13	-134 0	
4Q17	6.92	21 23	1 267	14 05	0.02	-127 0	
1Q18	6.94	17 90	1 287	20.40	0.24	-170.4	
2Q18	6.88	18 00	0 919	16.70	0.00	-27.9	
3Q18	7.09	20.40	0.495	19 00	0.14	-64.4	
4Q18	7.27	18 20	0 555	4.40	0.57	-107 0	
MW-26							
1Q16	6.82	17 87	1 305	25.15	0.29	63.0	
2Q16	6.88	17 83	1.162	5.78	0.17	70.0	
3Q16	6.83	20 95	1.155	31 29	0.28	200 0	
4Q16	6.88	19.74	1 340	14.49	0.11	-26.0	
1Q17	6.71	16.76	1 300	6.94	0.77	73.0	
2Q17	6.84	19 89	1 967	5.21	0.11	156 0	
3Q17	6.76	20.73	1 594	8.43	0.09	-41.0	
4Q17	6.87	20.40	1 814	3.12	0.20	53.8	
1Q18	6.77	18.40	1 630	18 80	0.43	165.4	
2Q18	6.72	18 80	1 832	14.10	0.09	90.4	
3Q18	6.71	22.10	1 592	4.00	0.40	146.7	
4Q18	6.81	21 00	1.431	3.80	0.73	62.3	
MW-27							
1Q16	6.84	17.44	1.105	11 90	0.66	-4.0	
2Q16	6.82	16 27	1.125	12 26	0.10	-38.0	
3Q16	6.91	18 99	0 933	21 55	1.57	-52.0	
4Q16	6.99	18 57	0 949	32.47	0.86	-24.0	
1Q17	7.01	15 97	0 812	17 30	0.34	349 0	
2Q17	6.93	18.70	1 021	1.65	0.79	-12.0	
3Q17	6.93	21 63	0 912	45.15	1.88	12.0	
4Q17	6.94	19 93	1 026	13 21	1.35	4.0	
1Q18	6.91	16 80	0 931	49 30	0.50	-43.8	
2Q18	6.90	15 80	1.436	30.70	0.72	-24.1	
3Q18	6.79	21.40	1 204	49 80	13.90 *	-30.4	* Field parameters are suspect.
4Q18	6.79	19 60	1 021	30 90	1.84	35.7	

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 2
SUMMARY OF GROUNDWATER MONITORING WELL FIELD PARAMETERS

WELL ID & EVENT	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
MW-28							
1Q16	6.71	18 64	2 592	8.98	0.03	0.0	
2Q16	6.70	17 97	2 266	5.11	0.02	34.0	
3Q16	6.65	19 51	1 892	19 22	0.00	137 0	
4Q16	6.75	18.43	1 855	10 58	0.00	-14.0	
1Q17	6.75	16 85	1.405	24 28	0.06	180 0	
2Q17	6.74	17 54	1 659	13.10	0.08	-44.0	
3Q17	6.65	21 61	1.783	41.11	0.05	-75.0	
4Q17	6.72	19 67	1 594	23.12	0.04	-17.0	
1Q18	6.70	17 90	1 343	22.10	0.26	-38.7	
2Q18	6.57	17 30	1 598	14 60	0.13	40.2	
3Q18	6.56	20 80	2 077	0.80	4.00	-11.4	
4Q18	6.71	19 30	1 619	8.10	0.83	-27.8	
P-54							
1Q16	6.92	14 29	1 250	7.21	4.72	77.0	
2Q16	6.81	16 52	1 229	7.40	5.39	233 0	
3Q16	7.03	18 86	1 080	11 23	5.69	116 0	
4Q16	6.82	18.16	1.180	5.41	4.98	194 0	
1Q17	6.87	16 33	0 958	10 33	2.70	167 0	
2Q17	6.86	17.13	1 332	9.18	2.51	191 0	
3Q17	6.71	21.77	1 359	21 24	0.68	35.0	
4Q17	6.85	19.45	1 283	21 53	0.96	126 0	
1Q18	6.75	17.40	1.441	13.40	1.64	161 0	
2Q18	6.90	15 90	1 999	26 20	1.72	90.0	
3Q18	6.77	20 60	1 258	13 60	19.70 *	199.1	* Field parameters are suspect.
4Q18	6.76	19.40	1 253	12 50	1.63	98.2	
P-55R							
1Q16	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
2Q16	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
3Q16	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
4Q16	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
1Q17	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
2Q17	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
3Q17	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
4Q17	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
1Q18	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
2Q18	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
3Q18	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
4Q18	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.

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TABLE 2
SUMMARY OF GROUNDWATER MONITORING WELL FIELD PARAMETERS

WELL ID & EVENT	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
P-56							
1Q16	6.81	18 90	1 641	38 50	0.00	-127 0	
2Q16	6.93	22 69	1 996	30 25	0.00	-145 0	
3Q16	7.08	22.75	1 874	7.47	0.00	-287 0	
4Q16	7.09	24.16	1 861	19 56	0.00	-144 0	
1Q17	7.02	18.76	1 819	13.42	0.00	-136 0	
2Q17	7.08	20 62	1 645	10 39	0.00	-80.0	
3Q17	7.12	29 55	1 228	35 04	0.00	-165 0	
4Q17	7.09	20 82	1 512	14 63	0.00	-157 0	
1Q18	6.91	19 90	1.466	19 50	0.13	-22.5	
2Q18	6.98	22 30	2 042	48.70	0.24	-131.4	
3Q18	6.92	22 80	1 579	49 90	0.00	-140 9	
4Q18	7.19	20 20	1.198	11 00	0.29	-88.6	
P-57							
1Q16	6.47	20.45	1.422	*	0.05	-106 0	
2Q16	6.76	24 03	1 608	6.43	0.01	-135 0	
3Q16	6.92	24 53	1 563	3.80	0.00	-159 0	
4Q16	6.88	23 87	1 511	6.36	0.05	-143 0	
1Q17	6.87	20.19	1 513	3.72	0.12	-129 0	
2Q17	6.86	22 38	1.480	0.98	0.03	-96.0	
3Q17	6.81	24 96	1 077	6.33	0.00	-137 0	
4Q17	6.88	23.41	1.439	2.36	0.00	-119 0	
1Q18	6.73	21 30	1 537	6.73	0.33	-151 2	
2Q18	6.69	20 80	1 689	9.40	0.37	-116 0	
3Q18	6.70	24.70	1.799	1.00	0.70	-131 3	
4Q18	6.57	21.70	1 307	3.80	0.75	60.3	
P-58							
1Q16	6.38	19.13	1 281	*	0.03	-91.0	
2Q16	6.61	24.46	2 012	16 95	0.00	-110 0	
3Q16	6.63	24 94	2.160	10 60	0.00	-124 0	
4Q16	6.69	24.48	2 648	15 56	0.05	-123 0	
1Q17	6.72	21 85	2 345	28 06	0.00	-111 0	
2Q17	6.69	22.16	2.443	4.71	0.04	61.0	
3Q17	6.79	24.77	2 202	10.11	0.00	-123 0	
4Q17	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
1Q18	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
2Q18	6.57	22.70	3.147	14.70	0.32	-93.2	
3Q18	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
4Q18	7.00	25 80	2 600	40 60	0.49	-39.4	

TABLE 2
SUMMARY OF GROUNDWATER MONITORING WELL FIELD PARAMETERS

WELL ID & EVENT	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
P-59							
1Q16	6.50	21 82	1 350	*	0.06	-100 0	
2Q16	6.59	27 97	1.498	3.74	0.01	-134 0	
3Q16	6.67	29.15	1 878	10.43	0.00	-150 0	
4Q16	6.67	27 37	1 525	8.42	0.03	-121 0	
1Q17	6.60	23 06	1 837	6.23	0.10	-125 0	
2Q17	6.68	24 94	1 394	1.02	0.07	-78.0	
3Q17	6.59	28 96	1 588	10.14	0.00	-127 0	
4Q17	6.64	27 54	1 824	10 54	0.00	-133 0	
1Q18	6.46	24.40	1.784	10 60	0.20	10.0	
2Q18	7.36	27.70	1 344	11 30	0.38	-106 9	
3Q18	6.56	31.40	1.790	8.00	2.00	-113.7	
4Q18	6.61	27.10	1 648	49 20	0.20	-90.1	
P-66							
1Q16	6.45	18 92	1 035	*	0.00	-78.0	
2Q16	6.48	20 88	1 201	9.19	0.00	-106 0	
3Q16	6.59	24 88	1 283	8.94	0.01	-260 0	
4Q16	6.64	21.18	1.419	13 50	0.02	-111 0	
1Q17	6.65	20 64	1.191	13.13	0.08	-102 0	
2Q17	6.67	22.11	1.185	8.79	0.00	-69.0	
3Q17	6.55	25 65	1 269	24 34	0.07	-109 0	
4Q17	6.62	21 99	1 587	5.96	0.04	-111 0	
1Q18	6.46	18 90	1 580	7.20	0.33	162 5	
2Q18	6.50	18 80	1 965	5.60	0.35	-103 6	
3Q18	6.49	27.10	1 861	16 50	0.37	-85.4	
4Q18	6.79	18 30	1 501	3.80	0.81	90.4	
P-68							
1Q16	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
2Q16	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
3Q16	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
4Q16	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
1Q17	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
2Q17	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
3Q17	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
4Q17	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
1Q18	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
2Q18	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
3Q18	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
4Q18	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.

TABLE 2
SUMMARY OF GROUNDWATER MONITORING WELL FIELD PARAMETERS

WELL ID & EVENT	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
P-74							
1Q16	7.82	8 66	0 898	5.01	11.96	38.0	
2Q16	7.07	19 67	0.183	16 93	0.00	-51.0	
3Q16	6.94	21 04	0.171	8.45	0.01	-286 0	
4Q16	7.02	21.43	0 298	1.78	0.00	-185 0	
1Q17	6.62	14.73	0 232	4.84	0.25	-38.0	
2Q17	7.85	19 80	1 536	1.89	8.06	35.0	
3Q17	7.15	25.12	0.142	3.38	0.10	-107 0	
4Q17	6.56	20 98	0 384	6.95	0.00	-55.0	
1Q18	6.42	19 50	0.776	6.30	0.26	166 5	
2Q18	7.85	13 00	0 255	6.30	9.75	28.4	
3Q18	7.09	27 50	0 225	11 90	0.57	31.2	
4Q18	6.29	18.10	0 323	3.30	0.86	62.0	
P-93A							
1Q16	6.45	17 36	1.489	*	0.22	-21.0	
2Q16	6.68	20 38	1.733	4.87	0.20	-12.0	
3Q16	6.77	21 63	1.795	1.59	0.01	103 0	
4Q16	6.79	20 53	1 563	5.17	2.09	105 0	
1Q17	6.77	17 21	1 521	18 27	0.20	68.0	
2Q17	6.84	20 26	1.177	1.56	0.12	83.0	
3Q17	7.02	25.19	1 049	15 32	0.12	-14.0	
4Q17	6.88	22 07	1 047	1.97	0.40	117 0	
1Q18	6.99	22.40	1.173	6.10	0.36	142.1	
2Q18	6.83	24 00	1 514	12 60	0.51	-3.2	Initial sample
	6.72	23 60	0 965	6.20	0.34	206 0	Confirmation sample
3Q18	6.78	30 00	1 007	5.20	0.85	-81.2	
4Q18	6.83	22 90	1.158	2.60	0.30	-137 9	
P-93B							
1Q16	6.82	17.15	1 268	*	0.07	-110 0	
2Q16	6.89	18.15	1 553	10.49	1.31	-120 0	
3Q16	6.89	19 50	1.448	3.64	0.53	-114 0	
4Q16	6.94	18.70	1 357	8.97	0.88	-99.0	
1Q17	6.80	17.46	1 337	18.77	0.20	-121 0	
2Q17	6.85	17 81	1.171	8.61	4.05	-52.0	Dishchared during reading.
3Q17	6.77	22 27	1 323	0.05	0.00	-125 0	
4Q17	6.68	19 00	1 669	12 80	1.20	-100 3	
1Q18	6.78	17 30	1.455	44 20	0.35	-125.7	
2Q18	7.07	18 20	1 364	8.80	0.76	-113 2	
3Q18	6.68	23 90	1.448	50 30	0.50	-95.0	
4Q18	6.59	18 50	1 561	28 20	0.44	-63.6	

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TABLE 2
SUMMARY OF GROUNDWATER MONITORING WELL FIELD PARAMETERS

WELL ID & EVENT	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
P-93C							
1Q16	6.87	17 91	1.193	*	1.95	-93.0	
2Q16	7.06	19 69	1.115	12 53	0.00	-99.0	
3Q16	7.01	20.10	1 235	51 32	0.01	-241 0	
4Q16	6.93	19 28	1 278	7.37	0.15	-72.0	
1Q17	7.04	18 32	1 309	30 61	0.12	-91.0	
2Q17	6.96	18 36	1.104	0.43	0.00	-49.0	
3Q17	6.97	22.42	0 948	15 98	0.16	-87.0	
4Q17	6.90	19.44	1.165	41.17	0.00	-106 0	
1Q18	6.92	19.40	1 256	14 90	0.38	137 8	
2Q18	7.00	19 00	1 563	42.70	0.46	-81.6	
3Q18	6.74	23.40	1 222	3.30	0.29	-49.3	
4Q18	6.95	19 00	1 362	8.30	0.40	-48.7	
P-93D							
1Q16	6.87	16.45	1.403	*	0.18	-98.0	
2Q16	7.08	17 84	1 617	7.95	0.16	-224 0	
3Q16	7.21	18 93	1.455	3.07	0.01	-142 0	
4Q16	7.12	20 21	1.478	28 86	2.05	-125 0	
1Q17	6.51	15.16	1.447	15 58	4.10	-77.0	
2Q17	7.09	17 80	1.192	0.77	0.17	-50.0	
3Q17	7.12	19 92	1 278	1.49	0.00	-166 0	
4Q17	6.98	17 80	1 598	1.12	0.15	-140.1	
1Q18	6.96	17 80	1 513	12 30	0.26	-157 9	
2Q18	7.42	19 00	1 367	10 30	0.83	-106 5	
3Q18	7.37	28 90	1.447	4.50	3.10	-101.1	
4Q18	7.05	17 50	1.441	7.00	0.21	-107 9	
P-114R							
1Q16	6.86	19.48	0 842	*	0.02	-129 0	
2Q16	6.68	19.47	1 527	7.43	0.00	-145 0	
3Q16	6.82	22 88	1.115	8.81	0.00	-295 0	
4Q16	6.83	21 50	1 094	16 25	0.03	-127 0	
1Q17	6.80	16 52	0 803	29 92	0.22	-76.0	
2Q17	6.85	21 22	0 907	32 88	0.00	-113 0	
3Q17	6.48	22.74	0 651	38 57	0.00	-94.0	
4Q17	6.46	21.45	0.721	49.42	0.05	-84.0	
1Q18	6.64	20 60	0 990	45 60	0.16	-49.8	
2Q18	6.30	19 60	0 879	33.40	0.12	-60.0	
3Q18	6.67	22 00	0 903	29 60	0.12	-132 6	
4Q18	6.74	20 50	0.784	38 00	0.49	41.0	

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TABLE 2
SUMMARY OF GROUNDWATER MONITORING WELL FIELD PARAMETERS

WELL ID & EVENT	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
ROST-3-MW							
1Q16	6.90	17.72	1 239	7.09	0.00	-100 0	
2Q16	6.68	17 29	1.711	11 39	0.00	-93.0	
3Q16	6.75	19 03	1.406	8.68	0.13	-103 0	
4Q16	7.01	17 52	1 283	8.93	0.00	-152 0	
1Q17	6.82	17 39	1 354	12 89	0.05	48.0	
2Q17	6.86	18.77	1 538	0.88	0.00	-299 0	
3Q17	6.89	19 81	1 614	16.13	0.04	-123 0	
4Q17	6.53	17 64	1 660	12 28	0.05	-108 0	Initial sample
	6.45	17.44	1 534	36 05	0.09	-192 0	Confirmation sample
1Q18	6.15	15 20	1.776	15 00	0.37	239 6	Initial sample
	6.48	18.40	1 631	14 00	0.29	-10.9	Confirmation sample
2Q18	6.56	17.10	1.704	25.10	0.02	-36.0	
3Q18	6.64	21 00	1 562	23.10	0.22	-78.8	
4Q18	6.49	19.10	1 585	12 90	0.61	21.4	
ROST-4-PZ(C)							
1Q16	7.02	17 91	1 971	9.64	0.00	-155 0	
2Q16	7.14	18 50	1 907	19 38	0.03	-178 0	
3Q16	7.12	20 30	1 553	6.54	0.10	-174 0	
4Q16	7.31	18 20	1 575	8.38	0.00	-241 0	
1Q17	7.38	16.15	1 351	12.10	0.15	68.0	
2Q17	7.30	17 89	1.492	4.89	0.09	-134 0	
3Q17	7.24	20 56	1.460	23 29	0.01	-178 0	
4Q17	7.16	18 31	1.466	5.75	0.00	-142 0	
1Q18	6.71	16 20	2.188	44 00	0.27	-107 6	
2Q18	6.66	16 90	2 033	15 20	0.39	-84.2	
3Q18	6.75	19 80	2.149	5.20	0.70	-120 8	
4Q18	6.98	17.70	1.121	12 80	0.69	65.2	
ROST-4-PZ(E)							
4Q17	7.02	19.45	1.753	18.10	0.02	-147 0	Added to Interim GW Monitoring Program 4Q17
1Q18	6.99	16 60	2 311	19.70	0.39	-32.4	
2Q18	6.91	18 00	2.416	15 20	0.58	16.8	
3Q18	6.65	23.40	2 660	42 60	2.90	-4.0	
4Q18	6.45	18.70	1 518	11 80	0.89	145 0	
ROST-4-PZ(G)							
4Q17	6.82	18.77	1 525	11 54	0.00	-138 0	Added to Interim GW Monitoring Program 4Q17
1Q18	6.70	18 50	1.416	7.80	0.24	-119.1	
2Q18	6.38	17 90	2 255	10.40	0.37	-88.8	
3Q18	6.76	21.40	2 357	4.90	1.00	-109.7	
4Q18	6.92	18.70	1 832	9.00	0.69	52.1	

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 2
SUMMARY OF GROUNDWATER MONITORING WELL FIELD PARAMETERS

WELL ID & EVENT	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
T-12							
1Q16	6.47	19 69	0 995	*	0.13	-101 0	
2Q16	6.82	24 20	1 227	4.24	0.00	-147 0	
3Q16	6.90	26 05	1 206	7.74	0.00	-280 0	
4Q16	6.91	26 26	1 268	12 90	0.04	-135 0	
1Q17	6.90	20.47	1 213	4.88	0.11	-125 0	
2Q17	6.98	21 85	1 096	4.41	0.12	-98.0	
3Q17	6.86	25 07	1 243	6.64	0.00	-151 0	
4Q17	6.98	23.48	1.165	5.31	0.00	-157 0	
1Q18	6.72	22.40	1 372	6.40	0.18	-37.9	
2Q18	7.95	21 80	1 335	20 60	0.34	-115 8	
3Q18	6.70	22.70	1 977	0.00	0.90	-117.1	
4Q18	6.54	23 00	1.716	3.00	0.32	-70.3	

NOTES:

1) Beginning in 1Q18, field parameters were collected using a YSI ProDSS. Prior results were reported using an In-Situ Troll 9500.

2) NM = Not Measured

3) * = Equipment malfunction. Results are suspect.

4) Negative parameter readings for Turbidity and DO are recorded as zero.

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs													
						Acetone	Benzene	Bromomethane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Chlorobenzene	Chloroform	Cymene (p-Isopropyltoluene)	1,2-Dibromo-3-chloropropane (DBCP)	1,2-Dibromoethane	1,2-Dichloroethane	cis-1,2-Dichloroethene
Screening Values (mg/L)						6.3 [1]	0.005 [1]	0.0098 [2]	4.2 [1]	0.35 [3]	0.7 [3]	0.7 [3]	0.7 [1]	0.100 [1]	0.07 [1]		0.0002 [1]	0.00005 [1]	0.005 [2]	0.07 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**													
MW-01	MW1-ROX-010816	1/8/2016	48 80 - 58 80	40 93	NE	<0 025	0 0029	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW1-ROX-041216	4/12/2016		40 35	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW1-ROX-071416	7/14/2016		39.43	NE	<0 025	0 00063 J	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW1-ROX-101316	10/13/2016		38.79	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW-1-ROX-011217	1/12/2017		38 35	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW1-ROX-041717	4/17/2017		38 58	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	MW1-ROX-071117	7/11/2017		37 24	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	MW1-ROX-100617	10/6/2017		37 63	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW1-ROX-010518	1/5/2018		40 06	NE	0.066 F1 J	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW1-ROX-040618	4/6/2018		40 82	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW1-ROX-070618	7/6/2018		41.40	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	MW1-ROX-101018	10/10/2018	48 80 - 58 80	41.17	NE	<0 025	0 0018	<0 001	<0 05	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.0001	<0 00002	<0 001	<0.001
MW-02	MW2-ROX-011416	1/14/2016	49 87 - 59 87	42 04	NE	0 034 J	0.018	<0 002	0.0089 J	0.0057	0 0039	<0.002	<0 002	<0.002	<0 002	0 0046	<0.000029	<0.000019	<0 002	<0.002
	MW2-ROX-041316	4/13/2016		41 59	NE	0 028 J	0.017	<0 002	0.019 J	<0.002	0 0078	<0.002	<0 002	<0.002	<0 002	0 0087	<0.00003	<0 00002	<0 002	<0.002
	MW2-ROX-071416	7/14/2016		40.79	NE	<0.05	0.012	<0 002	<0 05	<0.002	<0.002	<0.002	<0 002	<0.002	<0 002	0 0066	<0 000031 UJ	<0.000021 UJ	<0 002	<0.002
	MW2-ROX101316	10/13/2016		40.10	NE	<0 025	0.013	<0 001	0.013 J	0.0036	0 0027	<0.001	<0 001	<0.001	<0 001	0 0032	<0.00003	<0 00002	<0 001	<0.001
	MW2-ROX-011217	1/12/2017		39 58	NE	<0 025	0.016	<0 001	<0.025	<0.001	0 0059	<0.001	0.0039	<0.001	<0 001	0.007	<0.000031	<0.000021	<0 001	<0.001
	MW2-ROX-041717	4/17/2017		39 69	NE	<0.13	0 0062	<0 005	0.026 J	0.0088	0 0055	<0.005	<0 005	<0.005	<0 005	0.006	<0.000031	<0.000021	<0 005	<0.005
	MW2-ROX-071217	7/12/2017		38 66	NE	<0 025	0 0092	<0 001	0.0093 J	0.0062	0 0055	<0.001	<0 001	<0.001	<0 001	0 0062	<0.00003	<0 00002	0.00085 J	<0.001
	MW2-ROX-101217	10/12/2017		39 03	NE	<0.13	0.006	<0 005	0.016 J	0.01	0.006	<0.005	<0 005	<0.005	<0 005	0 0065	0.00012	<0 00002	<0 005	<0.005
	MW2-ROX-011118	1/11/2018		41 24	NE	<0 025	0.011	<0 001	0.0083 J	<0.001	0 0054	<0.001	<0 001	<0.001	<0 001	0 0057	<0.00003	<0 00002	<0 001	<0.001
	MW2-ROX-040918	4/9/2018		42.10	NE	0.029	0 0016	<0 001	0.019 J	0.0029	0 0017	<0.001	<0 001	<0.001	0.0021	0 0018	<0.00003	<0 00002	<0 001	<0.001
	MW2ROX-071018	7/10/2018		42 59	NE	<0 025	0.007	<0 001	0.0095 J	0.0058	0 0054	0.00074 J	0.00093 J	<0.001	<0 001	0 0052	<0.000029	<0.000019	<0 001	<0.001
	MW2-ROX-101218	10/12/2018	49 87 - 59 87	42.71	NE	0 021 J	0 0044	<0 001	0.0099 J	0.0022	0.004	<0.001	<0 001	<0.001	<0 001	0 0036	<0.00003	<0 00002	<0 001	<0.001
	MW2-ROX-101218-DUP	10/12/2018		42.71	NE	0 017 J	0 0045	<0 001	0.0095 J	0.0022	0 0041	<0.001	<0 001	<0.001	<0 001	0 0037	<0.00003	<0 00002	<0 001	<0.001
MW-03	MW3-ROX-010716	1/7/2016	34 67 - 44 67	27 92	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW3-ROX-040616	4/6/2016		27 07	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	0 0007 J	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW3-ROX-070816	7/8/2016		26 51	NE	0 03	0 00042 J	<0 001	0.0047 J	<0.001	0 00092 J	0.0011	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW3-ROX100716	10/7/2016		25.79	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW3-ROX-010617	1/6/2017		25 65	NE	0 015 J	0 0011	<0 001	<0.025	0.00078 J	0 0016	0.0013	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW3-ROX-041117	4/11/2017		26.13	NE	0 023 J	0.0004 J	<0 001	<0.025	<0.001	<0.001	0.00073 J	<0 001	<0.001	<0 001	<0.001	<0 000031 UJ	<0.00002 UJ	<0 001	<0.001
	MW3-ROX-071217	7/12/2017		24 25	NE	<0 025	0.0004 J	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW3-ROX-100517	10/5/2017		25 02	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	0.00063 J	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW3-ROX-010818	1/8/2018		27 28	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW3-ROX-040518	4/5/2018		27 98	NE	0.01 J	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW3-ROX-070618	7/6/2018		28 30	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW3-ROX-100518	10/5/2018	34 67 - 44 67	28.18	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
MW-04	MW4-ROX-011316	1/13/2016	45 06 - 55 06	39.10	NE	<0 025	0.12	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW4-ROX-041916	4/19/2016		38 50	NE	<0 025	0 0012	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW4-ROX-071416	7/14/2016		37 85	NE	<0 025	0.0008 J	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW4-ROX-100616	10/6/2016		37.18	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	MW4-ROX-010917	1/9/2017		36 84	NE	<0 025	0 00039 J	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW4-ROX-041017	4/10/2017		37 08	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	MW4-ROX-071017	7/10/2017		35 68	NE	0 014 J	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW4-ROX-100517	10/5/2017		36 32	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW-4-ROX-010918	1/9/2018		38 65	NE	0.031	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW4-ROX-040918	4/9/2018		39 32	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW4-ROX-071018	7/10/2018		39 60	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW4-ROX-100818	10/8/2018	45 06 - 55 06	39 61	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs													
						Acetone	Benzene	Bromomethane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Chlorobenzene	Chloroform	Cymene (p-Isopropyltoluene)	1,2-Dibromo-3-chloropropane (DBCP)	1,2-Dibromoethane	1,2-Dichloroethane	cis-1,2-Dichloroethene
Screening Values (mg/L)						6.3 [1]	0.005 [1]	0.0098 [2]	4.2 [1]	0.35 [3]	0.7 [3]	0.7 [3]	0.7 [1]	0.100 [1]	0.07 [1]		0.0002 [1]	0.00005 [1]	0.005 [2]	0.07 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**													
MW-05	MW5-ROX-011416	1/14/2016	33 97 - 43 97	27.19	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	0.0026	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW5-ROX-040616	4/6/2016		26 80	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	0.0016	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW5-ROX-070816	7/8/2016		26 28	NE	0 011 J	<0.001	<0 001	<0.025	<0.001	<0.001	0 003	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW5-ROX-101016	10/10/2016		25.47	NE	<0 025	<0.001	<0 001	<0.025	<0.001	0 00077 J	0.0044	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW5-ROX-010617	1/6/2017		25 33	NE	<0 025	0 0011	<0 001	<0.025	<0.001	0 0013	0.0034	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW5-ROX-041217	4/12/2017		25 69	NE	<0 025	0 00049 J	<0 001	<0.025	<0.001	<0.001	0.0012	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW5-ROX-071217	7/12/2017		23 96	NE	<0 025	0 0038	<0 001	<0.025	<0.001	<0.001	0.0024	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW5-ROX-101217	10/12/2017		25 04	NE	<0 025	0 0069	<0 001	<0.025	<0.001	<0.001	0 002	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	0 0005 J
	MW5-ROX-011118	1/11/2018		26 98	NE	0 011 J	0 0021	<0 001	<0.025	<0.001	<0.001	0.0025	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW5-ROX-040918	4/9/2018		27.78	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	0.0012	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW5-ROX-071018	7/10/2018		27 87	NE	<0 025	0 00091 J	<0 001	<0.025	<0.001	<0.001	0.0029	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW5-ROX-101218	10/12/2018	33 97 - 43 97	27 95	NE	<0 025	0 0019	<0 001	<0.025	<0.001	<0.001	0.0022	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
MW-06A	MW6A-ROX-011116	1/11/2016	34 83 - 44 83	29 36	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW6A-ROX-040716	4/7/2016		29 07	NE	0 023 J	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW6A-ROX-071116	7/11/2016		28.45	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW6A-ROX-101116	10/11/2016		27 51	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW6A-ROX-011017	1/10/2017		27.43	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW6A-ROX-041217	4/12/2017		27 69	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	MW6A-ROX-071117	7/11/2017		26.16	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW6A-ROX-100417	10/4/2017		27 09	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW6A-ROX-010518	1/5/2018		29 22	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW6A-ROX-040518	4/5/2018	33 85 - 43 85	29 83	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW6A-ROX-070518	7/5/2018		30.10	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW6A-ROX-100418	10/4/2018	33 85 - 43 85	30.10	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
MW-06B	MW6B-ROX-011116	1/11/2016	64 05 - 69 05	29.41	NE	<0 025	<0.001	<0 001	0.005 J	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW6B-ROX-040716	4/7/2016		29.11	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW6B-ROX-071116	7/11/2016		28.49	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW6B-ROX-101116	10/11/2016		27 56	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW6B-ROX-011017	1/10/2017		27.49	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW6B-ROX-041217	4/12/2017		27.75	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW6B-ROX-071117	7/11/2017		26.18	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	MW6B-ROX-100417	10/4/2017		27.16	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW6B-ROX-010518	1/5/2018		29 25	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW6B-ROX-040518	4/5/2018		29 95	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW6B-ROX-070518	7/5/2018		30.15	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW6B-ROX-100418	10/4/2018	64 05 - 69 05	30.13	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
MW-06C	MW6C-ROX-010816	1/8/2016	84 95 - 89 95	29 31	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW6C-ROX-040716	4/7/2016		28 91	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW6C-ROX-071116	7/11/2016		28 30	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW6C-ROX-101016	10/10/2016		27 37	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW6C-ROX-011017	1/10/2017		27 26	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW6C-ROX-041217	4/12/2017		27 56	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	MW6C-ROX-071117	7/11/2017		25 99	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	MW6C-ROX-100417	10/4/2017		26 98	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW6C-ROX-010818	1/8/2018		29 05	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW6C-ROX-040518	4/5/2018		29.74	NE	<0 025	0 0018	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW6C-ROX-070518	7/5/2018		29 93	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	MW6C-ROX-070518-DUP	7/5/2018		29 93	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW6C-ROX-100418	10/4/2018	84 95 - 89 95	29 93	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs													
						Acetone	Benzene	Bromomethane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Chlorobenzene	Chloroform	Cymene (p-Isopropyltoluene)	1,2-Dibromo-3-chloropropane (DBCP)	1,2-Dibromoethane	1,2-Dichloroethane	cis-1,2-Dichloroethene
Screening Values (mg/L)						6.3 [1]	0.005 [1]	0.0098 [2]	4.2 [1]	0.35 [3]	0.7 [3]	0.7 [3]	0.7 [1]	0.100 [1]	0.07 [1]		0.0002 [1]	0.00005 [1]	0.005 [2]	0.07 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**													
MW-06D	MW6D-ROX-010816	1/8/2016	104.72 - 109.72	29 59	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW6D-ROX-010816-DUP	1/8/2016		29 59	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW6D-ROX-040716	4/7/2016		28.76	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW6D-ROX-040716-DUP	4/7/2016		28.76	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW6D-ROX-071116	7/11/2016		28.16	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW6D-ROX-071116-DUP	7/11/2016		28.16	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW6D-ROX-101016	10/10/2016		27 26	NE	<0 025	0 0041	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW6D-ROX-101016-DUP	10/10/2016		27 26	NE	<0 025	0 0044	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW6D-ROX-011017	1/10/2017		27.14	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW6D-ROX-011017-DUP	1/10/2017		27.14	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	MW6D-ROX-041217	4/12/2017		27.43	NE	<0 025	0 0013	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	MW6D-ROX-041217-DUP	4/12/2017		27.43	NE	<0 025	0 00088 J	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	MW6D-ROX-071117	7/11/2017		25 83	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000033	<0.000022	<0 001	<0.001
	MW6D-ROX-071117-DUP	7/11/2017		25 83	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW6D-ROX-100517	10/5/2017		26 83	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW6D-ROX-010818	1/8/2018		28 90	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW6D-ROX-040518	4/5/2018		29 52	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW6D-ROX-070518	7/5/2018		29.76	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW6D-ROX-100418	10/4/2018	104.72 - 109.72	29.76	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
MW-07	MW7-ROX-011416	1/14/2016	42 92 - 52 92	41 02	NE	<130	740	<5	<130	<5	<5	<5	<5	<5	<5	<5	<0.000029	<0.000019	<5	<5
	MW7-ROX-011416-DUP	1/14/2016		41 02	NE	<130	700	<5	<130	<5	<5	<5	<5	<5	<5	<5	<0.000029	<0 00002	<5	<5
	MW7-ROX-041916	4/19/2016		40 68	NE	<50	1100	<2	<50	<2	<2	<2	<2	<2	<2	<2	<0.000029	<0.000019	<2	<2
	MW7-ROX-041916-DUP	4/19/2016		40 68	NE	<50	1100	<2	<50	<2	<2	<2	<2	<2	<2	<2	<0.000029	<0 00002	<2	<2
	MW7-ROX-071416	7/14/2016		39 99	NE	<130	670	<5	<130	<5	<5	<5	<5	<5	<5	<5	<0.000029	<0 00002	<5	<5
	MW7-ROX-071416-DUP	7/14/2016		39 99	NE	<130	680	<5	<130	<5	<5	<5	<5	<5	<5	<5	<0.000029	<0.000019	<5	<5
	MW7-ROX-100616	10/6/2016		39 24	NE	<250	910	<10	<250	<10	<10	<10	<10	<10	<10	<10	<0.00003	<0 00002	<10	<10
	MW7-ROX-100616-DUP	10/6/2016		39 24	NE	<250	840	<10	<250	<10	<10	<10	<10	<10	<10	<10	<0.00003	<0 00002	<10	<10
	MW7-ROX-010917	1/9/2017		38 90	NE	<130	950	<5	<130	<5	<5	<5	<5	<5	<5	<5	<0.00003	<0 00002	<5	<5
	MW7-ROX-041017	4/10/2017		38 92	NE	<25	1000	<1	<25	<1	<1	<1	<1	<1	<1	<1	0.00012 p J	0 000042 J	<1	<1
	MW7-ROX-041017-DUP	4/10/2017		38 92	NE	<25	1100	<1	<25	<1	<1	<1	<1	<1	<1	<1	0.00012 p J	0 000052 J	<1	<1
	MW7 ROX-071117	7/11/2017		37.79	NE	<130	810	<5	<130	<5	<5	<5	<5	<5	<5	<5	<0.00003	<0 00002	<5	<5
	MW7 ROX-071117-DUP	7/11/2017		37.79	NE	<130	870	<5	<130	<5	<5	<5	<5	<5	<5	<5	<0.00003	<0 00002	<5	<5
	MW7-ROX-100517	10/5/2017		38.45	NE	<130	1400	<5	<130	<5	<5	<5	<5	<5	<5	<5	<0.00003	<0 00002	<5	<5
	MW7-ROX-010918	1/9/2018		40 67	NE	<130	1500	<5	<130	<5	<5	<5	<5	<5	<5	<5	<0.00003	<0 00002	<5	<5
	MW7-ROX-040918	4/9/2018		41 38	NE	<25	780	<1	<25	<1	<1	<1	<1	<1	<1	<1	0 000049	<0 00002	<1	<1
	MW7-ROX-040918-DUP	4/9/2018		41 38	NE	<25	770	<1	<25	<1	<1	<1	<1	<1	<1	<1	0 000056	<0 00002	<1	<1
	MW7-ROX-071018	7/10/2018		41 64	NE	<250	1900	<10	<250	<10	<10	<10	<10	<10	<10	<10	<0.000029	<0.000019	<10	<10
	MW7-ROX-071018-DUP	7/10/2018		41 64	NE	<250	1700	<10	<250	<10	<10	<10	<10	<10	<10	<10	<0.000031	<0 00002	<10	<10
	MW7-ROX-100818	10/8/2018	42 92 - 52 92	41 69	NE	<63	650	<2 5	<63	<2 5	<2.5	<2 5	<2.5	<2.5	<2.5	<2.5	<0.000032	<0.000021	<2.5	<2.5
MW-08	MW8-ROX-011416	1/14/2016	33 60 - 43 60	31.79	NE	<50	300	<2	<50	<2	<2	<2	<2	<2	<2	<2	<0.00003	<0 00002	<2	<2
	MW8-ROX-041916	4/19/2016		31.45	NE	<25	480	<1	<25	<1	<1	<1	<1	<1	<1	<1	<0.00003	<0 00002	<1	<1
	MW8-ROX-071416	7/14/2016		30 80	NE	<50	310	<2	<50	<2	<2	<2	<2	<2	<2	<2	<0.00003	<0 00002	<2	<2
	MW8-ROX-100616	10/6/2016		29 99	NE	<130	630	<5	<130	<5	<5	<5	<5	<5	<5	<5	<0.00003	<0 00002	<5	<5
	MW8-ROX-010917	1/9/2017		29.79	NE	<63	410	<2 5	<63	<2 5	<2.5	<2 5	<2.5	<2.5	<2.5	<2.5	<0.00003	<0 00002	<2.5	<2.5
	MW8-ROX-041017	4/10/2017		30 02	NE	<25	830	<1	<25	<1	<1	<1	<1	<1	<1	<1	<0 000031 UJ	<0.000021 UJ	<1	<1
	MW8-ROX-071017	7/10/2017		28.48	NE	<25	870	<1	<25	<1	<1	<1	<1	<1	<1	<1	<0.00003	<0 00002	<1	<1
	MW8-ROX-100517	10/5/2017		29 28	NE	<250	970	<10	<250	<10	<10	<10	<10	<10	<10	<10	<0.00003	<0 00002	<10	<10
	MW8-ROX-100517-DUP	10/5/2017		29 28	NE	<250	990	<10	<250	<10	<10	<10	<10	<10	<10	<10	<0.000031	<0 00002	<10	<10
	MW8-ROX-010918	1/9/2018		31 60	NE	<130	720	<5	<130	<5	<5	<5	<5	<5	<5	<5	<0.000029	<0.000019	<5	<5
	MW8-ROX-040918	4/9/2018		32 27	NE	<25	510	<1	<25	<1	<1	<1	<1	<1	<1	<1	<0.00003	<0 00002	<1	<1
	MW8-ROX-071018	7/10/2018		32.42	NE	<130	840	<5	<130	<5	<5	<5	<5	<5	<5	<5	<0.00003	<0 00002	<5	<5
	MW8-ROX-100818	10/8/2018	33 60 - 43 60	32.45	NE	<63	550	<2 5	<63	<2 5	<2.5	<2 5	<2.5	<2.5	<2.5	<2.5	<0.00003	<0 00002	<2.5	<2.5
	MW8-ROX-100818-DUP	10/8/2018		32.45	NE	<63	560	<2 5	<63	<2 5	<2.5	<2 5	<2.5	<2.5	<2.5	<2.5	<0.000031	<0.000021	<2.5	<2.5

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs													
						Acetone	Benzene	Bromomethane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Chlorobenzene	Chloroform	Cymene (p-Isopropyltoluene)	1,2-Dibromo-3-chloropropane (DBCP)	1,2-Dibromoethane	1,2-Dichloroethane	cis-1,2-Dichloroethene
Screening Values (mg/L)						6.3 [1]	0.005 [1]	0.0098 [2]	4.2 [1]	0.35 [3]	0.7 [3]	0.7 [3]	0.7 [1]	0.100 [1]	0.07 [1]		0.0002 [1]	0.00005 [1]	0.005 [2]	0.07 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**													
MW-09	MW9-ROX-011316	1/13/2016	46.45 - 56.45	42 63	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW9-ROX-041216	4/12/2016		41 98	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW9-ROX-071316	7/13/2016		40 93	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW9-ROX-101316	10/13/2016		40 39	NE	<0 025	0 0024	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW9-ROX-011117	1/11/2017		40 06	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW9-ROX-041417	4/14/2017		40 67	NE	<0 025	0 00068 J	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	MW9-ROX-071217	7/12/2017		38 86	NE	<0 025	0 00076 J	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW9-ROX-100917	10/9/2017		39.17	NE	<0 025	0 00064 J	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW9-ROX-011018	1/10/2018		41.10	NE	<0 025	<0.001	<0 001	0.0028 J	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW9-ROX-040618	4/6/2018	46 04 - 56 04	42 29	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW9-ROX-070918	7/9/2018		42 82	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW9-ROX-101018	10/10/2018	46 04 - 56 04	42 88	NE	<0 025	0 00024 J	<0 001	<0 05	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000099	<0 00002	<0 001	<0.001
MW-10	MW10-ROX-011316	1/13/2016	44.43 - 54.43	42 53	NE	0 023 J	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000032	<0.000021	<0 001	<0.001
	MW10-ROX-041116	4/11/2016		41 88	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	MW10-ROX-071316	7/13/2016		41 00	NE	<0 025	0.0006 J	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW10-ROX-101216	10/12/2016		40 27	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW10-ROX-011117	1/11/2017		39 88	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW10-ROX-041417	4/14/2017		40 50	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW10-ROX-071117	7/11/2017		38 86	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW10-ROX-100917	10/9/2017		38 94	NE	<0 025	0 00057 J	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	MW10-ROX-100917-DUP	10/9/2017		38 94	NE	<0 025	0 00045 J	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	MW10-ROX-011018	1/10/2018		40 88	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW10-ROX-011018-DUP	1/10/2018		40 88	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW10-ROX-040518	4/5/2018		41 94	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW10-ROX-070918	7/9/2018		42 88	NE	0.033	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW10-ROX-101018	10/10/2018	44.43 - 54.43	42 87	NE	<0 025	<0.001	<0 001	<0 05	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.0001	<0 00002	<0 001	<0.001
MW-11	MW11-ROX-011216	1/12/2016	41 66 - 51 66	40 33	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW11-ROX-041116	4/11/2016		39.49	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	MW11-ROX-071316	7/13/2016		38 59	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW11-ROX-101216	10/12/2016		37 93	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW11-ROX-011117	1/11/2017		37 63	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW11-ROX-041417	4/14/2017		38.17	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW11-ROX-071017	7/10/2017		36 39	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW11-ROX-100917	10/9/2017		36 32	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	MW11-ROX-011018	1/10/2018		39 00	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW11-ROX-040618	4/6/2018		39 98	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW11-ROX-070918	7/9/2018		40 54	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW11-ROX-101118	10/11/2018	41 66 - 51 66	40 65	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
MW-12	MW12-ROX-011116	1/11/2016	41 92 - 51 92	40 98	NE	0 015 J	<0.001	<0 001	0.0043 J	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW12-ROX-040716	4/7/2016		39 82	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW12-ROX-071216	7/12/2016		38 89	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW12-ROX-101116	10/11/2016		38 85	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW12-ROX-010917	1/9/2017		38.11	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW12-ROX-041417	4/14/2017		38 50	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW-12-ROX-07072017	7/7/2017		36 84	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW12-ROX-100617	10/6/2017		37 23	NE	<0 025	0 00099 J	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW12-ROX-011118	1/11/2018		39 62	NE	0.028 F1 J	<0.001	<0 001	<0 025 UJ	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW12-ROX-040518	4/5/2018		40 50	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW12-ROX-040518-DUP	4/5/2018		40 50	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW12-ROX-070618	7/6/2018		41 03	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW12-ROX-101018	10/10/2018	41 92 - 51 92	40 84	NE	<0 025	<0.001	<0 001	<0 05	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.0001	<0 00002	<0 001	<0.001

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs													
						Acetone	Benzene	Bromomethane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Chlorobenzene	Chloroform	Cymene (p-Isopropyltoluene)	1,2-Dibromo-3-chloropropane (DBCP)	1,2-Dibromoethane	1,2-Dichloroethane	cis-1,2-Dichloroethene
Screening Values (mg/L)						6.3 [1]	0.005 [1]	0.0098 [2]	4.2 [1]	0.35 [3]	0.7 [3]	0.7 [3]	0.7 [1]	0.100 [1]	0.07 [1]		0.0002 [1]	0.00005 [1]	0.005 [2]	0.07 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**													
MW-13	MW13-ROX-010716	1/7/2016	25 57 - 35 57	27.16	NE	0 019 J	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW13-ROX-040816	4/8/2016		26 81	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW13-ROX-071116	7/11/2016		26 01	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW13-ROX100716	10/7/2016		25.16	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW13-ROX-010617	1/6/2017		25 54	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW13-ROX-041317	4/13/2017		25.75	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	MW13-ROX-070717	7/7/2017		23 64	NE	0.01 J	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW13-ROX-101017	10/10/2017		25 20	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW13-ROX-010918	1/9/2018		27 20	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW13-ROX-040618	4/6/2018	24 80 - 34 80	27.71	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW13-ROX-070918	7/9/2018		27.6	NE	0 017 J	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW13-ROX-101118	10/11/2018	24 80 - 34 80	27 66	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
MW-14	MW-14-ROX-010816	1/8/2016	33.42 - 43.42	31 64	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000028	<0.000019	<0 001	<0.001
	MW14-ROX-041416	4/14/2016		31 32	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW14-ROX-071116	7/11/2016		30 59	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW14-ROX-101416	10/14/2016		29 62	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW14-ROX-011117	1/11/2017		29 61	NE	<0 025	0 0019	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW14-ROX-041317	4/13/2017		29 54	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW14-ROX-070717	7/7/2017		28 28	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0.00002 UJ	<0 001	<0.001
	MW14-ROX-101017	10/10/2017		29.44	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW14-ROX-010918	1/9/2018		31 34	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW14-ROX-010918-DUP	1/9/2018		31 34	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW14-ROX-041018	4/10/2018		31 96	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW14-ROX-071118	7/11/2018		32 06	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW14-ROX-101518	10/15/2018	33.42 - 43.42	32 32	NE	0 013 J	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
MW-16	MW16-ROX-011216	1/12/2016	37 06 - 47 06	41 99	NE	0 016 J	0 00092 J	<0 001	<0.025	<0.001	<0.001	<0.001	0.0015	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW16-ROX-040816	4/8/2016		41.17	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW16-ROX-071216	7/12/2016		39 93	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW16-ROX-101116	10/11/2016		39 64	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW16-ROX-010917	1/9/2017		39.15	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	MW16-ROX-041417	4/14/2017		39.45	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW16-ROX-071017	7/10/2017		38.16	NE	<0 025	0 00039 J	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW16-ROX-100617	10/6/2017		38 04	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW16-ROX-010818	1/8/2018		40.71	NE	<0.025 UJ	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW16-ROX-040618	4/6/2018	37 50 - 47 50	41 54	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW16-ROX-070618	7/6/2018		42 35	NE	0.01 J F2	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW16-ROX-100518	10/5/2018	37 50 - 47 50	42 24	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs													
						Acetone	Benzene	Bromomethane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Chlorobenzene	Chloroform	Cymene (p-Isopropyltoluene)	1,2-Dibromo-3-chloropropane (DBCP)	1,2-Dibromoethane	1,2-Dichloroethane	cis-1,2-Dichloroethene
Screening Values (mg/L)						6.3 [1]	0.005 [1]	0.0098 [2]	4.2 [1]	0.35 [3]	0.7 [3]	0.7 [3]	0.7 [1]	0.100 [1]	0.07 [1]		0.0002 [1]	0.00005 [1]	0.005 [2]	0.07 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**													
MW-22	MW22-ROX-011516	1/15/2016	37 88 - 47 88	40.42	NE	<0.5	1 2	<0.02	<0.5	<0.02	<0 02	<0.02	<0.02	<0.02	<0.02	<0 02	<0.000029	<0 00002	<0.02	<0.02
	MW22-ROX-011516-DUP	1/15/2016		40.42	NE	<0.5	1.1	<0.02	<0.5	<0.02	<0 02	<0.02	<0.02	<0.02	<0.02	<0 02	<0.000029	<0 00002	<0.02	<0.02
	MW22-ROX-041316	4/13/2016		39 56	NE	<0.63	1 2	<0 025	<0 63	<0.025	<0.025	<0.025	<0 025	<0.025	<0 025	<0.025	<0.00003	<0 00002	<0 025	<0.025
	MW22-ROX-041316-DUP	4/13/2016		39 56	NE	<0.63	1 2	<0 025	<0 63	<0.025	<0.025	<0.025	<0 025	<0.025	<0 025	<0.025	<0.000029	<0 00002	<0 025	<0.025
	MW22-ROX-071516	7/15/2016		38 97	NE	<0.13	0.061	<0 005	<0.13	<0.005	<0.005	<0.005	<0 005	<0.005	<0 005	<0.005	<0.000031	<0 00002	<0 005	<0.005
	MW22-ROX-071516-DUP	7/15/2016		38 97	NE	<0.13	0.062	<0 005	<0.13	<0.005	<0.005	<0.005	<0 005	<0.005	<0 005	<0.005	<0.00003	<0 00002	<0 005	<0.005
	MW22-ROX-101716	10/17/2016		38.17	NE	<0.25	0.31	<0.01	<0 25	<0.01	<0 01	<0.01	<0.01	<0.01	<0.01	<0 01	<0.00003	<0 00002	<0.01	<0.01
	MW22-ROX-101716-DUP	10/17/2016		38.17	NE	<0.25	0.31	<0.01	<0 25	<0.01	<0 01	<0.01	<0.01	<0.01	<0.01	<0 01	<0.00003	<0 00002	<0.01	<0.01
	MW22-ROX-011217	1/12/2017		37 80	NE	<0 062 U	0.039	<0 005	<0.13	<0.005	<0.005	<0.005	<0 005	<0.005	<0 005	<0.005	<0.000031	<0 00002	<0 005	<0.005
	MW22-ROX-011217-DUP	1/12/2017		37 80	NE	0 065 J	0.036	<0 005	<0.13	<0.005	<0.005	<0.005	<0 005	<0.005	<0 005	<0.005	<0.00003	<0 00002	<0 005	<0.005
	MW22-ROX-041717	4/17/2017		38 24	NE	<0.25	0.13	<0.01	<0 25	<0.01	<0 01	<0.01	<0.01	<0.01	<0.01	<0 01	<0.000031	<0 00002	<0.01	<0.01
	MW22-ROX-041717-DUP	4/17/2017		38 24	NE	<0.25	0.14	<0.01	<0 25	<0.01	<0 01	<0.01	<0.01	<0.01	<0.01	<0 01	<0.00003	<0 00002	<0.01	<0.01
	MW22-ROX-071217	7/12/2017		36 83	NE	<0.05	0 0079	<0 002	<0 05	<0.002	<0.002	<0.002	<0 002	<0.002	<0 002	<0.002	<0.00003	<0 00002	<0 002	<0.002
	MW22-ROX-071217-DUP	7/12/2017		36 83	NE	<0.05	0 0068	<0 002	<0 05	<0.002	<0.002	<0.002	<0 002	<0.002	<0 002	<0.002	<0.00003	<0 00002	<0 002	<0.002
	MW22-ROX-101317	10/13/2017		36 94	NE	0.02 J	0 0089	<0 001	0.006 J	<0.001	<0.001	0.00091 J	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW22-ROX-101317-DUP	10/13/2017		36 94	NE	0 016 J	0 0086	<0 001	0.0053 J	<0.001	<0.001	0.00068 J	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW22-ROX-011118	1/11/2018		39 25	NE	<0.63	0.32	<0 025	<0 63	<0.025	<0.025	<0.025	<0 025	<0.025	<0 025	<0.025	<0.00003	<0 00002	<0 025	<0.025
	MW22-ROX-011118-DUP	1/11/2018		39 25	NE	<0.63	0.32	<0 025	<0 63	<0.025	<0.025	<0.025	<0 025	<0.025	<0 025	<0.025	<0.00003	<0 00002	<0 025	<0.025
	MW22-ROX-041018	4/10/2018	38.43 - 48.43	NM	NE	<0.5	0.43	<0.02	<0.5	<0.02	<0 02	<0.02	<0.02	<0.02	<0.02	<0 02	<0.000029	<0 00002	<0.02	<0.02
	MW22-ROX-071018	7/10/2018		40 88	NE	<0.63	0.79	<0 025	<0 63	<0.025	<0.025	<0.025	<0 025	<0.025	<0 025	<0.025	<0.000029	<0.000019	<0 025	<0.025
	MW22-ROX-101518	10/15/2018	38.43 - 48.43	41.11	NE	<0.25	0.056	<0.01	<0 25	<0.01	0.0077 J	<0.01	<0.01	<0.01	<0.01	<0 01	<0.00003	<0 00002	<0.01	<0.01
MW-23	MW-23-ROX-010716	1/7/2016	29 02 - 39 02	28.78	NE	0 014 J	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW-23-ROX-040616	4/6/2016		27 96	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW-23-ROX-070816	7/8/2016		27 54	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW23-ROX-BP-100716	10/7/2016		26 64	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW23-ROX-011017	1/10/2017		26 83	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW23-ROX-041117	4/11/2017		27 54	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	MW23-ROX-071017	7/10/2017		25.13	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW23-ROX-100517	10/5/2017		26.42	NE	<0.025 UJ	<0.001	<0 001	<0 025 UJ	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW23-ROX-010518	1/5/2018		28 52	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW-23-ROX-040918	4/9/2018		29 24	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW23-ROX-070918	7/9/2018		29.1	NE	0 013 J	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW23-ROX-100918	10/9/2018	29 02 - 39 02	29 00	NE	<0 025	<0.001	<0 001	<0 05	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.0001	<0 00002	<0 001	<0.001
MW-24	MW24-ROX-011316	1/13/2016	38 89 - 48 89	41.44	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW24-ROX-040816	4/8/2016		40.79	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW24-ROX-071216	7/12/2016		39 67	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	MW24-ROX-101116	10/11/2016		39.19	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW24-ROX-010917	1/9/2017		38 97	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW24-ROX-041717	4/17/2017		39.42	NE	0.13	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW-24-ROX-07072017	7/7/2017		37 68	NE	0 012 J	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW24-ROX-100617	10/6/2017		37 93	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW24-ROX-010818	1/8/2018		40 36	NE	0.19	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW24-ROX-040618	4/6/2018	39 61 - 49 61	41 28	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW24-ROX-040618-DUP	4/6/2018		41 28	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000033	<0.000022	<0 001	<0.001
	MW24-ROX-070618	7/6/2018		41 87	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW24-ROX-100518	10/5/2018	39 61 - 49 61	41 81	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs														
						Acetone	Benzene	Bromomethane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Chlorobenzene	Chloroform	Cymene (p-Isopropyltoluene)	1,2-Dibromo-3-chloropropane (DBCP)	1,2-Dibromoethane	1,2-Dichloroethane	cis-1,2-Dichloroethene
Screening Values (mg/L)						6.3 [1]	0.005 [1]	0.0098 [2]	4.2 [1]	0.35 [3]	0.7 [3]	0.7 [3]	0.7 [1]	0.100 [1]	0.07 [1]		0.0002 [1]	0.00005 [1]	0.005 [2]	0.07 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)														
MW-25	MW25-ROX-011416	1/14/2016	35 59 - 45 59	36.12	NE	<0.5	2 2	<0.02	<0.5	<0.02	<0 02	<0.02	<0.02	<0.02	<0.02	<0 02	<0.000029	<0 00002	<0.02	<0.02
	MW25-ROX-041916	4/19/2016		35 67	NE	<0 025	0.99	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW25-ROX-071816	7/18/2016		35.19	NE	<0.25	1 2	<0.01	<0 25	<0.01	<0 01	<0.01	<0.01	<0.01	<0.01	<0 01	<0.000028	<0.000019	<0.01	<0.01
	MW25-ROX-100616	10/6/2016		34 27	NE	<0.05	0.37	<0 002	<0 05	<0.002	<0.002	<0.002	<0 002	<0.002	<0 002	<0.002	<0.00003	<0 00002	<0 002	<0.002
	MW25-ROX-011117	1/11/2017		34 00	NE	<0 025	0.28	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW25-ROX-041117	4/11/2017		34 31	NE	<0 025	0.19	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW25-ROX-071017	7/10/2017		32.75	NE	0 014 J	0.056	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW25-ROX-100517	10/5/2017		33 52	NE	<0 025	0.065	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW25-ROX-010918	1/9/2018		35 80	NE	<0 025	0.028	<0 001	<0.025	<0.001	<0.001	<0.001	0.00088 J	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW25-ROX-040918	4/9/2018		36.49	NE	<0 025	0.02	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW25-ROX-071018	7/10/2018		36.71	NE	<0 025	0.005	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW25-ROX-100818	10/8/2018	35 59 - 45 59	36.73	NE	<0 025	0 0071	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
MW-26	MW26-ROX-010716	1/7/2016	38.15 - 48.15	39 55	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW26-ROX-040616	4/6/2016		38.44	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW26-ROX-071216	7/12/2016		37.74	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000032	<0.000021	<0 001	<0.001
	MW26-ROX-101016	10/10/2016		37.13	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW26-ROX-010617	1/6/2017		36.74	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW26-ROX-041417	4/14/2017		36 91	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW-26-ROX-07072017	7/7/2017		35 61	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW26-ROX-100517	10/5/2017		36.10	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW26-ROX-010818	1/8/2018		38.41	NE	0.01 J	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW26-ROX-040518	4/5/2018		39 22	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW26-ROX-070618	7/6/2018		39.73	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW26-ROX-100918	10/9/2018	38.15 - 48.15	39 53	NE	<0 025	<0.001	<0 001	<0 05	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.0001	<0 00002	<0 001	<0.001
MW-27	MW27-ROX-011316	1/13/2016	39.79 - 49.79	40 68	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW27-ROX-041116	4/11/2016		39.73	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW-27-ROX-071316	7/13/2016		38 94	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW27-ROX-101216	10/12/2016		38 50	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW27-ROX-011117	1/11/2017		38 05	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW27-ROX-041417	4/14/2017		38.72	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	MW27-ROX-071017	7/10/2017		37 23	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW27-ROX-100917	10/9/2017		37.17	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW27-ROX-011018	1/10/2018		38 98	NE	0 24	<0.001	<0 001	0.0028 J	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW27-ROX-040618	4/6/2018		40 34	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW27-ROX-070918	7/9/2018		41.16	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	MW27-ROX-100918	10/9/2018	39.79 - 49.79	41 06	NE	<0 025	<0.001	<0 001	<0 05	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.0001	<0 00002	<0 001	<0.001
MW-28	MW28-ROX-011416	1/14/2016	33 61 - 43 61	39 98	NE	0 018 J	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW28-ROX-041216	4/12/2016		39 20	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW28-ROX-071416	7/14/2016		38.49	NE	<0 025	0 0098	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW28-ROX-101316	10/13/2016		37 86	NE	0.01 J	0 0066	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW28-ROX-011217	1/12/2017		37.14	NE	<0 025	0.14	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW28-ROX-041717	4/17/2017		38 05	NE	<0 025	0.017	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW28-ROX-071217	7/12/2017		36.48	NE	<0 025	0 00067 J	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	MW28-ROX-100917	10/9/2017		36.44	NE	<0 025	0 00093 J	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW28-ROX-011018	1/10/2018		38.18	NE	<0 025	0 00044 J	<0 001	0.0029 J	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	MW28-ROX-040618	4/6/2018		39 25	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	MW28-ROX-070918	7/9/2018		40 08	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000028	<0.000019	<0 001	<0.001
	MW28-ROX-101118	10/11/2018	33 61 - 43 61	40 25	NE	<0 025	0 0026	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs														
						Acetone	Benzene	Bromomethane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Chlorobenzene	Chloroform	Cymene (p-Isopropyltoluene)	1,2-Dibromo-3-chloropropane (DBCP)	1,2-Dibromoethane	1,2-Dichloroethane	cis-1,2-Dichloroethene
Screening Values (mg/L)						6.3 [1]	0.005 [1]	0.0098 [2]	4.2 [1]	0.35 [3]	0.7 [3]	0.7 [3]	0.7 [1]	0.100 [1]	0.07 [1]		0.0002 [1]	0.00005 [1]	0.005 [2]	0.07 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**														
P-54	P54-ROX-011216	1/12/2016	38 00 - 63 00	40 22	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	P54-ROX-041216	4/12/2016		39.42	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P54-ROX-071216	7/12/2016		38.44	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	P54-ROX-101216	10/12/2016		37 85	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P54-ROX-010917	1/9/2017		37 80	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P54-ROX-041717	4/17/2017		38 30	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P54-ROX-071017	7/10/2017		36 35	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P54-ROX-100617	10/6/2017		36.79	NE	<0 025	0 0025	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P54-ROX-011118	1/11/2018		39.10	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P54-ROX-040618	4/6/2018		40 05	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P54-ROX-070618	7/6/2018		40 51	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	P54-ROX-100518	10/5/2018	38 00 - 63 00	40.46	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
P-56	P56-ROX-011116	1/11/2016	40 82 - 65 82	44.78	NE	0 069 J	0.03	<0 005	0.032 J	<0.005	<0.005	<0.005	<0 005	<0.005	<0 005	<0.005	<0.000031	<0.000021	<0 005	<0.005
	P56-ROX-041416	4/14/2016		43.73	NE	<0.13	0.036	<0 005	<0.13	<0.005	<0.005	<0.005	<0 005	<0.005	<0 005	<0.005	<0.00003	<0 00002	<0 005	<0.005
	P56-ROX-071216	7/12/2016		42 87	NE	<0.05	0.024	<0 002	<0 05	<0.002	0 0021	<0.002	<0 002	<0.002	<0 002	<0.002	<0.00003	<0 00002	<0 002	<0.002
	P56-ROX-101716	10/17/2016		42 35	NE	0.047	0.019	<0 001	0.014 J	0.0018	0 0022	0.00076 J	<0 001	<0.001	<0 001	0 0017	<0.000031	<0.000021	<0 001	<0.001
	P56-ROX-011217	1/12/2017		42 01	NE	<0 025	0.015	<0 001	<0.025	<0.001	0 0022	<0.001	0.0005 J	<0.001	<0 001	0 0017	<0.00003	<0 00002	<0 001	<0.001
	P56-ROX-040617	4/6/2017		42.46	NE	<0 025	0.012	<0 001	0.0097 J	<0.001	0 0022	<0.001	<0 001	<0.001	<0 001	0 0016	<0 000031 UJ	<0.00002 UJ	<0 001	<0.001
	P56-ROX-071217	7/12/2017		41.11	NE	<0 025	0 0049	<0 001	0.019 J	<0.001	0 0011	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P56-ROX-101117	10/11/2017		41 08	NE	<0 025	0 0097	<0 001	<0.025	0.0013	0 0017	<0.001	<0 001	<0.001	<0 001	0 0011	<0.000031	<0.000021	<0 001	<0.001
	P56-ROX-011018	1/10/2018		43 63	NE	<0.13 UJ	0.015	<0 005	0 021 J F1	<0.005	<0.005	<0.005	<0 005	<0.005	<0 005	<0.005	<0.00003	<0 00002	<0 005	<0.005
	P56-ROX-041118	4/11/2018		44.40	NE	0.099	0 0057	<0 001	0.018 J	0.00092 J	0 0016	<0.001	0.001	<0.001	<0 001	0.001	<0.00003	<0 00002	<0 001	<0.001
	P56-ROX-071118	7/11/2018		45 25	NE	0.038	0 0044	<0 001	<0.0069 U	0.0014	0 0018	<0.001	<0 001	<0.001	<0 001	0 0015	<0.000031	<0.000021	<0 001	<0.001
	P56-ROX-101518	10/15/2018	40 82 - 65 82	45 37	NE	<0 025	0.002	<0 001	<0.025	<0.001	0 0011	<0.001	<0 001	<0.001	<0 001	0 00082 J	<0.00003	<0 00002	<0 001	<0.001
P-57	P57-ROX-011216	1/12/2016	44.19 - 54.19	45 61	NE	<25	160	<1	<25	<1	<1	<1	<1	<1	<1	<1	<0.000029	<0.000019	<1	<1
	P57-ROX-041816	4/18/2016		44 80	NE	<6.3	73	<0.25	<6.3	<0.25	<0 25	<0.25	<0.25	<0.25	<0.25	<0 25	0.000054 p	<0.000019	<0.25	<0.25
	P57-ROX-071316	7/13/2016		44 02	NE	<13	70	<0 5	<13	<0 5	<0.5	<0 5	<0.5	<0.5	<0.5	<0.5	<0.000029	<0.000019	<0.5	<0.5
	P57-ROX-101816	10/18/2016		43.17	NE	<13	71	<0 5	<13	<0 5	<0.5	<0 5	<0.5	<0.5	<0.5	<0.5	<0.000031	<0.000021	<0.5	<0.5
	P57-ROX-011617	1/16/2017		42 82	NE	<6.3	39	<0.25	<6.3	<0.25	<0 25	<0.25	<0.25	<0.25	<0.25	<0 25	<0.00003	<0 00002	<0.25	<0.25
	P57-ROX-040717	4/7/2017		43 05	NE	<5	45	<0 2	<5	<0 2	<0.2	<0 2	<0.2	<0.2	<0.2	<0.2	<0.00003 UJ	<0.00002 UJ	<0.2	<0.2
	P57-ROX-071317	7/13/2017		41 95	NE	<5	43	<0 2	<5	<0 2	<0.2	<0 2	<0.2	<0.2	<0.2	<0.2	<0.00003	<0 00002	<0.2	<0.2
	P57-ROX-101617	10/16/2017		42 64	NE	<6.3	42	<0.25	<6.3	<0.25	<0 25	<0.25	<0.25	<0.25	<0.25	<0 25	<0.000029	<0.000019	<0.25	<0.25
	P57-ROX-011818	1/18/2018		44 86	NE	<2.5	15 J	<0.1	<2.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.000029	<0.000019	<0.1	<0.1
	P57-ROX-011818-DUP	1/18/2018		44 86	NE	<2.5	20 J	<0.1	<2.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.000029	<0.000019	<0.1	<0.1
	P57-ROX-041018	4/10/2018		45.45	NE	<1.3	8 8	<0.05	<1.3	<0.05	<0 05	<0.05	<0.05	<0.05	<0.05	<0 05	<0.00003	<0 00002	<0.05	<0.05
	P57-ROX-071118	7/11/2018		45.76	NE	<1.3	5 J	<0.05	<1.3	<0.05	<0 05	<0.05	<0.05	<0.05	<0.05	<0 05	<0.00003	<0 00002	<0.05	<0.05
	P57-ROX-071118-DUP	7/11/2018		45.76	NE	<1.3	8.8 J	<0.05	<1.3	<0.05	<0 05	<0.05	<0.05	<0.05	<0.05	<0 05	<0.00003	<0 00002	<0.05	<0.05
	P57-ROX-101618	10/16/2018	44.19 - 54.19	45 86	NE	<5	34	<0 2	<5	<0 2	<0.2	<0 2	0.1 J	<0.2	<0.2	<0.2	<0.000029	<0.000019	<0.2	<0.2
	P57-ROX-101618-DUP	10/16/2018		45 86	NE	<5	34	<0 2	<5	<0 2	<0.2	<0 2	<0.2	<0.2	<0.2	<0.2	<0.000029	<0.000019	<0.2	<0.2
P-58	P58-ROX-011316	1/13/2016	40 21 - 65 21	43.18	NE	<50	510	<2	<50	<2	<2	<2	<2	<2	<2	<2	<0.000029	<0 00002	<2	<2
	P58-ROX-041816	4/18/2016		42 68	NE	<25	440	<1	<25	<1	<1	<1	<1	<1	<1	<1	<0.000028	<0.000019	<1	<1
	P58-ROX-071516	7/15/2016		42 05	NE	<50	250	<2	<50	<2	<2	<2	<2	<2	<2	<2	<0.00003	<0 00002	<2	<2
	P58-ROX-101816	10/18/2016		41 05	NE	<50	340	<2	<50	<2	<2	<2	<2	<2	<2	<2	<0.000031	<0 00002	<2	<2
	P58-ROX-011617	1/16/2017		40.73	NE	<25	260	<1	<25	<1	<1	<1	<1	<1	<1	<1	<0.00003	<0 00002	<1	<1
	P58-ROX-041117	4/11/2017		40.74	NE	<13	320	<0 5	<13	<0 5	<0.5	<0 5	<0.5	<0.5	<0.5	<0.5	<0 000031 UJ	<0.000021 UJ	<0.5	<0.5
	P58-ROX-071317	7/13/2017		39 88	NE	<25	130	<1	<25	<1	<1	<1	<1	<1	<1	<1	<0.00003	<0 00002	<1	<1
	P58-ROX-041118	4/11/2018		43.19	NE	<50	220	<2	<50	<2	<2	<2	<2	<2	<2	<2	<0.00003 UJ	<0 00002	<2	<2
	P58-ROX-041118-DUP	4/11/2018		43.19	NE	<50	240	<2	<50	<2	<2	<2	<2	<2	<2	<2	0 00013 * J	<0.000021	<2	<2
	P58-ROX-101618	10/16/2018	40 21 - 65 21	43 66	NE	<25	190	<1	<25	<1	<1	<1	<1	<1	<1	<1	<0.000029	<0.000019	<1	<1

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs													
						Acetone	Benzene	Bromomethane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Chlorobenzene	Chloroform	Cymene (p-Isopropyltoluene)	1,2-Dibromo-3-chloropropane (DBCP)	1,2-Dibromoethane	1,2-Dichloroethane	cis-1,2-Dichloroethene
Screening Values (mg/L)						6.3 [1]	0.005 [1]	0.0098 [2]	4.2 [1]	0.35 [3]	0.7 [3]	0.7 [3]	0.7 [1]	0.100 [1]	0.07 [1]		0.0002 [1]	0.00005 [1]	0.005 [2]	0.07 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**													
P-59	P59-ROX-011216	1/12/2016	47 91 - 72 91	46.10	NE	<0.63	5.4	<0 025	<0 63	<0.025	<0.025	<0.025	<0 025	<0.025	<0 025	<0.025	<0.000029	<0.000019	<0 025	<0.025
	P59-ROX-041816	4/18/2016		44 28	NE	<0.5	4 9	<0.02	<0.5	<0.02	<0 02	<0.02	<0.02	<0.02	<0.02	<0 02	<0.000031	<0.000021	<0.02	<0.02
	P59-ROX-071316	7/13/2016		44 01	NE	<0.63	4 2	<0 025	<0 63	<0.025	<0.025	<0.025	<0 025	<0.025	<0 025	<0.025	<0.000029	<0 00002	<0 025	<0.025
	P59-ROX-101816	10/18/2016		43 39	NE	<1.3	8.7	<0.05	<1.3	<0.05	<0 05	<0.05	<0.05	<0.05	<0.05	<0 05	<0.000031	<0.000021	<0.05	<0.05
	P59-ROX-011617	1/16/2017		42 83	NE	<1.3	7 6	<0.05	<1.3	<0.05	<0 05	<0.05	<0.05	<0.05	<0.05	<0 05	<0.000031	<0 00002	<0.05	<0.05
	P59-ROX-040717	4/7/2017		43 31	NE	<1.3	7 6	<0.05	<1.3	<0.05	<0 05	<0.05	<0.05	<0.05	<0.05	<0 05	<0 000031 UJ	<0.000021 UJ	<0.05	<0.05
	P59-ROX-071317	7/13/2017		42.16	NE	<1.3	7.7	<0.05	<1.3	<0.05	<0 05	<0.05	<0.05	<0.05	<0.05	<0 05	<0.000032	<0.000021	<0.05	<0.05
	P59-ROX-101317	10/13/2017		41 87	NE	<0.5	2.7	<0.02	0.054 J	<0.02	<0 02	<0.02	<0.02	<0.02	<0.02	<0 02	<0.000029	<0 00002	<0.02	<0.02
	P59-ROX-101317-DUP	10/13/2017		41 87	NE	<0.5	2 6	<0.02	0.055 J	<0.02	<0 02	<0.02	<0.02	<0.02	<0.02	<0 02	<0.00003	<0 00002	<0.02	<0.02
	P59-ROX-011118	1/11/2018		44.44	NE	<0.5	4.7	<0.02	<0.5	<0.02	<0 02	<0.02	<0.02	<0.02	<0.02	<0 02	<0.000031	<0.000021	<0.02	<0.02
	P59-ROX-041218	4/12/2018		45.13	NE	<0.5	3 2	0.02	<0.5	<0.02	<0 02	<0.02	<0.02	<0.02	<0.02	<0 02	0.000032 p *	<0.000018	<0.02	<0.02
	P59-ROX-071118	7/11/2018		46.16	NE	<0.63	3.7	<0 025	<0 63	<0.025	<0.025	<0.025	<0 025	<0.025	<0 025	<0.025	<0.000031	<0.000021	<0 025	<0.025
	P59-ROX-101618	10/16/2018	47 91 - 72 91	45 99	NE	0 52	2 3	<0.01	0.11 J	<0.01	<0 01	<0.01	<0.01	<0.01	<0.01	<0 01	<0.000029	<0 00002	<0.01	<0.01
P-66	P-66-ROX-010816	1/8/2016	34.72 - 59.72	34 64	NE	<0 025	0 0013	<0 001	<0.025	<0.001	0 01	0.0019	<0 001	<0.001	<0 001	<0.001	<0.000028	<0.000019	<0 001	<0.001
	P66-ROX-041516	4/15/2016		34 33	NE	0 015 J	0 0044	<0 001	<0.025	0.0052	0 0088	0.0026	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	P66-ROX-071116	7/11/2016		33 58	NE	<0 025	0 0037	<0 001	<0.025	0.0071	0.012	0.0028	<0 001	0.00054 J	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	P66-ROX-101416	10/14/2016		32 61	NE	<0 025	0 0069	<0 001	0.0049 J	0 004	0 0076	0.0038	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	P66-ROX-011117	1/11/2017		32.41	NE	<0 025	0 0058	<0 001	<0.025	0.0057	0 01	0 004	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P66-ROX-041317	4/13/2017		32.19	NE	0 012 J	0 00094 J	<0 001	<0.025	0.0054	0 01	0.0028	<0 001	<0.001	<0 001	<0.001	<0 000031 UJ	<0.00002 UJ	<0 001	<0.001
	P66-ROX-071217	7/12/2017		31 38	NE	<0 025	0 0052	<0 001	<0.025	0.0042	0 0081	0.0039	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P66-ROX-101017	10/10/2017		32 27	NE	<0 025	0 0038	<0 001	<0.025	0 005	0 0098	0.0053	<0 001	0.00061 J	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P66-ROX-011118	1/11/2018		34 09	NE	<0 025	0 0037	<0 001	<0.025	0.0059	0 01	0.0051	<0 001	<0.001	<0 001	<0.001	<0.000028	<0.000019	<0 001	<0.001
	P66-ROX-041018	4/10/2018		34 93	NE	0 013 J	0.015	<0 001	<0.025	0.0045	0 0082	0.0037	<0 001	0 0006 J	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P66-ROX-071118	7/11/2018		35.10	NE	0.025	0.015	<0 001	0.0032 J	0.0011	0 0025	0.0016	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	P66-ROX-071118-DUP	7/11/2018		35.10	NE	0 023 J	0.017	<0 001	0.0027 J	0.0013	0 0028	0.0018	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	P66-ROX-101518	10/15/2018	34.72 - 59.72	35 31	NE	<0.025 UJ	0.052	<0.001 UJ	<0 025 UJ	0.0036	0 008 J	0.0023	<0.001 UJ	<0 001 UJ	<0.001 UJ	<0 001 UJ	<0 000031 UJ	<0.000021 UJ	<0.001 UJ	<0 001 UJ
	P66-ROX-101518-DUP	10/15/2018		35 31	NE	<0.025 UJ	0.057	<0.001 UJ	<0 025 UJ	0 005	0 011 J	0.0028	<0.001 UJ	<0 001 UJ	<0.001 UJ	<0 001 UJ	<0 000031 UJ	<0.000021 UJ	<0.001 UJ	<0 001 UJ
P-74	P74-ROX-011116	1/11/2016	44.43 - 69.43	40 67	NE	0 023 J	0 0013	<0 001	0.003 J	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P74-ROX-041516	4/15/2016		40.40	NE	0 016 J	0.028	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P74-ROX-071216	7/12/2016		39 56	NE	<0 025	0.023	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	P74-ROX-101416	10/14/2016		39.44	NE	<0 025	0.017	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P74-ROX-011217	1/12/2017		38 64	NE	<0 025	0.077	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	P74-ROX-040717	4/7/2017		38 92	NE	<0 025	0 00041 J	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	P74-ROX-071217	7/12/2017		38 08	NE	<0 025	0.022	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	P74-ROX-101617	10/16/2017		38 57	NE	<0 025	0.21	<0 001	0.0026 J	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	0 000038	<0 00002	<0 001	<0.001
	P74-ROX-01108	1/10/2018		40 25	NE	<0.13	1.1	<0 005	<0.13	<0.005	<0.005	<0.005	<0 005	<0.005	<0 005	<0.005	<0.000029	<0 00002	<0 005	<0.005
	P74-ROX-041018	4/10/2018	43 83 - 68 83	40 69	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	P74-ROX-041018-DUP	4/10/2018		40 69	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	P74-ROX-071118	7/11/2018		42 22	NE	<0 025	0.015	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P74-ROX-101618	10/16/2018	43 83 - 68 83	42.18	NE	<0 025	0 3	<0 001	<0.025	<0.001	<0.001	<0.001	0.0005 J	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001

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						VOCs													
						Acetone	Benzene	Bromomethane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Chlorobenzene	Chloroform	Cymene (p-Isopropyltoluene)	1,2-Dibromo-3-chloropropane (DBCP)	1,2-Dibromoethane	1,2-Dichloroethane	cis-1,2-Dichloroethene
Screening Values (mg/L)						6.3 [1]	0.005 [1]	0.0098 [2]	4.2 [1]	0.35 [3]	0.7 [3]	0.7 [3]	0.7 [1]	0.100 [1]	0.07 [1]		0.0002 [1]	0.00005 [1]	0.005 [2]	0.07 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**													
P-93A	P-93A-ROX-011216	1/12/2016	43 07 - 53 07	43.73	NE	<50	430	<2	<50	<2	<2	<2	<2	<2	<2	<2	<0.00003	<0 00002	<2	<2
	P-93A-ROX-011216-DUP	1/12/2016		43.73	NE	<50	450	<2	<50	<2	<2	<2	<2	<2	<2	<2	<0.000029	<0.000019	<2	<2
	P93A-ROX-041916	4/19/2016		43 08	NE	<6.3	66	<0.25	<6.3	<0.25	<0 25	<0.25	<0.25	<0.25	<0.25	<0 25	<0.000028	<0.000019	<0.25	<0.25
	P93A-ROX-041916-DUP	4/19/2016		43 08	NE	<6.3	70	<0.25	<6.3	<0.25	<0 25	<0.25	<0.25	<0.25	<0.25	<0 25	<0.00003	<0 00002	<0.25	<0.25
	P93A-ROX-071316	7/13/2016		42 20	NE	<2.5	18	<0.1	<2.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.00003	<0 00002	<0.1	<0.1
	P93A-ROX-071316-DUP	7/13/2016		42 20	NE	<2.5	20	<0.1	<2.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.00003	<0 00002	<0.1	<0.1
	P93A-ROX-101816	10/18/2016		41 35	NE	<0.5	2 6	<0.02	<0.5	<0.02	<0 02	<0.02	<0.02	<0.02	<0.02	<0 02	<0.000031	<0 00002	<0.02	<0.02
	P93A-ROX-101816-DUP	10/18/2016		41 35	NE	<0.5	3 3	<0.02	<0.5	<0.02	<0 02	<0.02	<0.02	<0.02	<0.02	<0 02	<0.00003	<0 00002	<0.02	<0.02
	P93A-ROX-011217	1/12/2017		41 04	NE	<0.13	0 51 J	<0 005	<0.13	<0.005	<0.005	<0.005	<0 005	<0.005	<0 005	<0.005	<0.00003	<0 00002	<0 005	<0.005
	P93A-ROX-011217-DUP	1/12/2017		41 04	NE	<0.13	0 69 J	<0 005	<0.13	<0.005	<0.005	<0.005	<0 005	<0.005	<0 005	<0.005	<0.00003	<0 00002	<0 005	<0.005
	P93A-ROX-040717	4/7/2017		41 26	NE	<0.05	0.72	<0 002	<0 05	<0.002	<0.002	<0.002	<0 002	<0.002	<0 002	<0.002	<0.00003	<0 00002	<0 002	<0.002
	P93A-ROX-040717-DUP	4/7/2017		41 26	NE	<0.05	0.68	<0 002	<0 05	<0.002	<0.002	<0.002	<0 002	<0.002	<0 002	<0.002	<0.000031	<0.000021	<0 002	<0.002
	P93A-ROX-071317	7/13/2017		40.11	NE	<0 025	0.083	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P93A-ROX-101117	10/11/2017		40 87	NE	<0.13	0.77	<0 005	<0.13	<0.005	<0.005	<0.005	<0 005	<0.005	<0 005	<0.005	<0.000033	<0.000022	<0 005	<0.005
	P93A-ROX-011118	1/11/2018		42.71	NE	<0.5	2.3 J	<0.02	<0.5	<0.02	<0 02	<0.02	<0.02	<0.02	<0.02	<0 02	<0.00003	<0 00002	<0.02	<0.02
	P93A-ROX-011118-DUP	1/11/2018		42.71	NE	<0.5	3.4 J	<0.02	<0.5	<0.02	<0 02	<0.02	<0.02	<0.02	<0.02	<0 02	<0.00003	<0 00002	<0.02	<0.02
	P93A-ROX-041118	4/11/2018		43.48	NE	<6.3	57	<0.25	<6.3	<0.25	<0 25	<0.25	<0.25	<0.25	<0.25	<0 25	<0.000032	<0.000021	<0.25	<0.25
	P93A-ROX-052218	5/22/2018		43.48	NE	<5	43	<0 2	<5	<0 2	<0.2	<0 2	<0.2	<0.2	<0.2	<0.2			<0.2	<0.2
	P93A-ROX-071218	7/12/2018		44 03	NE	<5	28	<0 2	<5	<0 2	<0.2	<0 2	<0.2	<0.2	<0.2	<0.2	<0.000031	<0.000021	<0.2	<0.2
	P93A-ROX-101618	10/16/2018	43 07 - 53 07	44 05	NE	<5	30	<0 2	<5	<0 2	<0.2	<0 2	<0.2	<0.2	<0.2	<0.2	<0.000029	<0 00002	<0.2	<0.2
P-93B	P93B-ROX-011316	1/13/2016	74 60 - 76 60	44 96	NE	<25	280	<1	<25	<1	<1	<1	<1	<1	<1	<1	<0.000029	<0.000019	<1	<1
	P93B-ROX-041916	4/19/2016		44 54	NE	<25	240	<1	<25	<1	<1	<1	<1	<1	<1	<1	<0.000029	<0.000019	<1	<1
	P93B-ROX-071516	7/15/2016		43 65	NE	<25	100	<1	<25	<1	<1	<1	<1	<1	<1	<1	<0.00003	<0 00002	<1	<1
	P93B-ROX-101816	10/18/2016		42.73	NE	<13	86	<0 5	<13	<0 5	<0.5	<0 5	<0.5	<0.5	<0.5	<0.5	<0.000031	<0 00002	<0.5	<0.5
	P93B-ROX-011017	1/10/2017		42.41	NE	<13	87	<0 5	<13	<0 5	<0.5	<0 5	<0.5	<0.5	<0.5	<0.5	<0.000031	<0 00002	<0.5	<0.5
	P93B-ROX-011017-DUP	1/10/2017		42.41	NE	<13	88	<0 5	<13	<0 5	<0.5	<0 5	<0.5	<0.5	<0.5	<0.5	<0.000031	<0 00002	<0.5	<0.5
	P93B-ROX-040617	4/6/2017		42 59	NE	<13	79	<0 5	<13	<0 5	<0.5	<0 5	<0.5	<0.5	<0.5	<0.5	<0.00003 UJ	<0.00002 UJ	<0.5	<0.5
	P93B-ROX-07117	7/11/2017		41 59	NE	<25	180	<1	<25	<1	<1	<1	<1	<1	<1	<1	<0.000029	<0 00002	<1	<1
	P93B-ROX-07117-DUP	7/11/2017		41 59	NE	<25	180	<1	<25	<1	<1	<1	<1	<1	<1	<1	<0.000033	<0.000022	<1	<1
	P93B-ROX-101117	10/11/2017		42 21	NE	<25	250	<1	<25	<1	<1	<1	<1	<1	<1	<1	<0.00003	<0 00002	<1	<1
	P93B-ROX-101117-DUP	10/11/2017		42 21	NE	<25	210	<1	<25	<1	<1	<1	<1	<1	<1	<1	<0.00003	<0 00002	<1	<1
	P93B-ROX-011518	1/15/2018		44.42	NE	<63	280	<2 5	<63	<2 5	<2.5	<2 5	<2.5	<2.5	<2.5	<2.5	<0.000028	<0.000019	<2.5	<2.5
	P93B-ROX-041218	4/12/2018	74 88 - 76 88	44.75	NE	<25	120	<1	<25	<1	<1	<1	<1	<1	<1	<1	<0.000028	<0.000019	<1	<1
	P93B-ROX-041218-DUP	4/12/2018		44.75	NE	<25	130	<1	<25	<1	<1	<1	<1	<1	<1	<1	<0.000028	<0.000019	<1	<1
	P93B-ROX-071218	7/12/2018		45 36	NE	<25	110 J	<1	<25	<1	<1	<1	<1	<1	<1	<1	<0.000031	<0.000021	<1	<1
	P93B-ROX-071218-DUP	7/12/2018		45 36	NE	<25	160 J	<1	<25	<1	<1	<1	<1	<1	<1	<1	<0.000033	<0.000022	<1	<1
	P93B-ROX-101518	10/15/2018	74 88 - 76 88	45 64	NE	<50 UJ	1100	<2 UJ	<50 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<0 000029 UJ	<0.00002 UJ	<2 UJ	<2 UJ
	P93B-ROX-101518-DUP	10/15/2018		45 64	NE	<50 UJ	1200	<2 UJ	<50 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<0.00003 UJ	<0.00002 UJ	<2 UJ	<2 UJ
P-93C	P-93C-ROX-010816	1/8/2016	92.47 - 97.47	44 68	NE	<0 025	0.04	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000028	<0.000019	<0 001	<0.001
	P93C-ROX-041816	4/18/2016		44 06	NE	<0 025	0.068	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P93C-ROX-071216	7/12/2016		43 37	NE	0 016 J	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	P93C-ROX-101816	10/18/2016		42.49	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	P93C-ROX-011117	1/11/2017		42 20	NE	<0 025	0 00095 J	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P93C-ROX-040517	4/5/2017		42.19	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	P93C-ROX-071217	7/12/2017		41 30	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	P93C-ROX-101117	10/11/2017		42 04	NE	<0 025	0 00047 J	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P93C-ROX-011118	1/11/2018		43 95	NE	<0 025	0 00069 J	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P93C-ROX-041118	4/11/2018	92 88 - 97 88	44 69	NE	0 011 J	0.055	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	P93C-ROX-071218	7/12/2018		45 22	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	P93C-ROX-101518	10/15/2018	92 88 - 97 88	45 31	NE	<0.25	1 9	<0.01	<0 25	<0.01	<0 01	<0.01	<0.01	<0.01	<0.01	<0 01	<0.00003	<0 00002	<0.01	<0.01

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs													
						Acetone	Benzene	Bromomethane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Chlorobenzene	Chloroform	Cymene (p-Isopropyltoluene)	1,2-Dibromo-3-chloropropane (DBCP)	1,2-Dibromoethane	1,2-Dichloroethane	cis-1,2-Dichloroethene
Screening Values (mg/L)						6.3 [1]	0.005 [1]	0.0098 [2]	4.2 [1]	0.35 [3]	0.7 [3]	0.7 [3]	0.7 [1]	0.100 [1]	0.07 [1]		0.0002 [1]	0.00005 [1]	0.005 [2]	0.07 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**													
P-93D	P93D-ROX-011316	1/13/2016	125.75 - 127.75	45.10	NE	<2.5	14	<0.1	<2.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.000033	<0.000022	<0.1	<0.1
	P93D-ROX-041916	4/19/2016		44 61	NE	<1.3	9 5	<0.05	<1.3	<0.05	<0 05	<0.05	<0.05	<0.05	<0.05	<0 05	<0.000029	<0.000019	<0.05	<0.05
	P93D-ROX-071516	7/15/2016		43 83	NE	<0 025	0.086	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	P93D-ROX-101716	10/17/2016		42.78	NE	<0 025	0.023	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	P93D-ROX-011017	1/10/2017		42 59	NE	<0 025	0.14	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P93D-ROX-040617	4/6/2017		42 80	NE	<0 025	0.07	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	P93D-ROX-07117	7/11/2017		41 64	NE	<0 025	0.012	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P93D-ROX-101117	10/11/2017		42.42	NE	<0 025	0.011	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P93D-ROX-011718	1/17/2018		44 80	NE	<0.025 UJ	0.066	<0 001	<0 025 UJ	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	P93D-ROX-041218	4/12/2018		45 95	NE	<0 025	0.038	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000027	<0.000018	<0 001	<0.001
	P93D-ROX-071218	7/12/2018		45 57	NE	<0 025	0.15	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	P93D-ROX-101518	10/15/2018	125.75 - 127.75	45.70	NE	<0 025	0 0044	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
P-114R	P114R-ROX-010716	1/7/2016	23 01 - 33 01	25 62	NE	<0 025	0.0004 J	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P114R-ROX-040816	4/8/2016		25 65	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P114R-ROX-070816	7/8/2016		24 95	NE	0 017 J	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	P114R-ROX-100716	10/7/2016		23 89	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	P114R-ROX-010617	1/6/2017		24 81	NE	0.073	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	P114R-ROX-041317	4/13/2017		25 05	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P114R-ROX-071117	7/11/2017		22.45	NE	<0 025	0 00047 J	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	P114R-ROX-101017	10/10/2017		24.45	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	P114R-ROX-010918	1/9/2018		26 37	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P114R-ROX-040618	4/6/2018		26.76	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	P114R-ROX-070918	7/9/2018		26 38	NE	0 013 J	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000032	<0.000021	<0 001	<0.001
	P114R-ROX-101118	10/11/2018	23 01 - 33 01	26 27	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	P114R-ROX-101118-DUP	10/11/2018		26 27	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
ROST-3-MW	ROST3MW-ROX-011416	1/14/2016	37 81 - 47 81	40 30	NE	<0 025	0 0012	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	ROST3MW-ROX-041216	4/12/2016		39 69	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	ROST3MW-ROX-071416	7/14/2016		38.70	NE	<0 025	0 0017	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000032	<0.000021	<0 001	<0.001
	ROST3MW-ROX-101316	10/13/2016		38.19	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	ROST3MW-ROX-011117	1/11/2017		37 50	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	ROST3MW-ROX-041417	4/14/2017		38.16	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	ROST3MW-ROX-071117	7/11/2017		36 61	NE	<0 025	0 00048 J	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	ROST3MW-ROX-101217	10/12/2017		38 05	NE	<0.025 UJ	0.021	<0 001	<0.025	<0.001	<0.001	<0.001	0.00052 J	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	ROST3MW-ROX-112017-R	11/20/2017		38 05	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001			<0 001	<0.001
	ROST3MW-ROX-011518	1/15/2018		40 00	NE												<0.000029	<0 00002		
	ROST3MW-ROX-022618	2/26/2018		40 00	NE	0.028	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	0.00055 J	<0.001	<0 001	<0.001			<0 001	<0.001
	ROST3MW-ROX-040618	4/6/2018		39 98	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000032	<0.000021	<0 001	<0.001
	ROST3MW-ROX-070518	7/5/2018		40.74	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0.000021	<0 001	<0.001
	ROST3MW-ROX-100918	10/9/2018	37 81 - 47 81	40.72	NE	<0 025	<0.001	<0 001	<0 05	<0.001	0 00047 J	<0.001	<0 001	<0.001	<0 001	<0.001	<0.0001	<0 00002	<0 001	<0.001
ROST-4-PZ(C)	ROST4PZC-ROX-011516	1/15/2016	34 95 - 44 95	40 54	NE	<0.05	0.059	<0 002	<0 05	<0.002	<0.002	<0.002	0 001 J	<0.002	<0 002	<0.002	<0.000029	<0.000019	<0 002	<0.002
	ROST4PZC-ROX-041316	4/13/2016		39 61	NE	<0.05	0.05	<0 002	<0 05	<0.002	<0.002	<0.002	<0 002	<0.002	<0 002	<0.002	<0.000029	<0.000019	<0 002	<0.002
	ROST4PZC-ROX-071516	7/15/2016		38 93	NE	<0.05	0.044	<0 002	<0 05	<0.002	<0.002	<0.002	<0 002	<0.002	<0 002	<0.002	<0.000031	<0.000021	<0 002	<0.002
	ROST4PZC-ROX-101316	10/13/2016		38.45	NE	<0.05	0.025	<0 002	<0 05	<0.002	<0.002	<0.002	<0 002	<0.002	<0 002	<0.002	<0.000031	<0 00002	<0 002	<0.002
	ROST4PZC-ROX-011217	1/12/2017		37 88	NE	<0 025	0.021	<0 001	<0.025	<0.001	<0.001	<0.001	0.0012	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	ROST4PZC-ROX-041717	4/17/2017		38 24	NE	<0.05	0.025	<0 002	<0 05	<0.002	<0.002	<0.002	<0 002	<0.002	<0 002	<0.002	<0.00003	<0 00002	<0 002	<0.002
	ROST4PZC-ROX-071217	7/12/2017		37 20	NE	<0 025	0.017	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	0.00084 J	<0.001
	ROST4PZC-ROX-101217	10/12/2017		36 88	NE	0 023 J	0.01	<0 001	0 02 J	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	0.00028	<0 00002	<0 001	<0.001
	ROST4PZC-ROX-011518	1/15/2018		39 04	NE	<0 025	0 00054 J	<0 001	<0.025	<0.001	<0.001	<0.001	0.00054 J	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	ROST4PZC-ROX-040918	4/9/2018		40.13	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	ROST4PZC-ROX-070918	7/9/2018		40 87	NE	<0 025	0 0018	<0 001	<0.025	<0.001	<0.001	<0.001	0.00069 J	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	ROST4PZC-ROX-101218	10/12/2018	34 95 - 44 95	40 91	NE	0.027	0 0085	<0 001	0.0083 J	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs														
						Acetone	Benzene	Bromomethane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Chlorobenzene	Chloroform	Cymene (p-Isopropyltoluene)	1,2-Dibromo-3-chloropropane (DBCP)	1,2-Dibromoethane	1,2-Dichloroethane	cis-1,2-Dichloroethene
Screening Values (mg/L)						6.3 [1]	0.005 [1]	0.0098 [2]	4.2 [1]	0.35 [3]	0.7 [3]	0.7 [3]	0.7 [1]	0.100 [1]	0.07 [1]		0.0002 [1]	0.00005 [1]	0.005 [2]	0.07 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**														
ROST-4-PZ(E)	ROST-4-PZ(E)-ROX-101317	10/13/2017	34.75 - 44.75	35 98	NE	<0.13 UJ	0 2	<0 005	<0.13 UJ	<0.005	<0.005	<0.005	<0 005	<0.005	<0 005	<0.005	0 000098	<0 00002	<0 005	<0.005
	ROST4PZE-ROX-011518	1/15/2018		38 07	NE	<0.05	0.079	<0 002	0.023 J	0 0017 J	<0.002	<0.002	<0 002	<0.002	<0 002	<0.002	<0.00029	<0 00019	<0 002	<0.002
	ROST4PZE-ROX-040918	4/9/2018		38 93	NE	0.053	0.014	<0 001	0.039	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	0.000041 p	<0 00002	<0 001	<0.001
	ROST4PZE-ROX-071018	7/10/2018		39 52	NE	<0 025	0.011	<0 001	0.036	0.0013	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	ROST4PZE-ROX-101518	10/15/2018	34.75 - 44.75	39.76	NE	<0.025 UJ	0 0011	<0.001 UJ	<0 025 UJ	<0.001 UJ	<0.001 UJ	<0.001 UJ	<0.001 UJ	<0 001 UJ	<0.001 UJ	0 00071 J	<0 000031 UJ	<0.000021 UJ	<0.001 UJ	<0 001 UJ
ROST-4-PZ(G)	ROST4PZG-ROX-101217	10/12/2017	34 28 - 44 28	36 58	NE	0.044	0 0015	<0 001	0 01 J	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.000031	<0 00002	<0 001	<0.001
	ROST4PZG-ROX-01118	1/11/2018		38 95	NE	<0 025	0 00082 J	<0 001	0.0027 J	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
	ROST4PZG-ROX-040918	4/9/2018		40 07	NE	<0 025	<0.001	<0 001	<0.025	<0.001	<0.001	<0.001	0.00053 J	<0.001	<0 001	<0.001	<0.000029	<0 00002	<0 001	<0.001
	ROST4PZG-ROX-070918	7/9/2018		40 81	NE	<0 025	0 0037	<0 001	<0.025	<0.001	<0.001	<0.001	0.00054 J	<0.001	<0 001	<0.001	<0.000029	<0.000019	<0 001	<0.001
	ROST4PZG-ROX-101218	10/12/2018	34 28 - 44 28	40 93	NE	<0 025	0 0011	<0 001	<0.025	<0.001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.00003	<0 00002	<0 001	<0.001
T-12	T12-ROX-011216	1/12/2016	46 83 - 72 83	44.13	NE	<0.25	1 5	<0.01	<0 25	<0.01	<0 01	<0.01	<0.01	<0.01	<0.01	<0 01	<0.00003	<0 00002	<0.01	<0.01
	T12-ROX-041516	4/15/2016		42 07	NE	<0.13	1.4	<0 005	<0.13	<0.005	<0.005	<0.005	<0 005	<0.005	<0 005	<0.005	<0.00003	<0 00002	<0 005	<0.005
	T12-ROX-071216	7/12/2016		41 50	NE	<0.25	1 6	<0.01	<0 25	<0.01	<0 01	<0.01	<0.01	<0.01	<0.01	<0 01	<0.000029	<0 00002	<0.01	<0.01
	T12-ROX-101716	10/17/2016		41.19	NE	<0.25	1.7	<0.01	<0 25	<0.01	<0 01	<0.01	<0.01	<0.01	0.0065 J	<0 01	<0.000031	<0 00002	<0.01	<0.01
	T12-ROX-011217	1/12/2017		40.70	NE	<0.25	1 5	<0.01	<0 25	<0.01	<0 01	<0.01	<0.01	<0.01	<0.01	<0 01	<0.000031	<0.000021	<0.01	<0.01
	T12-ROX-040617	4/6/2017		41.18	NE	<0.25	1.4	<0.01	<0 25	<0.01	<0 01	<0.01	<0.01	<0.01	<0.01	<0 01	<0.00003 UJ	<0.00002 UJ	<0.01	<0.01
	T12-ROX-071317	7/13/2017		40.10	NE	<0.25	1 2	<0.01	<0 25	<0.01	<0 01	<0.01	<0.01	<0.01	<0.01	<0 01	<0.00003	<0 00002	<0.01	<0.01
	T12-ROX-101317	10/13/2017		39.48	NE	<0.25	1.4	<0.01	<0 25	<0.01	<0 01	<0.01	<0.01	<0.01	<0.01	<0 01	<0.00003	<0 00002	<0.01	<0.01
	T12-ROX-011018	1/10/2018		42.14	NE	<0.25	2	<0.01	0.029 J	<0.01	<0 01	<0.01	<0.01	<0.01	<0.01	<0 01	<0.00003	<0 00002	<0.01	<0.01
	T12-ROX-041218	4/12/2018		43 03	NE	<0.25	1.7	0.012	<0 25	<0.01	<0 01	<0.01	<0.01	<0.01	<0.01	<0 01	<0.000028	<0.000019	<0.01	<0.01
	T12-ROX-071118	7/11/2018		44.12	NE	<0.25	2.1	<0.01	<0 25	<0.01	<0 01	<0.01	<0.01	<0.01	<0.01	<0 01	<0.000031	<0 00002	<0.01	<0.01
	T12-ROX-101618	10/16/2018	46 83 - 72 83	43 90	NE	<0.25	2 2	<0.01	<0 25	<0.01	<0 01	<0.01	<0.01	<0.01	<0.01	<0 01	<0.000029	<0.000019	<0.01	<0.01

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs															
						1,2-Dichloropropane	Ethylbenzene	Ethyl methacrylate	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	1,1,2,2-Tetrachloroethane	Toluene	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylenes	o-Xylenes	Xylenes (total)
Screening Values (mg/L)						0.005 [2]	0.7 [1]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	0.00043 [3]	1.0 [1]	0.005 [1]		0.07 [3]	10 [1]		10 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**															
MW-01	MW1-ROX-010816	1/8/2016	48.80 - 58.80	40.93	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.00078 J	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW1-ROX-041216	4/12/2016		40.35	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW1-ROX-071416	7/14/2016		39.43	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	0 0014	<0 001	<0.001	<0.001	<0.005	<0.005	0.0016 J
	MW1-ROX-101316	10/13/2016		38.79	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW-1-ROX-011217	1/12/2017		38.35	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW1-ROX-041717	4/17/2017		38.58	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW1-ROX-071117	7/11/2017		37.24	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW1-ROX-100617	10/6/2017		37.63	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW1-ROX-010518	1/5/2018		40.06	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW1-ROX-040618	4/6/2018		40.82	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW1-ROX-070618	7/6/2018		41.40	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW1-ROX-101018	10/10/2018	48.80 - 58.80	41.17	NE	<0.001	<0 001	<0 01	<0.001	<0 01	<0.001	<0 005	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.002	<0.001	<0 003
MW-02	MW2-ROX-011416	1/14/2016	49.87 - 59.87	42.04	NE	<0.002	0.22	<0.002	0 049	<0 05	<0.002	0.027	0 063	<0 002	0.012	<0 002	0.05	0 072	0.11	0.01	0.12
	MW2-ROX-041316	4/13/2016		41.59	NE	<0.002	0.33	<0.002	0 075	<0 05	<0.002	0.029	0 099	<0 002	0.018	<0 002	0.077	0.1	0 23	0 017	0 24
	MW2-ROX-071416	7/14/2016		40.79	NE	<0.002	0.26	<0.002	0 079	<0 05	<0.002	0.048	0 095	<0 002	0.016	<0 002	0.079	0.1	0.16	0 021	0.18
	MW2-ROX101316	10/13/2016		40.10	NE	<0.001	0.13	<0.001	0 036	<0.025	<0.001	0.016	0 044	<0 001	0.01	<0 001	0.017	0 044	0.056	0.0057	0.061
	MW2-ROX-011217	1/12/2017		39.58	NE	<0.001	0.097	<0.001	0 055	<0.025	<0.001	0.015	0.07	<0 001	0.013	<0 001	0.031	0 073	0.051	0.0062	0.057
	MW2-ROX-041717	4/17/2017		39.69	NE	<0.005	0.62	<0.005	0 075	<0.13	<0.005	0.053	0 094	<0 005	0.012	<0 005	0.12	0 088	0 35	0 028	0 38
	MW2-ROX-071217	7/12/2017		38.66	NE	<0.001	0.15	<0.001	0.06	<0.025	<0.001	0.014	0 079	<0 001	0.008	<0 001	0.04	0.07	0.086	0.0073	0.093
	MW2-ROX-101217	10/12/2017		39.03	NE	<0.005	0.51	<0.005	0.07	<0.13	<0.005	0.035	0 099	<0 005	0.012	<0 005	0.16	0.11	0 35	0 026	0 38
	MW2-ROX-011118	1/11/2018		41.24	NE	<0.001	0.087	<0.001	0 049	<0.025	<0.001	0 01	0 069	<0 001	0 0082	<0 001	0.015	0.05	0.033	0 0037 J	0.036
	MW2-ROX-040918	4/9/2018		42.10	NE	<0.001	0.22	<0.001	0 026	<0.025	<0.001	0.036	0 033	<0 001	0.006	<0 001	0.046	0 038	0.12	0.0094	0.13
	MW2ROX-071018	7/10/2018		42.59	NE	<0.001	0.077	<0.001	0 052	<0.025	<0.001	0 01	0 073	<0 001	0.008	<0 001	0.013	0 052	0.028	0 0031 J	0.031
	MW2-ROX-101218	10/12/2018	49.87 - 59.87	42.71	NE	<0.001	0.11	<0.001	0 035	<0.025	<0.001	0.011	0 049	<0 001	0 0049	<0 001	0.0091 J	0 014	0 045 J	0.0053	0 05
	MW2-ROX-101218-DUP	10/12/2018		42.71	NE	<0.001	0.13	<0.001	0 035	<0.025	<0.001	0.013	0.05	<0 001	0 0054	<0 001	0.012 J	0 014	0 058 J	0.0067	0.065
MW-03	MW3-ROX-010716	1/7/2016	34.67 - 44.67	27.92	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0 008	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW3-ROX-040616	4/6/2016		27.07	NE	<0.001	0.0031	<0.001	0 014	<0.025	0.0097	<0 001	0 025	<0 001	0.039	<0 001	<0.001	<0.001	0.1	0 006	0.11
	MW3-ROX-070816	7/8/2016		26.51	NE	<0.001	0.0012	<0.001	0 016	<0.025	0.0054	<0 001	0 034	<0 001	0.014	<0 001	<0.001	0.00062 J	0.076	0 0042 J	0 08
	MW3-ROX100716	10/7/2016		25.79	NE	<0.001	<0 001	<0.001	0.0042	<0.025	0.0036	<0 001	0.0085	<0 001	0 0025	<0 001	<0.001	<0.001	0.0089	0.001 J	0 01
	MW3-ROX-010617	1/6/2017		25.65	NE	<0.001	0.0035	<0.001	0 019	<0.025	0.0051	<0 001	0 045	<0 001	0.039	<0 001	<0.001	0.00072 J	0.12	0.0081	0.12
	MW3-ROX-041117	4/11/2017		26.13	NE	<0.001	0.0011	<0.001	0.0098	<0.025	0.0035	<0 001	0.02	<0 001	0.019	<0 001	<0.001	<0.001	0.086	0.0053	0.091
	MW3-ROX-071217	7/12/2017		24.25	NE	<0.001	<0 001	<0.001	0.0026	<0.025	0.0028	<0 001	0.0078	<0 001	0 0045	<0 001	<0.001	<0.001	0 02	0 0014 J	0.022
	MW3-ROX-100517	10/5/2017		25.02	NE	<0.001	<0 001	<0.001	0.00087 J	<0.025	0.0026	<0 001	0 002	<0 001	0 0011	<0 001	<0.001	<0.001	0.0031 J	<0.005	0.0034 J
	MW3-ROX-010818	1/8/2018		27.28	NE	<0.001	<0 001	<0.001	0.0046	<0.025	0.0026	<0 001	0.0091	<0 001	0 0061	<0 001	<0.001	<0.001	0.028	0 0021 J	0 03
	MW3-ROX-040518	4/5/2018		27.98	NE	<0.001	<0 001	<0.001	0.0028	<0.025	0.0027	<0 001	0.0082	<0 001	0 00095 J	<0 001	<0.001	<0.001	0.005	0.00081 J	0.0058 J
	MW3-ROX-070618	7/6/2018		28.30	NE	<0.001	<0 001	<0.001	0 004	<0.025	<0.001	<0 001	0.0087	<0 001	0 0019	<0 001	<0.001	<0.001	0.011	0 0016 J	0.012
	MW3-ROX-100518	10/5/2018	34.67 - 44.67	28.18	NE	<0.001	<0 001	<0.001	0.0022	<0.025	0.0019	<0 001	0.0066	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
MW-04	MW4-ROX-011316	1/13/2016	45.06 - 55.06	39.10	NE	<0.001	0.00066 J	<0.001	0.0017	<0.025	0 012	<0 001	0.0021	<0 001	0 0011	<0 001	<0.001	<0.001	0.0047 J	0 0011 J	0.0058
	MW4-ROX-041916	4/19/2016		38.50	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	0.00092 J
	MW4-ROX-071416	7/14/2016		37.85	NE	<0.001	<0 001	<0.001	0.00053 J	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	0.0016 J
	MW4-ROX-100616	10/6/2016		37.18	NE	<0.001	<0 001	<0.001	0.0011	<0.025	0.0073	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	0.0019 J
	MW4-ROX-010917	1/9/2017		36.84	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0045	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW4-ROX-041017	4/10/2017		37.08	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0046	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW4-ROX-071017	7/10/2017		35.68	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0078	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW4-ROX-100517	10/5/2017		36.32	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0037	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW-4-ROX-010918	1/9/2018		38.65	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0028	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW4-ROX-040918	4/9/2018		39.32	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0036	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW4-ROX-071018	7/10/2018		39.60	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0039	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW4-ROX-100818	10/8/2018	45.06 - 55.06	39.61	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0032	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs														
						1,2-Dichloropropane	Ethylbenzene	Ethyl methacrylate	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	1,1,2,2-Tetrachloroethane	Toluene	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylenes	o-Xylenes	Xylenes (total)
Screening Values (mg/L)						0.005 [2]	0.7 [1]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	0.00043 [3]	1.0 [1]	0.005 [1]		0.07 [3]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)														
MW-05	MW5-ROX-011416	1/14/2016	33.97 - 43.97	27.19	NE	<0.001	<0 001	<0.001	0.0017	<0.025	0.01	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	0.0018 J
	MW5-ROX-040616	4/6/2016		26.80	NE	<0.001	<0 001	<0.001	0.0019	<0.025	0 007	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	0.0025 J	<0.005	0 003 J
	MW5-ROX-070816	7/8/2016		26.28	NE	<0.001	<0 001	<0.001	0 001	<0.025	0.0084	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	0.0017 J	<0.005	0.0021 J
	MW5-ROX-101016	10/10/2016		25.47	NE	<0.001	<0 001	<0.001	0.0011	<0.025	0.0079	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	0.0017 J	0.00077 J	0.0025 J
	MW5-ROX-010617	1/6/2017		25.33	NE	<0.001	<0 001	<0.001	0.0074	<0.025	0.0014	<0 001	0.00096 J	<0 001	0 00076 J	<0 001	<0.001	<0.001	0.0069	0 0016 J	0.0085 J
	MW5-ROX-041217	4/12/2017		25.69	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0034	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW5-ROX-071217	7/12/2017		23.96	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0026	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW5-ROX-101217	10/12/2017		25.04	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0014	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW5-ROX-011118	1/11/2018		26.98	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0028	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW5-ROX-040918	4/9/2018		27.78	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0011	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW5-ROX-071018	7/10/2018		27.87	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0023	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW5-ROX-101218	10/12/2018	33.97 - 43.97	27.95	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
MW-06A	MW6A-ROX-011116	1/11/2016	34.83 - 44.83	29.36	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0034	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW6A-ROX-040716	4/7/2016		29.07	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0043	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW6A-ROX-071116	7/11/2016		28.45	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0036	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6A-ROX-101116	10/11/2016		27.51	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0027	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6A-ROX-011017	1/10/2017		27.43	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0022	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6A-ROX-041217	4/12/2017		27.69	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0018	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6A-ROX-071117	7/11/2017		26.16	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0021	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6A-ROX-100417	10/4/2017		27.09	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0017	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6A-ROX-010518	1/5/2018		29.22	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0016	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6A-ROX-040518	4/5/2018	33.85 - 43.85	29.83	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6A-ROX-070518	7/5/2018		30.10	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0012	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6A-ROX-100418	10/4/2018	33.85 - 43.85	30.10	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0015	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
MW-06B	MW6B-ROX-011116	1/11/2016	64.05 - 69.05	29.41	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0063	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW6B-ROX-040716	4/7/2016		29.11	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0029	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW6B-ROX-071116	7/11/2016		28.49	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0019	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6B-ROX-101116	10/11/2016		27.56	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6B-ROX-011017	1/10/2017		27.49	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6B-ROX-041217	4/12/2017		27.75	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6B-ROX-071117	7/11/2017		26.18	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6B-ROX-100417	10/4/2017		27.16	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6B-ROX-010518	1/5/2018		29.25	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6B-ROX-040518	4/5/2018		29.95	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6B-ROX-070518	7/5/2018		30.15	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6B-ROX-100418	10/4/2018	64.05 - 69.05	30.13	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
MW-06C	MW6C-ROX-010816	1/8/2016	84.95 - 89.95	29.31	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW6C-ROX-040716	4/7/2016		28.91	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW6C-ROX-071116	7/11/2016		28.30	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6C-ROX-101016	10/10/2016		27.37	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6C-ROX-011017	1/10/2017		27.26	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6C-ROX-041217	4/12/2017		27.56	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6C-ROX-071117	7/11/2017		25.99	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6C-ROX-100417	10/4/2017		26.98	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6C-ROX-010818	1/8/2018		29.05	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6C-ROX-040518	4/5/2018		29.74	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6C-ROX-070518	7/5/2018		29.93	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6C-ROX-070518-DUP	7/5/2018		29.93	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6C-ROX-100418	10/4/2018	84.95 - 89.95	29.93	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01

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SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs															
						1,2-Dichloropropane	Ethylbenzene	Ethyl methacrylate	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	1,1,2,2-Tetrachloroethane	Toluene	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylenes	o-Xylenes	Xylenes (total)
Screening Values (mg/L)						0.005 [2]	0.7 [1]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	0.00043 [3]	1.0 [1]	0.005 [1]		0.07 [3]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)															
MW-06D	MW6D-ROX-010816	1/8/2016	104.72 - 109.72	29.59	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW6D-ROX-010816-DUP	1/8/2016		29.59	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW6D-ROX-040716	4/7/2016		28.76	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6D-ROX-040716-DUP	4/7/2016		28.76	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW6D-ROX-071116	7/11/2016		28.16	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6D-ROX-071116-DUP	7/11/2016		28.16	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6D-ROX-101016	10/10/2016		27.26	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6D-ROX-101016-DUP	10/10/2016		27.26	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6D-ROX-011017	1/10/2017		27.14	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6D-ROX-011017-DUP	1/10/2017		27.14	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6D-ROX-041217	4/12/2017		27.43	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6D-ROX-041217-DUP	4/12/2017		27.43	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6D-ROX-071117	7/11/2017		25.83	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6D-ROX-071117-DUP	7/11/2017		25.83	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6D-ROX-100517	10/5/2017		26.83	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6D-ROX-010818	1/8/2018		28.90	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6D-ROX-040518	4/5/2018		29.52	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6D-ROX-070518	7/5/2018		29.76	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW6D-ROX-100418	10/4/2018	104.72 - 109.72	29.76	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
MW-07	MW7-ROX-011416	1/14/2016	42.92 - 52.92	41.02	NE	<5	<5	<5	<5	<130	<5	<5	<5	<5	<5	<5	<5	<5	<25	<25	<25
	MW7-ROX-011416-DUP	1/14/2016		41.02	NE	<5	<5	<5	<5	<130	<5	<5	<5	<5	<5	<5	<5	<5	<25	<25	<25
	MW7-ROX-041916	4/19/2016		40.68	NE	<2	<2	<2	<2	<50	<2	<2	<2	<2	<2	<2	<2	<2	<10	<10	<10
	MW7-ROX-041916-DUP	4/19/2016		40.68	NE	<2	<2	<2	<2	<50	<2	<2	<2	<2	<2	<2	<2	<2	<10	<10	<10
	MW7-ROX-071416	7/14/2016		39.99	NE	<5	<5	<5	<5	<130	<5	<5	<5	<5	<5	<5	<5	<5	<25	<25	<50
	MW7-ROX-071416-DUP	7/14/2016		39.99	NE	<5	<5	<5	<5	<130	<5	<5	<5	<5	<5	<5	<5	<5	<25	<25	<50
	MW7-ROX-100616	10/6/2016		39.24	NE	<10	<10	<10	<10	<250	<10	<10	<10	<10	<10	<10	<10	<10	<50	<50	<100
	MW7-ROX-100616-DUP	10/6/2016		39.24	NE	<10	<10	<10	<10	<250	<10	<10	<10	<10	<10	<10	<10	<10	<50	<50	<100
	MW7-ROX-010917	1/9/2017		38.90	NE	<5	<5	<5	<5	<130	<5	<5	<5	<5	<5	<5	<5	<5	<25	<25	<50
	MW7-ROX-041017	4/10/2017		38.92	NE	<1	<1	<1	<1	<25	<1	<1	<1	<1	0.8 J	<1	<1	<1	<5	<5	<10
	MW7-ROX-041017-DUP	4/10/2017		38.92	NE	<1	<1	<1	<1	<25	<1	<1	<1	<1	0 85 J	<1	<1	<1	<5	<5	<10
	MW7 ROX-071117	7/11/2017		37.79	NE	<5	<5	<5	<5	<130	<5	<5	<5	<5	<5	<5	<5	<5	<25	<25	<50
	MW7 ROX-071117-DUP	7/11/2017		37.79	NE	<5	<5	<5	<5	<130	<5	<5	<5	<5	<5	<5	<5	<5	<25	<25	<50
	MW7-ROX-100517	10/5/2017		38.45	NE	<5	<5	<5	<5	<130	<5	<5	<5	<5	<5	<5	<5	<5	<25	<25	<50
	MW7-ROX-010918	1/9/2018		40.67	NE	<5	<5	<5	<5	<130	<5	<5	<5	<5	<5	<5	<5	<5	<25	<25	<50
	MW7-ROX-040918	4/9/2018		41.38	NE	<1	<1	<1	<1	<25	<1	<1	<1	<1	0.8 J	<1	<1	<1	<5	<5	<10
	MW7-ROX-040918-DUP	4/9/2018		41.38	NE	<1	<1	<1	<1	<25	<1	<1	<1	<1	0 96 J	<1	<1	<1	<5	<5	<10
	MW7-ROX-071018	7/10/2018		41.64	NE	<10	<10	<10	<10	<250	<10	<10	<10	<10	<10	<10	<10	<10	<50	<50	<100
	MW7-ROX-071018-DUP	7/10/2018		41.64	NE	<10	<10	<10	<10	<250	<10	<10	<10	<10	<10	<10	<10	<10	<50	<50	<100
	MW7-ROX-100818	10/8/2018	42.92 - 52.92	41.69	NE	<2.5	<2 5	<2.5	<2 5	<63	<2 5	<2.5	<2.5	<2.5	<2.5	<2 5	<2.5	<2 5	<13	<13	<25
MW-08	MW8-ROX-011416	1/14/2016	33.60 - 43.60	31.79	NE	<2	<2	<2	<2	<50	<2	<2	<2	<2	<2	<2	<2	<2	<10	<10	<10
	MW8-ROX-041916	4/19/2016		31.45	NE	<1	<1	<1	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<5
	MW8-ROX-071416	7/14/2016		30.80	NE	<2	<2	<2	<2	<50	<2	<2	<2	<2	<2	<2	<2	<2	<10	<10	<20
	MW8-ROX-100616	10/6/2016		29.99	NE	<5	<5	<5	<5	<130	<5	<5	<5	<5	<5	<5	<5	<5	<25	<25	<50
	MW8-ROX-010917	1/9/2017		29.79	NE	<2.5	<2 5	<2.5	<2.5	<63	<2 5	<2.5	<2.5	<2.5	<2.5	<2 5	<2.5	<2 5	<13	<13	<25
	MW8-ROX-041017	4/10/2017		30.02	NE	<1	<1	<1	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<10
	MW8-ROX-071017	7/10/2017		28.48	NE	<1	<1	<1	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<10
	MW8-ROX-100517	10/5/2017		29.28	NE	<10	<10	<10	<10	<250	<10	<10	<10	<10	<10	<10	<10	<10	<50	<50	<100
	MW8-ROX-100517-DUP	10/5/2017		29.28	NE	<10	<10	<10	<10	<250	<10	<10	<10	<10	<10	<10	<10	<10	<50	<50	<100
	MW8-ROX-010918	1/9/2018		31.60	NE	<5	<5	<5	<5	<130	<5	<5	<5	<5	<5	<5	<5	<5	<25	<25	<50
	MW8-ROX-040918	4/9/2018		32.27	NE	<1	<1	<1	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<10
	MW8-ROX-071018	7/10/2018		32.42	NE	<5	<5	<5	<5	<130	<5	<5	<5	<5	<5	<5	<5	<5	<25	<25	<50
	MW8-ROX-100818	10/8/2018	33.60 - 43.60	32.45	NE	<2.5	<2 5	<2.5	<2 5	<63	<2 5	<2.5	<2.5	<2.5	<2.5	<2 5	<2.5	<2 5	<13	<13	<25
	MW8-ROX-100818-DUP	10/8/2018		32.45	NE	<2.5	<2 5	<2.5	<2 5	<63	<2 5	<2.5	<2.5	<2.5	<2.5	<2 5	<2.5	<2 5	<13	<13	<25

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs														
						1,2-Dichloropropane	Ethylbenzene	Ethyl methacrylate	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	1,1,2,2-Tetrachloroethane	Toluene	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylenes	o-Xylenes	Xylenes (total)
Screening Values (mg/L)						0.005 [2]	0.7 [1]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	0.00043 [3]	1.0 [1]	0.005 [1]		0.07 [3]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)														
MW-09	MW9-ROX-011316	1/13/2016	46.45 - 56.45	42.63	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW9-ROX-041216	4/12/2016		41.98	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW9-ROX-071316	7/13/2016		40.93	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW9-ROX-101316	10/13/2016		40.39	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW9-ROX-011117	1/11/2017		40.06	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW9-ROX-041417	4/14/2017		40.67	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW9-ROX-071217	7/12/2017		38.86	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW9-ROX-100917	10/9/2017		39.17	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW9-ROX-011018	1/10/2018		41.10	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW9-ROX-040618	4/6/2018	46.04 - 56.04	42.29	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW9-ROX-070918	7/9/2018		42.82	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW9-ROX-101018	10/10/2018	46.04 - 56.04	42.88	NE	<0.001	<0 001	<0 01	<0.001	<0 01	<0.001	<0 005	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.002	<0.001	<0 003
MW-10	MW10-ROX-011316	1/13/2016	44.43 - 54.43	42.53	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW10-ROX-041116	4/11/2016		41.88	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW10-ROX-071316	7/13/2016		41.00	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW10-ROX-101216	10/12/2016		40.27	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW10-ROX-011117	1/11/2017		39.88	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW10-ROX-041417	4/14/2017		40.50	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW10-ROX-071117	7/11/2017		38.86	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW10-ROX-100917	10/9/2017		38.94	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW10-ROX-100917-DUP	10/9/2017		38.94	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW10-ROX-011018	1/10/2018		40.88	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW10-ROX-011018-DUP	1/10/2018		40.88	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW10-ROX-040518	4/5/2018		41.94	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW10-ROX-070918	7/9/2018		42.88	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW10-ROX-101018	10/10/2018	44.43 - 54.43	42.87	NE	<0.001	<0 001	<0 01	<0.001	<0 01	<0.001	<0 005	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.002	<0.001	<0 003
MW-11	MW11-ROX-011216	1/12/2016	41.66 - 51.66	40.33	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW11-ROX-041116	4/11/2016		39.49	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW11-ROX-071316	7/13/2016		38.59	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW11-ROX-101216	10/12/2016		37.93	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW11-ROX-011117	1/11/2017		37.63	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW11-ROX-041417	4/14/2017		38.17	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW11-ROX-071017	7/10/2017		36.39	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW11-ROX-100917	10/9/2017		36.32	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW11-ROX-011018	1/10/2018		39.00	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW11-ROX-040618	4/6/2018		39.98	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW11-ROX-070918	7/9/2018		40.54	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW11-ROX-101118	10/11/2018	41.66 - 51.66	40.65	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
MW-12	MW12-ROX-011116	1/11/2016	41.92 - 51.92	40.98	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW12-ROX-040716	4/7/2016		39.82	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW12-ROX-071216	7/12/2016		38.89	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW12-ROX-101116	10/11/2016		38.85	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW12-ROX-010917	1/9/2017		38.11	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW12-ROX-041417	4/14/2017		38.50	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW-12-ROX-07072017	7/7/2017		36.84	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW12-ROX-100617	10/6/2017		37.23	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW12-ROX-011118	1/11/2018		39.62	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW12-ROX-040518	4/5/2018		40.50	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW12-ROX-040518-DUP	4/5/2018		40.50	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW12-ROX-070618	7/6/2018		41.03	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW12-ROX-101018	10/10/2018	41.92 - 51.92	40.84	NE	<0.001	<0 001	<0 01	<0.001	<0 01	<0.001	<0 005	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.002	<0.001	<0 003

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs														
						1,2-Dichloropropane	Ethylbenzene	Ethyl methacrylate	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	1,1,2,2-Tetrachloroethane	Toluene	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylenes	o-Xylenes	Xylenes (total)
Screening Values (mg/L)						0.005 [2]	0.7 [1]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	0.00043 [3]	1.0 [1]	0.005 [1]		0.07 [3]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)														
MW-13	MW13-ROX-010716	1/7/2016	25.57 - 35.57	27.16	NE	<0.001	0.0021	<0.001	0 008	<0.025	0 013	<0 001	0 011	<0 001	0.033	<0 001	<0.001	<0.001	0.059	0 0038 J	0.063
	MW13-ROX-040816	4/8/2016		26.81	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0055	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW13-ROX-071116	7/11/2016		26.01	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0064	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW13-ROX100716	10/7/2016		25.16	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0076	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW13-ROX-010617	1/6/2017		25.54	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0067	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW13-ROX-041317	4/13/2017		25.75	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0055	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW13-ROX-070717	7/7/2017		23.64	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0067	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW13-ROX-101017	10/10/2017		25.20	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0046	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW13-ROX-010918	1/9/2018		27.20	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0035	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW13-ROX-040618	4/6/2018	24.80 - 34.80	27.71	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0 004	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW13-ROX-070918	7/9/2018		27.6	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0044	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW13-ROX-101118	10/11/2018	24.80 - 34.80	27.66	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0033	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
MW-14	MW-14-ROX-010816	1/8/2016	33.42 - 43.42	31.64	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW14-ROX-041416	4/14/2016		31.32	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	0 001 J
	MW14-ROX-071116	7/11/2016		30.59	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW14-ROX-101416	10/14/2016		29.62	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW14-ROX-011117	1/11/2017		29.61	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW14-ROX-041317	4/13/2017		29.54	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW14-ROX-070717	7/7/2017		28.28	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW14-ROX-101017	10/10/2017		29.44	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW14-ROX-010918	1/9/2018		31.34	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW14-ROX-010918-DUP	1/9/2018		31.34	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW14-ROX-041018	4/10/2018		31.96	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW14-ROX-071118	7/11/2018		32.06	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW14-ROX-101518	10/15/2018	33.42 - 43.42	32.32	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
MW-16	MW16-ROX-011216	1/12/2016	37.06 - 47.06	41.99	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW16-ROX-040816	4/8/2016		41.17	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW16-ROX-071216	7/12/2016		39.93	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW16-ROX-101116	10/11/2016		39.64	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW16-ROX-010917	1/9/2017		39.15	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW16-ROX-041417	4/14/2017		39.45	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW16-ROX-071017	7/10/2017		38.16	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW16-ROX-100617	10/6/2017		38.04	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW16-ROX-010818	1/8/2018		40.71	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW16-ROX-040618	4/6/2018	37.50 - 47.50	41.54	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW16-ROX-070618	7/6/2018		42.35	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW16-ROX-100518	10/5/2018	37.50 - 47.50	42.24	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs															
						1,2-Dichloropropane	Ethylbenzene	Ethyl methacrylate	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	1,1,2,2-Tetrachloroethane	Toluene	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylenes	o-Xylenes	Xylenes (total)
Screening Values (mg/L)						0.005 [2]	0.7 [1]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	0.00043 [3]	1.0 [1]	0.005 [1]		0.07 [3]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)															
MW-22	MW22-ROX-011516	1/15/2016	37.88 - 47.88	40.42	NE	<0 02	2	<0 02	0.08	<0.5	<0.02	0 26	0.13	<0.02	1 8	<0.02	0.81	0.21	3.2	1.9	5
	MW22-ROX-011516-DUP	1/15/2016		40.42	NE	<0 02	1.9	<0 02	0 075	<0.5	<0.02	0 23	0.12	<0.02	1.7	<0.02	0.74	0.19	2.9	1.7	4.7
	MW22-ROX-041316	4/13/2016		39.56	NE	<0.025	2.8	<0.025	0 097	<0 63	<0.025	0 33	0.17	<0 025	1 6	<0 025	0.98	0.25	5.5	2.6	8.1
	MW22-ROX-041316-DUP	4/13/2016		39.56	NE	<0.025	3	<0.025	0.1	<0 63	<0.025	0 32	0.17	<0 025	1.7	<0 025	1	0.26	5.7	2.8	8.5
	MW22-ROX-071516	7/15/2016		38.97	NE	<0.005	0.41	<0.005	0 024	<0.13	<0.005	0.075	0 045	<0 005	0.051	<0 005	0.22	0 064	0 56	0.31	0 88
	MW22-ROX-071516-DUP	7/15/2016		38.97	NE	<0.005	0.41	<0.005	0 025	<0.13	<0.005	0.078	0 042	<0 005	0.051	<0 005	0.21	0 063	0 57	0.31	0 88
	MW22-ROX-101716	10/17/2016		38.17	NE	<0 01	0.86	<0 01	0 031	<0 25	<0.01	0.11	0 063	<0.01	0.12	<0.01	0.36	0 097	1.7	0.76	2.5
	MW22-ROX-101716-DUP	10/17/2016		38.17	NE	<0 01	0.89	<0 01	0 034	<0 25	<0.01	0.097	0 061	<0.01	0.12	<0.01	0.35	0 092	1.7	0.8	2.5
	MW22-ROX-011217	1/12/2017		37.80	NE	<0.005	0.3	<0.005	0 018	<0.13	<0.005	0.057	0 033	<0 005	0.032	<0 005	0.19	0 048	0 52	0.29	0.8
	MW22-ROX-011217-DUP	1/12/2017		37.80	NE	<0.005	0.28	<0.005	0 017	<0.13	<0.005	0.055	0 029	<0 005	0.028	<0 005	0.17	0 046	0.48	0.26	0.74
	MW22-ROX-041717	4/17/2017		38.24	NE	<0 01	0.89	<0 01	0 032	<0 25	<0.01	0.099	0 057	<0.01	0.077	<0.01	0.36	0 085	1.7	0.71	2.4
	MW22-ROX-041717-DUP	4/17/2017		38.24	NE	<0 01	0.98	<0 01	0 034	<0 25	<0.01	0.11	0 062	<0.01	0.084	<0.01	0.39	0 094	1.8	0.77	2.6
	MW22-ROX-071217	7/12/2017		36.83	NE	<0.002	0.17	<0.002	0.0092	<0 05	<0.002	0.031	0 012	<0 002	0.017	<0 002	0.063	0 018	0 27	0.13	0.4
	MW22-ROX-071217-DUP	7/12/2017		36.83	NE	<0.002	0.15	<0.002	0.0088	<0 05	<0.002	0.029	0 011	<0 002	0.015	<0 002	0.052	0 015	0 23	0.11	0 34
	MW22-ROX-101317	10/13/2017		36.94	NE	<0.001	0.04	<0.001	0.0021	<0.025	<0.001	0.015	0 004	<0 001	0 0042	<0 001	0.065	0 021	0.059	0 033	0.091
	MW22-ROX-101317-DUP	10/13/2017		36.94	NE	<0.001	0.033	<0.001	0.0018	<0.025	<0.001	0.014	0.0035	<0 001	0 0037	<0 001	0.055	0 018	0.048	0 026	0.075
	MW22-ROX-011118	1/11/2018		39.25	NE	<0.025	1.5	<0.025	0.05	<0 63	<0.025	0.19	0.1	<0 025	0.19	<0 025	0 6	0.16	3.1	1.3	4.5
	MW22-ROX-011118-DUP	1/11/2018		39.25	NE	<0.025	1.6	<0.025	0 059	<0 63	<0.025	0 24	0.11	<0 025	0.21	<0 025	0.68	0.18	3.3	1.4	4.8
	MW22-ROX-041018	4/10/2018	38.43 - 48.43	NM	NE	<0 02	1.8	<0 02	0 052	<0.5	<0.02	0.16	0 078	<0.02	0.28	<0.02	0.59	0.15	3.3	1	4.3
	MW22-ROX-071018	7/10/2018		40.88	NE	<0.025	2	<0.025	0 057	<0 63	<0.025	0.2	0 094	<0 025	0.41	<0 025	0 6	0.15	3.9	0.85	4.8
	MW22-ROX-101518	10/15/2018	38.43 - 48.43	41.11	NE	<0 01	1.5	<0 01	0 066	<0 25	<0.01	0 21	0.12	<0.01	0.13	<0.01	0 8	0.19	2.9	0.3	3.2
MW-23	MW-23-ROX-010716	1/7/2016	29.02 - 39.02	28.78	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW-23-ROX-040616	4/6/2016		27.96	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW-23-ROX-070816	7/8/2016		27.54	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW23-ROX-BP-100716	10/7/2016		26.64	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0 001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW23-ROX-011017	1/10/2017		26.83	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW23-ROX-041117	4/11/2017		27.54	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW23-ROX-071017	7/10/2017		25.13	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW23-ROX-100517	10/5/2017		26.42	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW23-ROX-010518	1/5/2018		28.52	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW-23-ROX-040918	4/9/2018		29.24	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW23-ROX-070918	7/9/2018		29.1	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW23-ROX-100918	10/9/2018	29.02 - 39.02	29.00	NE	<0.001	<0 001	<0 01	<0.001	<0 01	0.0011	<0 005	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.002	<0.001	<0 003
MW-24	MW24-ROX-011316	1/13/2016	38.89 - 48.89	41.44	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW24-ROX-040816	4/8/2016		40.79	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW24-ROX-071216	7/12/2016		39.67	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW24-ROX-101116	10/11/2016		39.19	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW24-ROX-010917	1/9/2017		38.97	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW24-ROX-041717	4/17/2017		39.42	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW-24-ROX-07072017	7/7/2017		37.68	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW24-ROX-100617	10/6/2017		37.93	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW24-ROX-010818	1/8/2018		40.36	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW24-ROX-040618	4/6/2018	39.61 - 49.61	41.28	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW24-ROX-040618-DUP	4/6/2018		41.28	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW24-ROX-070618	7/6/2018		41.87	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW24-ROX-100518	10/5/2018	39.61 - 49.61	41.81	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs														
						1,2-Dichloropropane	Ethylbenzene	Ethyl methacrylate	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	1,1,2,2-Tetrachloroethane	Toluene	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylenes	o-Xylenes	Xylenes (total)
Screening Values (mg/L)						0.005 [2]	0.7 [1]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	0.00043 [3]	1.0 [1]	0.005 [1]		0.07 [3]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)														
MW-25	MW25-ROX-011416	1/14/2016	35.59 - 45.59	36.12	NE	<0 02	<0.02	<0 02	<0.02	<0.5	0 042	<0.02	<0.02	<0.02	<0 02	<0.02	<0 02	<0.02	<0.1	<0.1	<0.1
	MW25-ROX-041916	4/19/2016		35.67	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0 049	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	0.00085 J
	MW25-ROX-071816	7/18/2016		35.19	NE	<0 01	<0.01	<0 01	<0.01	<0 25	0 025	<0.01	<0.01	<0.01	<0 01	<0.01	<0 01	<0.01	<0 05	<0.05	<0.1
	MW25-ROX-100616	10/6/2016		34.27	NE	<0.002	<0 002	<0.002	<0.002	<0 05	0 039	<0 002	<0.002	<0 002	<0.002	<0 002	<0.002	<0.002	<0 01	<0.01	<0.02
	MW25-ROX-011117	1/11/2017		34.00	NE	<0.001	<0 001	<0.001	0.00059 J	<0.025	0 025	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW25-ROX-041117	4/11/2017		34.31	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0 023	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW25-ROX-071017	7/10/2017		32.75	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.02	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW25-ROX-100517	10/5/2017		33.52	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0 016	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW25-ROX-010918	1/9/2018		35.80	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0068	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW25-ROX-040918	4/9/2018		36.49	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0022	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW25-ROX-071018	7/10/2018		36.71	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW25-ROX-100818	10/8/2018	35.59 - 45.59	36.73	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
MW-26	MW26-ROX-010716	1/7/2016	38.15 - 48.15	39.55	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW26-ROX-040616	4/6/2016		38.44	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW26-ROX-071216	7/12/2016		37.74	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW26-ROX-101016	10/10/2016		37.13	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW26-ROX-010617	1/6/2017		36.74	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW26-ROX-041417	4/14/2017		36.91	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW-26-ROX-07072017	7/7/2017		35.61	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW26-ROX-100517	10/5/2017		36.10	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW26-ROX-010818	1/8/2018		38.41	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW26-ROX-040518	4/5/2018		39.22	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW26-ROX-070618	7/6/2018		39.73	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW26-ROX-100918	10/9/2018	38.15 - 48.15	39.53	NE	<0.001	<0 001	<0 01	<0.001	<0 01	<0.001	<0 005	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.002	<0.001	<0 003
MW-27	MW27-ROX-011316	1/13/2016	39.79 - 49.79	40.68	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW27-ROX-041116	4/11/2016		39.73	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW-27-ROX-071316	7/13/2016		38.94	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW27-ROX-101216	10/12/2016		38.50	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW27-ROX-011117	1/11/2017		38.05	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	0.00094 J	<0.001	<0.001	<0.005	<0.005	<0.01
	MW27-ROX-041417	4/14/2017		38.72	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW27-ROX-071017	7/10/2017		37.23	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW27-ROX-100917	10/9/2017		37.17	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW27-ROX-011018	1/10/2018		38.98	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW27-ROX-040618	4/6/2018		40.34	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW27-ROX-070918	7/9/2018		41.16	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW27-ROX-100918	10/9/2018	39.79 - 49.79	41.06	NE	<0.001	<0 001	<0 01	<0.001	<0 01	<0.001	0.00052 J	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.002	<0.001	<0 003
MW-28	MW28-ROX-011416	1/14/2016	33.61 - 43.61	39.98	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW28-ROX-041216	4/12/2016		39.20	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	MW28-ROX-071416	7/14/2016		38.49	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0011	<0 001	<0.001	<0 001	0 0013	<0 001	<0.001	<0.001	<0.005	<0.005	0.0017 J
	MW28-ROX-101316	10/13/2016		37.86	NE	<0.001	<0 001	<0.001	0.0023	<0.025	0.0011	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	0 0011 J	<0.01
	MW28-ROX-011217	1/12/2017		37.14	NE	<0.001	<0 001	<0.001	0.0018	<0.025	0.0028	<0 001	<0.001	<0 001	0 00082 J	<0 001	0 0013	0.00071 J	0 01	0.02	0 03
	MW28-ROX-041717	4/17/2017		38.05	NE	<0.001	0.004	<0.001	0.0041	<0.025	0.00098 J	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	0.0054	0.0063 J
	MW28-ROX-071217	7/12/2017		36.48	NE	<0.001	0.00063 J	<0.001	0.0025	<0.025	0 003	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	0.00092 J	0.0017 J
	MW28-ROX-100917	10/9/2017		36.44	NE	<0.001	<0 001	<0.001	0.0018	<0.025	0.0031	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	0 0007 J	<0.01
	MW28-ROX-011018	1/10/2018		38.18	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0044	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW28-ROX-040618	4/6/2018		39.25	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0041	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW28-ROX-070918	7/9/2018		40.08	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0016	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	MW28-ROX-101118	10/11/2018	33.61 - 43.61	40.25	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0 005	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01

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						VOCs														
						1,2-Dichloropropane	Ethylbenzene	Ethyl methacrylate	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	1,1,2,2-Tetrachloroethane	Toluene	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylenes	o-Xylenes	Xylenes (total)
Screening Values (mg/L)						0.005 [2]	0.7 [1]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	0.00043 [3]	1.0 [1]	0.005 [1]		0.07 [3]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)														
P-54	P54-ROX-011216	1/12/2016	38.00 - 63.00	40.22	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	P54-ROX-041216	4/12/2016		39.42	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	P54-ROX-071216	7/12/2016		38.44	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P54-ROX-101216	10/12/2016		37.85	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P54-ROX-010917	1/9/2017		37.80	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	0.00077 J	<0.001	<0.001	<0.005	<0.005	<0.01
	P54-ROX-041717	4/17/2017		38.30	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P54-ROX-071017	7/10/2017		36.35	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P54-ROX-100617	10/6/2017		36.79	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P54-ROX-011118	1/11/2018		39.10	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P54-ROX-040618	4/6/2018		40.05	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P54-ROX-070618	7/6/2018		40.51	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P54-ROX-100518	10/5/2018	38.00 - 63.00	40.46	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
P-56	P56-ROX-011116	1/11/2016	40.82 - 65.82	44.78	NE	<0.005	0.092	<0.005	0 031	<0.13	<0.005	0.023	0 036	<0 005	0.016	<0 005	0.063	0 016	0 22	0 0062 J	0 22
	P56-ROX-041416	4/14/2016		43.73	NE	<0.005	0.093	<0.005	0 035	<0.13	<0.005	0.019	0 039	<0 005	0.017	<0 005	0.074	0 019	0.2	0 0061 J	0 21
	P56-ROX-071216	7/12/2016		42.87	NE	<0.002	0.034	<0.002	0 032	<0 05	<0.002	0.013	0 032	<0 002	0.011	<0 002	0.037	0 011	0.1	0 0036 J	0.11
	P56-ROX-101716	10/17/2016		42.35	NE	<0.001	0.051	<0.001	0 031	<0.025	<0.001	0.023	0 036	<0 001	0.011	<0 001	0.062	0 015	0.18	0.0047 J J	0.19
	P56-ROX-011217	1/12/2017		42.01	NE	<0.001	0.017	<0.001	0 028	<0.025	<0.001	0.012	0 031	<0 001	0 0049	<0 001	0.04	0.01	0.073	0.003 J	0.076
	P56-ROX-040617	4/6/2017		42.46	NE	<0.001	0.017	<0.001	0 028	<0.025	<0.001	0.0065	0 032	<0 001	0 0041	<0 001	0.038	0 011	0.079	0 0018 J	0 08
	P56-ROX-071217	7/12/2017		41.11	NE	<0.001	0.0089	0 0028	0 013	<0.025	<0.001	0.0054	0 015	<0 001	0 0018	<0 001	0 0091	0.0025	0.026	0.00088 J	0.027
	P56-ROX-101117	10/11/2017		41.08	NE	<0.001	0.034	<0.001	0 022	<0.025	<0.001	0.017	0 025	<0 001	0 0071	<0 001	0.038	0.0094	0.098	0 0027 J	0.1
	P56-ROX-011018	1/10/2018		43.63	NE	<0.005	0.072	<0.005	0 028	<0.13	<0.005	0.018	0.03	<0 005	0 0076	<0 005	0.041	0.0097	0.11	0 0035 J	0.12
	P56-ROX-041118	4/11/2018		44.40	NE	<0.001	0.0014	<0.001	0.02	<0.025	<0.001	0.0019	0 023	<0 001	<0.001	<0 001	0 0047	0.0017	0.016	<0.005	0.017
	P56-ROX-071118	7/11/2018		45.25	NE	<0.001	0.015	<0.001	0 026	<0.025	<0.001	0.0067	0 027	<0 001	0 0022	<0 001	0 013	0.0041	0.046	0 0019 J	0.048
	P56-ROX-101518	10/15/2018	40.82 - 65.82	45.37	NE	<0.001	0.0012	<0.001	0 014	<0.025	<0.001	<0 001	0 016	<0 001	0 00076 J	<0 001	0 0013	<0.001	0.0059	<0.005	0.0062 J
P-57	P57-ROX-011216	1/12/2016	44.19 - 54.19	45.61	NE	<1	0.55 J	<1	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	0.83 J
	P57-ROX-041816	4/18/2016		44.80	NE	<0 25	0 2 J	<0 25	<0.25	<6.3	<0.25	<0.25	<0.25	<0.25	<0 25	<0.25	<0 25	<0.25	<1.3	<1 3	<1.3
	P57-ROX-071316	7/13/2016		44.02	NE	<0.5	0.57	<0.5	<0 5	<13	<0 5	<0.5	<0.5	<0.5	<0.5	<0 5	<0.5	<0 5	<2.5	<2 5	<5
	P57-ROX-101816	10/18/2016		43.17	NE	<0.5	0 3 J	<0.5	<0 5	<13	<0 5	<0.5	<0.5	<0.5	<0.5	<0 5	<0.5	<0 5	<2.5	<2 5	<5
	P57-ROX-011617	1/16/2017		42.82	NE	<0 25	0.24 J	<0 25	<0.25	<6.3	<0.25	<0.25	<0.25	<0.25	<0 25	<0.25	<0 25	<0.25	<1.3	<1 3	<2.5
	P57-ROX-040717	4/7/2017		43.05	NE	<0.2	0.14 J	<0.2	<0 2	<5	<0 2	<0.2	<0.2	<0.2	<0.2	<0 2	<0.2	<0 2	<1	<1	<2
	P57-ROX-071317	7/13/2017		41.95	NE	<0.2	0.18 J	<0.2	<0 2	<5	<0 2	<0.2	<0.2	<0.2	<0.2	<0 2	<0.2	<0 2	<1	<1	<2
	P57-ROX-101617	10/16/2017		42.64	NE	<0 25	0.21 J	<0 25	<0.25	<6.3	<0.25	<0.25	<0.25	<0.25	<0 25	<0.25	<0 25	<0.25	<1.3	<1 3	<2.5
	P57-ROX-011818	1/18/2018		44.86	NE	<0.1	0.053 J	<0.1	<0.1	<2.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0 5	<1
	P57-ROX-011818-DUP	1/18/2018		44.86	NE	<0.1	0.071 J	<0.1	<0.1	<2.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0 5	<1
	P57-ROX-041018	4/10/2018		45.45	NE	<0 05	<0.05	<0 05	<0.05	<1.3	<0.05	<0.05	<0.05	<0.05	<0 05	<0.05	<0 05	<0.05	<0 25	<0.25	<0.5
	P57-ROX-071118	7/11/2018		45.76	NE	<0 05	0.032 J	<0 05	0.028 J	<1.3	<0.05	0.076	0.036 J	<0.05	<0 05	<0.05	<0 05	<0.05	<0 25	<0.25	<0.5
	P57-ROX-071118-DUP	7/11/2018		45.76	NE	<0 05	0.036 J	<0 05	<0.05	<1.3	<0.05	0.071	0.038 J	<0.05	<0 05	<0.05	<0 05	<0.05	<0 25	<0.25	<0.5
	P57-ROX-101618	10/16/2018	44.19 - 54.19	45.86	NE	<0.2	0.15 J	<0.2	<0 2	<5	<0 2	<0.2	<0.2	<0.2	<0.2	<0 2	<0.2	<0 2	<1	<1	<2
	P57-ROX-101618-DUP	10/16/2018		45.86	NE	<0.2	0.14 J	<0.2	<0 2	<5	<0 2	<0.2	<0.2	<0.2	<0.2	<0 2	<0.2	<0 2	<1	<1	<2
P-58	P58-ROX-011316	1/13/2016	40.21 - 65.21	43.18	NE	<2	<2	<2	<2	<50	<2	<2	<2	<2	<2	<2	<2	<2	<10	<10	<10
	P58-ROX-041816	4/18/2016		42.68	NE	<1	0.62 J	<1	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<5
	P58-ROX-071516	7/15/2016		42.05	NE	<2	<2	<2	<2	<50	<2	<2	<2	<2	<2	<2	<2	<2	<10	<10	<20
	P58-ROX-101816	10/18/2016		41.05	NE	<2	<2	<2	<2	<50	<2	<2	<2	<2	<2	<2	<2	<2	<10	<10	<20
	P58-ROX-011617	1/16/2017		40.73	NE	<1	0.98 J	<1	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<10
	P58-ROX-041117	4/11/2017		40.74	NE	<0.5	0.48 J	<0.5	<0 5	<13	<0 5	<0.5	<0.5	<0.5	<0.5	<0 5	<0.5	<0 5	<2.5	<2.5	<5
	P58-ROX-071317	7/13/2017		39.88	NE	<1	<1	<1	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<10
	P58-ROX-041118	4/11/2018		43.19	NE	<2	<2	<2	<2	<50	<2	<2	<2	<2	<2	<2	<2	<2	<10	<10	<20
	P58-ROX-041118-DUP	4/11/2018		43.19	NE	<2	<2	<2	<2	<50	<2	<2	<2	<2	<2	<2	<2	<2	<10	<10	<20
	P58-ROX-101618	10/16/2018	40.21 - 65.21	43.66	NE	<1	<1	<1	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<10

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs														
						1,2-Dichloropropane	Ethylbenzene	Ethyl methacrylate	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	1,1,2,2-Tetrachloroethane	Toluene	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylenes	o-Xylenes	Xylenes (total)
Screening Values (mg/L)						0.005 [2]	0.7 [1]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	0.00043 [3]	1.0 [1]	0.005 [1]		0.07 [3]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)														
P-59	P59-ROX-011216	1/12/2016	47.91 - 72.91	46.10	NE	<0.025	1.1	<0.025	0.022 J	<0 63	<0.025	0.11	0 037	<0 025	1 6	<0 025	0.26	0.08	2.3	0.46	2.8
	P59-ROX-041816	4/18/2016		44.28	NE	<0 02	1.7	<0 02	0.04	<0.5	<0.02	0.14	0 084	<0.02	0.85	<0.02	0.56	0.16	3.4	0.31	3.7
	P59-ROX-071316	7/13/2016		44.01	NE	<0.025	1.4	<0.025	0 046	<0 63	<0.025	0.18	0 059	<0 025	0.47	<0 025	0.48	0.16	2.1	0.17	2.2
	P59-ROX-101816	10/18/2016		43.39	NE	<0 05	2.1	<0 05	0.05	<1.3	<0.05	0.19	0.1	<0.05	2 3	<0.05	0.64	<0.05	4.2	0.27	4.5
	P59-ROX-011617	1/16/2017		42.83	NE	<0 05	2.3	<0 05	0.07	<1.3	<0.05	0 25	0.14	<0.05	0.61	<0.05	0.87	0.22	3.5	0.14 J	3.6
	P59-ROX-040717	4/7/2017		43.31	NE	<0 05	2	<0 05	0.048 J	<1.3	<0.05	0.18	0 089	<0.05	0.59	<0.05	0.55	0.13	3.3	0.12 J	3.4
	P59-ROX-071317	7/13/2017		42.16	NE	<0 05	1.9	<0 05	0 051	<1.3	<0.05	0.18	0.1	<0.05	2.1	<0.05	0.63	0.15	3.5	0.13 J	3.6
	P59-ROX-101317	10/13/2017		41.87	NE	<0 02	0.92	<0 02	0 046	<0.5	<0.02	0.19	0 085	<0.02	0.4	<0.02	0.46	0.12	1.3	0.044 J	1.3
	P59-ROX-101317-DUP	10/13/2017		41.87	NE	<0 02	0.81	<0 02	0 043	<0.5	<0.02	0.17	0 078	<0.02	0.39	<0.02	0.42	0.1	1.1	0.037 J	1.2
	P59-ROX-011118	1/11/2018		44.44	NE	<0 02	1.2	<0 02	0 052	<0.5	<0.02	0 22	0 092	<0.02	0.28	<0.02	0.56	0.14	1.8	0.032 J	1.8
	P59-ROX-041218	4/12/2018		45.13	NE	<0 02	0.77	<0 02	0 029	<0.5	<0.02	0.15	0 052	<0.02	0.46	<0.02	0.32	0 045	1.1	0.082 J	1.2
	P59-ROX-071118	7/11/2018		46.16	NE	<0.025	0.77	<0.025	0 038	<0 63	<0.025	0.14	0 068	<0 025	0.52	<0 025	0.4	0 082	1	0.04 J	1
	P59-ROX-101618	10/16/2018	47.91 - 72.91	45.99	NE	<0 01	1.1	<0 01	0 042	<0 25	<0.01	0.16	0 086	<0.01	1 2	<0.01	0.48	0.12	1.8	0.23	2
P-66	P-66-ROX-010816	1/8/2016	34.72 - 59.72	34.64	NE	<0.001	<0 001	<0.001	0 085	<0.025	<0.001	<0 001	0 083	<0 001	0 0012	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	P66-ROX-041516	4/15/2016		34.33	NE	<0.001	0.0048	<0.001	0 068	<0.025	<0.001	0.017	0 075	<0 001	0 00086 J	<0 001	0 0017	0.00056 J	0 002 J	0.00077 J	0.0027 J
	P66-ROX-071116	7/11/2016		33.58	NE	<0.001	0.0075	<0.001	0 083	<0.025	0 017	0.026	0.1	<0 001	<0.001	<0 001	0.006	0.00082 J	0.0032 J	0.001 J	0.0042 J
	P66-ROX-101416	10/14/2016		32.61	NE	<0.001	0.0091	<0.001	0 071	<0.025	0 022	0.067	0 095	<0 001	<0.001	<0 001	0.024	0.0014	0.0039 J	0.001 J	0.0049 J
	P66-ROX-011117	1/11/2017		32.41	NE	<0.001	0.0049	<0.001	0 083	<0.025	0.0052	0.051	0,12	<0 001	0 00087 J	<0 001	0.024	0.0012	0.0031 J	0 0013 J	0.0044 J
	P66-ROX-041317	4/13/2017		32.19	NE	<0.001	0.00056 J	<0.001	0 082	<0.025	<0.001	0.0018	0 085	<0 001	0 0011	<0 001	0 0014	<0.001	<0.005	0.00081 J	<0.01
	P66-ROX-071217	7/12/2017		31.38	NE	<0.001	0.0061	<0.001	0 081	<0.025	0.0086	0.14	0.12	0.0018	0 00092 J	<0 001	0.041	0.00087 J	0.0047 J	0 0013 J	0 006 J
	P66-ROX-101017	10/10/2017		32.27	NE	<0.001	0.0045	<0.001	0 074	<0.025	0.0079	0.12	0.12	<0 001	<0.001	<0 001	0.036	0.00066 J	0.0027 J	0 0011 J	0.0038 J
	P66-ROX-011118	1/11/2018		34.09	NE	<0.001	0.00082 J	<0.001	0.07	<0.025	0.0097	0.034	0 087	<0 001	0 00075 J	<0 001	0 0022	<0.001	<0.005	0.00087 J	0.0024 J
	P66-ROX-041018	4/10/2018		34.93	NE	<0.001	0.00056 J	<0.001	0 065	<0.025	0.0064	<0 001	0 071	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	0 0006 J	<0.01
	P66-ROX-071118	7/11/2018		35.10	NE	<0.001	<0 001	<0.001	0 025	<0.025	0.0055	<0 001	0 023	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P66-ROX-071118-DUP	7/11/2018		35.10	NE	<0.001	<0 001	<0.001	0 026	<0.025	0.0053	<0 001	0 025	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P66-ROX-101518	10/15/2018	34.72 - 59.72	35.31	NE	<0 001 UJ	0.00072 J	<0 001 UJ	0 054	<0.025 UJ	<0.001 UJ	<0.001 UJ	0.057 J	<0.001 UJ	0 00098 J	<0.001 UJ	<0 001 UJ	<0.001 UJ	<0.005 UJ	<0.005 UJ	<0.01 UJ
	P66-ROX-101518-DUP	10/15/2018		35.31	NE	<0 001 UJ	0.00082 J	<0 001 UJ	0 068	<0.025 UJ	<0.001 UJ	<0.001 UJ	0.076 J	<0.001 UJ	0 00099 J	<0.001 UJ	<0 001 UJ	<0.001 UJ	<0.005 UJ	0.00086 J	<0.01 UJ
P-74	P74-ROX-011116	1/11/2016	44.43 - 69.43	40.67	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	0 0032	<0 001	<0.001	<0.001	<0.005	<0.005	0 001 J
	P74-ROX-041516	4/15/2016		40.40	NE	<0.001	0.0025	<0.001	<0.001	<0.025	0.0018	0.0012	<0.001	<0 001	0.003	<0 001	0 0096	0.0062	0.013	0.001 J	0.014
	P74-ROX-071216	7/12/2016		39.56	NE	<0.001	0.0021	<0.001	<0.001	<0.025	<0.001	0.0018	<0.001	<0 001	0 0013	<0 001	0.016	0.0098	0.0069	0.00089 J	0.0078 J
	P74-ROX-101416	10/14/2016		39.44	NE	<0.001	0.002	<0.001	0.00063 J	<0.025	<0.001	0.0038	0.0012	<0 001	0 0015	<0 001	0.013	0 005	0.0035 J	0.00079 J	0.0043 J
	P74-ROX-011217	1/12/2017		38.64	NE	<0.001	0.0016	<0.001	<0.001	<0.025	0.0055	<0 001	<0.001	<0 001	0 0017	<0 001	0 0048	0.0011	0.0037 J	0 0015 J	0.0052 J
	P74-ROX-040717	4/7/2017		38.92	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P74-ROX-071217	7/12/2017		38.08	NE	<0.001	0.0017	<0.001	<0.001	<0.025	<0.001	0.0012	<0.001	<0 001	0 0018	<0 001	0.011	0.0053	0.0048 J	0.00066 J	0.0055 J
	P74-ROX-101617	10/16/2017		38.57	NE	<0.001	0.0051	<0.001	0.00053 J	<0.025	0 079	0.0021	0.00088 J	<0 001	0 0033	<0 001	0.018	0 009	0.014	0 0014 J	0.015
	P74-ROX-01108	1/10/2018		40.25	NE	<0.005	0.011	<0.005	<0.005	<0.13	0.64	<0 005	<0.005	<0 005	0 0081	<0 005	0.013	0.0061	0.025	<0.025	0 027 J
	P74-ROX-041018	4/10/2018	43.83 - 68.83	40.69	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P74-ROX-041018-DUP	4/10/2018		40.69	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P74-ROX-071118	7/11/2018		42.22	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0013	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P74-ROX-101618	10/16/2018	43.83 - 68.83	42.18	NE	<0.001	0.0019	<0.001	<0.001	<0.025	0 022	0.0014	<0.001	<0 001	0 0023	<0 001	0 0053	0.0014	0.0025 J	<0.005	0 003 J

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs														
						1,2-Dichloropropane	Ethylbenzene	Ethyl methacrylate	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	1,1,2,2-Tetrachloroethane	Toluene	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylenes	o-Xylenes	Xylenes (total)
Screening Values (mg/L)						0.005 [2]	0.7 [1]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	0.00043 [3]	1.0 [1]	0.005 [1]		0.07 [3]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)														
P-93A	P-93A-ROX-011216	1/12/2016	43.07 - 53.07	43.73	NE	<2	<2	<2	<2	<50	<2	<2	<2	<2	<2	<2	<2	<2	<10	<10	<10
	P-93A-ROX-011216-DUP	1/12/2016		43.73	NE	<2	<2	<2	<2	<50	<2	<2	<2	<2	<2	<2	<2	<2	<10	<10	<10
	P93A-ROX-041916	4/19/2016		43.08	NE	<0 25	<0.25	<0 25	<0.25	<6.3	<0.25	<0.25	<0.25	<0.25	<0 25	<0.25	<0 25	<0.25	<1.3	<1 3	<1.3
	P93A-ROX-041916-DUP	4/19/2016		43.08	NE	<0 25	<0.25	<0 25	<0.25	<6.3	<0.25	<0.25	<0.25	<0.25	<0 25	<0.25	<0 25	<0.25	<1.3	<1 3	<1.3
	P93A-ROX-071316	7/13/2016		42.20	NE	<0.1	<0.1	<0.1	<0.1	<2.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0 5	<1
	P93A-ROX-071316-DUP	7/13/2016		42.20	NE	<0.1	<0.1	<0.1	<0.1	<2.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0 5	<1
	P93A-ROX-101816	10/18/2016		41.35	NE	<0 02	<0.02	<0 02	<0.02	<0.5	<0.02	<0.02	<0.02	<0.02	<0 02	<0.02	<0 02	<0.02	<0.1	<0.1	<0.2
	P93A-ROX-101816-DUP	10/18/2016		41.35	NE	<0 02	<0.02	<0 02	<0.02	<0.5	<0.02	<0.02	<0.02	<0.02	<0 02	<0.02	<0 02	<0.02	<0.1	<0.1	<0.2
	P93A-ROX-011217	1/12/2017		41.04	NE	<0.005	<0 005	<0.005	<0.005	<0.13	<0.005	<0 005	<0.005	<0 005	<0.005	<0 005	<0.005	<0.005	<0.025	<0.025	<0.05
	P93A-ROX-011217-DUP	1/12/2017		41.04	NE	<0.005	<0 005	<0.005	<0.005	<0.13	<0.005	<0 005	<0.005	<0 005	<0.005	<0 005	<0.005	<0.005	<0.025	<0.025	<0.05
	P93A-ROX-040717	4/7/2017		41.26	NE	<0.002	<0 002	<0.002	<0.002	<0 05	<0.002	<0 002	<0.002	<0 002	<0.002	<0 002	<0.002	<0.002	<0 01	<0.01	<0.02
	P93A-ROX-040717-DUP	4/7/2017		41.26	NE	<0.002	<0 002	<0.002	<0.002	<0 05	<0.002	<0 002	<0.002	<0 002	<0.002	<0 002	<0.002	<0.002	<0 01	<0.01	<0.02
	P93A-ROX-071317	7/13/2017		40.11	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P93A-ROX-101117	10/11/2017		40.87	NE	<0.005	<0 005	<0.005	<0.005	<0.13	<0.005	<0 005	<0.005	<0 005	<0.005	<0 005	<0.005	<0.005	<0.025	<0.025	<0.05
	P93A-ROX-011118	1/11/2018		42.71	NE	<0 02	<0.02	<0 02	<0.02	<0.5	<0.02	<0.02	<0.02	<0.02	<0 02	<0.02	<0 02	<0.02	<0.1	<0.1	<0.2
	P93A-ROX-011118-DUP	1/11/2018		42.71	NE	<0 02	<0.02	<0 02	<0.02	<0.5	<0.02	<0.02	<0.02	<0.02	<0 02	<0.02	<0 02	<0.02	<0.1	<0.1	<0.2
	P93A-ROX-041118	4/11/2018		43.48	NE	<0 25	<0.25	<0 25	<0.25	<6.3	<0.25	<0.25	<0.25	<0.25	<0 25	<0.25	<0 25	<0.25	<1.3	<1 3	<2.5
	P93A-ROX-052218	5/22/2018		43.48	NE	<0.2	<0 2	<0.2	<0 2	<5	<0 2	<0.2	<0.2	<0.2	<0.2	<0 2	<0.2	<0 2	<1	<1	<2
	P93A-ROX-071218	7/12/2018		44.03	NE	<0.2	<0 2	<0.2	<0 2	<5	<0 2	<0.2	<0.2	<0.2	<0.2	<0 2	<0.2	<0 2	<1	<1	<2
	P93A-ROX-101618	10/16/2018	43.07 - 53.07	44.05	NE	<0.2	<0 2	<0.2	<0 2	<5	<0 2	<0.2	<0.2	<0.2	<0.2	<0 2	<0.2	<0 2	<1	<1	<2
P-93B	P93B-ROX-011316	1/13/2016	74.60 - 76.60	44.96	NE	<1	<1	<1	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<5
	P93B-ROX-041916	4/19/2016		44.54	NE	<1	<1	<1	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<5
	P93B-ROX-071516	7/15/2016		43.65	NE	<1	<1	<1	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<10
	P93B-ROX-101816	10/18/2016		42.73	NE	<0.5	<0 5	<0.5	<0 5	<13	<0 5	<0.5	<0.5	<0.5	<0 5	<0.5	<0.5	<0 5	<2.5	<2 5	<5
	P93B-ROX-011017	1/10/2017		42.41	NE	<0.5	<0 5	<0.5	<0 5	<13	<0 5	<0.5	<0.5	<0.5	<0 5	<0.5	<0.5	<0 5	<2.5	<2 5	<5
	P93B-ROX-011017-DUP	1/10/2017		42.41	NE	<0.5	<0 5	<0.5	<0 5	<13	<0 5	<0.5	<0.5	<0.5	<0 5	<0.5	<0.5	<0 5	<2.5	<2 5	<5
	P93B-ROX-040617	4/6/2017		42.59	NE	<0.5	<0 5	<0.5	<0 5	<13	<0 5	<0.5	<0.5	<0.5	<0 5	<0.5	<0.5	<0 5	<2.5	<2 5	<5
	P93B-ROX-07117	7/11/2017		41.59	NE	<1	<1	<1	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<10
	P93B-ROX-07117-DUP	7/11/2017		41.59	NE	<1	<1	<1	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<10
	P93B-ROX-101117	10/11/2017		42.21	NE	<1	<1	<1	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<10
	P93B-ROX-101117-DUP	10/11/2017		42.21	NE	<1	<1	<1	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<10
	P93B-ROX-011518	1/15/2018		44.42	NE	<2.5	<2 5	<2.5	<2.5	<63	<2 5	<2.5	<2.5	<2.5	<2.5	<2 5	<2.5	<2 5	<13	<13	<25
	P93B-ROX-041218	4/12/2018	74.88 - 76.88	44.75	NE	<1	<1	<1	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<10
	P93B-ROX-041218-DUP	4/12/2018		44.75	NE	<1	<1	<1	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<10
	P93B-ROX-071218	7/12/2018		45.36	NE	<1	<1	<1	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<10
	P93B-ROX-071218-DUP	7/12/2018		45.36	NE	<1	<1	<1	<1	<25	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<10
	P93B-ROX-101518	10/15/2018	74.88 - 76.88	45.64	NE	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<50 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<10 UJ	<10 UJ	<20 UJ
	P93B-ROX-101518-DUP	10/15/2018		45.64	NE	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<50 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<10 UJ	<10 UJ	<20 UJ
P-93C	P-93C-ROX-010816	1/8/2016	92.47 - 97.47	44.68	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0021	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	P93C-ROX-041816	4/18/2016		44.06	NE	<0.001	0.00085 J	<0.001	<0.001	<0.025	0.00099 J	<0 001	<0.001	<0 001	<0.001	<0 001	0 0011	<0.001	<0.005	<0.005	0.00067 J
	P93C-ROX-071216	7/12/2016		43.37	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0029	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P93C-ROX-101816	10/18/2016		42.49	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0026	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P93C-ROX-011117	1/11/2017		42.20	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0054	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P93C-ROX-040517	4/5/2017		42.19	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0043	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P93C-ROX-071217	7/12/2017		41.30	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0041	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P93C-ROX-101117	10/11/2017		42.04	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0048	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P93C-ROX-011118	1/11/2018		43.95	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0045	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P93C-ROX-041118	4/11/2018	92.88 - 97.88	44.69	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0035	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P93C-ROX-071218	7/12/2018		45.22	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0042	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P93C-ROX-101518	10/15/2018	92.88 - 97.88	45.31	NE	<0 01	<0.01	<0 01	<0.01	<0 25	0 0086 J	<0.01	<0.01	<0.01	<0 01	<0.01	<0 01	<0.01	<0 05	<0.05	<0.1

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						VOCs														
						1,2-Dichloropropane	Ethylbenzene	Ethyl methacrylate	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	1,1,2,2-Tetrachloroethane	Toluene	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylenes	o-Xylenes	Xylenes (total)
Screening Values (mg/L)						0.005 [2]	0.7 [1]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	0.00043 [3]	1.0 [1]	0.005 [1]		0.07 [3]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)														
P-93D	P93D-ROX-011316	1/13/2016	125.75 - 127.75	45.10	NE	<0.1	<0.1	<0.1	<0.1	<2.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0 5	<0.5
	P93D-ROX-041916	4/19/2016		44.61	NE	<0 05	<0.05	<0 05	<0.05	<1.3	<0.05	<0.05	<0.05	<0.05	<0 05	<0.05	<0 05	<0.05	<0 25	<0.25	<0.25
	P93D-ROX-071516	7/15/2016		43.83	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0017	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P93D-ROX-101716	10/17/2016		42.78	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0026	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P93D-ROX-011017	1/10/2017		42.59	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0023	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P93D-ROX-040617	4/6/2017		42.80	NE	0.001	<0 001	<0.001	<0.001	<0.025	0 002	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P93D-ROX-07117	7/11/2017		41.64	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0041	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P93D-ROX-101117	10/11/2017		42.42	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0034	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P93D-ROX-011718	1/17/2018		44.80	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0023	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P93D-ROX-041218	4/12/2018		45.95	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0 002	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P93D-ROX-071218	7/12/2018		45.57	NE	0 0038	<0 001	<0.001	<0.001	<0.025	0.0021	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P93D-ROX-101518	10/15/2018	125.75 - 127.75	45.70	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0031	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
P-114R	P114R-ROX-010716	1/7/2016	23.01 - 33.01	25.62	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.00091 J	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	P114R-ROX-040816	4/8/2016		25.65	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.00084 J	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0 005
	P114R-ROX-070816	7/8/2016		24.95	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.00082 J	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P114R-ROX-100716	10/7/2016		23.89	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P114R-ROX-010617	1/6/2017		24.81	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	0.00098 J	<0.001	<0.001	<0.005	<0.005	<0.01
	P114R-ROX-041317	4/13/2017		25.05	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.00085 J	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P114R-ROX-071117	7/11/2017		22.45	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.00082 J	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P114R-ROX-101017	10/10/2017		24.45	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.00096 J	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P114R-ROX-010918	1/9/2018		26.37	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0015	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P114R-ROX-040618	4/6/2018		26.76	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0021	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P114R-ROX-070918	7/9/2018		26.38	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.0024	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P114R-ROX-101118	10/11/2018	23.01 - 33.01	26.27	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0.00082 J	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	P114R-ROX-101118-DUP	10/11/2018		26.27	NE	<0.001	<0 001	<0.001	<0.001	<0.025	0 0009 J	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
ROST-3-MW	ROST3MW-ROX-011416	1/14/2016	37.81 - 47.81	40.30	NE	<0.001	0.027	<0.001	0.0016	<0.025	<0.001	0.0071	0.0018	<0 001	0 0016	<0 001	0.008	0.0015	0 04	0.0077	0.047
	ROST3MW-ROX-041216	4/12/2016		39.69	NE	<0.001	0.0011	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	0.00064 J
	ROST3MW-ROX-071416	7/14/2016		38.70	NE	<0.001	0.0042	<0.001	0.00055 J	<0.025	<0.001	0.0035	<0.001	<0 001	0 0015	<0 001	0 0029	<0.001	0.0042 J	0 0017 J	0.0058 J
	ROST3MW-ROX-101316	10/13/2016		38.19	NE	<0.001	0.036	<0.001	0.0021	<0.025	<0.001	0.0078	0.0031	<0 001	0 0016	<0 001	0.022	0.0032	0.044	0.0083	0.053
	ROST3MW-ROX-011117	1/11/2017		37.50	NE	<0.001	0.0058	<0.001	0.00089 J	<0.025	<0.001	0.0015	0.0014	<0 001	<0.001	<0 001	0 0026	<0.001	0.0016 J	<0.005	0.0021 J
	ROST3MW-ROX-041417	4/14/2017		38.16	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	ROST3MW-ROX-071117	7/11/2017		36.61	NE	<0.001	0.025	<0.001	0.0023	0.0079 J	<0.001	0.0059	0.0035	<0 001	0 0012	<0 001	0.018	0.0021	0.022	0 0042 J	0.026
	ROST3MW-ROX-101217	10/12/2017		38.05	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	ROST3MW-ROX-112017-R	11/20/2017		38.05	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	ROST3MW-ROX-011518	1/15/2018		40.00	NE																
	ROST3MW-ROX-022618	2/26/2018		40.00	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	ROST3MW-ROX-040618	4/6/2018		39.98	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	ROST3MW-ROX-070518	7/5/2018		40.74	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	ROST3MW-ROX-100918	10/9/2018	37.81 - 47.81	40.72	NE	<0.001	<0 001	<0 01	<0.001	<0 01	<0.001	0.00093 J	<0.001	<0 001	<0.001	<0 001	0 00036 J	<0.001	<0.002	<0.001	<0 003
ROST-4-PZ(C)	ROST4PZC-ROX-011516	1/15/2016	34.95 - 44.95	40.54	NE	<0.002	0.036	<0.002	0.0044	<0 05	<0.002	0.071	0 006	<0 002	0.03	<0 002	0.037	0 004	0.17	0.02	0.19
	ROST4PZC-ROX-041316	4/13/2016		39.61	NE	<0.002	0.067	<0.002	0.0073	<0 05	<0.002	0.12	0.01	<0 002	0.039	<0 002	0.063	0 013	0.49	0 014	0 51
	ROST4PZC-ROX-071516	7/15/2016		38.93	NE	<0.002	0.047	<0.002	0.0089	<0 05	<0.002	0.1	0 012	<0 002	0.029	<0 002	0.065	0 018	0 27	0 0065 J	0 28
	ROST4PZC-ROX-101316	10/13/2016		38.45	NE	<0.002	0.089	<0.002	0.0049	<0 05	<0.002	0.087	0.0074	<0 002	0.023	<0 002	0.039	0.01	0 26	0 0048 J	0 27
	ROST4PZC-ROX-011217	1/12/2017		37.88	NE	<0.001	0.061	<0.001	0.0064	<0.025	<0.001	0.081	0.0098	<0 001	0.017	0.00055 J	0.048	0 011	0.13	0.0059	0.14
	ROST4PZC-ROX-041717	4/17/2017		38.24	NE	<0.002	0.088	<0.002	0.0073	<0 05	<0.002	0.12	0 012	<0 002	0.028	<0 002	0.074	0 013	0.3	0.007 J	0 31
	ROST4PZC-ROX-071217	7/12/2017		37.20	NE	<0.001	0.13	<0.001	0.0064	<0.025	<0.001	0.098	0.0097	<0 001	0.017	<0 001	0.044	0 014	0 24	0 0035 J	0 24
	ROST4PZC-ROX-101217	10/12/2017		36.88	NE	<0.001	0.086	<0.001	0.0044	<0.025	<0.001	0.092	0.0061	<0 001	0.013	<0 001	0.041	0 012	0.16	0 0029 J	0.16
	ROST4PZC-ROX-011518	1/15/2018		39.04	NE	<0.001	0.00062 J	<0.001	0.0017	<0.025	<0.001	0.014	0.0035	<0 001	<0.001	<0 001	0.014	<0.001	<0.005	<0.005	<0.01
	ROST4PZC-ROX-040918	4/9/2018		40.13	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	0 0008 J	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	ROST4PZC-ROX-070918	7/9/2018		40.87	NE	<0.001	0.0011	<0.001	<0.001	<0.025	<0.001	<0 001	0.00084 J	<0 001	<0.001	<0 001	0.001	<0.001	<0.005	<0.005	<0.01
	ROST4PZC-ROX-101218	10/12/2018	34.95 - 44.95	40.91	NE	<0.001	0.061	<0.001	0.0016	<0.025	<0.001	0.031	0.0021	<0 001	0.011	<0 001	0 0069	<0.001	0.055	0.00099 J	0.056

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs														
						1,2-Dichloropropane	Ethylbenzene	Ethyl methacrylate	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	1,1,2,2-Tetrachloroethane	Toluene	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylenes	o-Xylenes	Xylenes (total)
Screening Values (mg/L)						0.005 [2]	0.7 [1]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	0.00043 [3]	1.0 [1]	0.005 [1]		0.07 [3]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)														
ROST-4-PZ(E)	ROST-4-PZ(E)-ROX-101317	10/13/2017	34.75 - 44.75	35.98	NE	<0.005	0.27	<0.005	0.0084	<0.13	<0.005	0.091	0.017	<0 005	0.041	<0 005	0.1	0.022	0.41	0 067	0.47
	ROST4PZE-ROX-011518	1/15/2018		38.07	NE	<0.002	0.043	<0.002	0.0096	<0 05	<0.002	0.098	0 009	<0 002	0.022	<0 002	0.12	0 027	0 29	0 063	0 35
	ROST4PZE-ROX-040918	4/9/2018		38.93	NE	<0.001	0.0025	<0.001	0.0018	<0.025	<0.001	0.023	0 001	<0 001	0 0027	<0 001	0.032	0.0087	0.041	0 015	0.056
	ROST4PZE-ROX-071018	7/10/2018		39.52	NE	<0.001	0.0069	<0.001	0.0023	<0.025	<0.001	0.015	0.0022	<0 001	0 0027	<0 001	0.032	0.0081	0 03	0 013	0.044
	ROST4PZE-ROX-101518	10/15/2018	34.75 - 44.75	39.76	NE	<0 001 UJ	<0.001 UJ	<0 001 UJ	<0.001 UJ	<0.025 UJ	<0.001 UJ	0.0015	<0 001 UJ	<0.001 UJ	<0 001 UJ	<0.001 UJ	0 0059	0.0018	0.0028 J	0 0014 J	0.0042 J
ROST-4-PZ(G)	ROST4PZG-ROX-101217	10/12/2017	34.28 - 44.28	36.58	NE	<0.001	0.0024	<0.001	0.0014	0.0064 J	<0.001	<0 001	0.0013	<0 001	<0.001	<0 001	<0.001	<0.001	0.0018 J	<0.005	0.0021 J
	ROST4PZG-ROX-01118	1/11/2018		38.95	NE	<0.001	0.0005 J	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	ROST4PZG-ROX-040918	4/9/2018		40.07	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	ROST4PZG-ROX-070918	7/9/2018		40.81	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
	ROST4PZG-ROX-101218	10/12/2018	34.28 - 44.28	40.93	NE	<0.001	<0 001	<0.001	<0.001	<0.025	<0.001	<0 001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0.005	<0.005	<0.01
T-12	T12-ROX-011216	1/12/2016	46.83 - 72.83	44.13	NE	<0 01	0.098	<0 01	0 015	<0 25	0 037	0.1	0 019	<0.01	0.084	<0.01	0.13	0 014	0.45	0 0074 J	0.46
	T12-ROX-041516	4/15/2016		42.07	NE	<0.005	0.023	<0.005	0 015	<0.13	<0.005	0.064	0 021	<0 005	0.053	<0 005	0.053	0.0094	0 21	0 0045 J	0 22
	T12-ROX-071216	7/12/2016		41.50	NE	<0 01	0.15	<0 01	0 026	<0 25	<0.01	0.058	0.04	<0.01	0.064	<0.01	0 051	0 011	0.16	0 0079 J	0.16
	T12-ROX-101716	10/17/2016		41.19	NE	<0 01	0.12	<0 01	0 014	<0 25	0 023	0 09	0 022	<0.01	0.15	<0.01	0.063	0 0073 J	0 37	0 0082 J	0 38
	T12-ROX-011217	1/12/2017		40.70	NE	<0 01	0.051	<0 01	0 012	<0 25	0 041	0.054	0.02	<0.01	0.065	<0.01	0.046	0.009 J	0 22	0.008 J	0 23
	T12-ROX-040617	4/6/2017		41.18	NE	<0 01	0.02	<0 01	0 0072 J	<0 25	0 029	0.016	0 012	<0.01	0.032	<0.01	0.015	<0.01	0.066	<0.05	0 069 J
	T12-ROX-071317	7/13/2017		40.10	NE	<0 01	0.053	<0 01	0 0064 J	<0 25	0 024	0.061	0 0091 J	<0.01	0.08	<0.01	0.033	<0.01	0.2	<0.05	0 21
	T12-ROX-101317	10/13/2017		39.48	NE	<0 01	0.025	<0 01	0 012	<0 25	0 023	0 05	0 023	<0.01	0.055	<0.01	0.012	0.01	0.099	0 0089 J	0.11
	T12-ROX-011018	1/10/2018		42.14	NE	<0 01	0.054	<0 01	0 012	<0 25	0 029	0.084	0 012	<0.01	0.085	<0.01	0.041	0 011	0 34	0.008 J	0 35
	T12-ROX-041218	4/12/2018		43.03	NE	<0 01	0.095	<0 01	0 018	<0 25	0 016	0.087	0 022	<0.01	0.085	<0.01	0.047	0 0074 J	0 34	0.011 J	0 35
	T12-ROX-071118	7/11/2018		44.12	NE	<0 01	0.12	<0 01	0.03	<0 25	0 012	0.082	0 055	<0.01	0.097	<0.01	0.061	0 012	0 39	0.013 J	0.4
	T12-ROX-101618	10/16/2018	46.83 - 72.83	43.90	NE	<0 01	0.1	<0 01	0 034	<0 25	0 0086 J	0.11	0 056	<0.01	0.085	<0.01	0.06	0 016	0 33	0.014 J	0 35

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethoxy)methane	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	Diethyl phthalate	2,4-Dimethylphenol	Di-n-butyl phthalate
Screening Values (mg/L)						0.42 [1]	0.21 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]		0.006 [2]	1.4 [2]	0.012 [1]	0.0003 [1]	0.007 [3]	5.6 [1]	0.14 [2]	0.7 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																		
MW-01	MW1-ROX-010816	1/8/2016	48.80 - 58 80	40 93	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW1-ROX-041216	4/12/2016		40 35	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	0.011	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW1-ROX-071416	7/14/2016		39.43	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01 UJ	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW1-ROX-101316	10/13/2016		38.79	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.03 UJ	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW-1-ROX-011217	1/12/2017		38 35	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.028	<0.0093	<0 0093	<0.0093	<0 0093	<0.00019	<0.00019	<0.0093	<0.0093	<0.0093	<0 0093
	MW1-ROX-041717	4/17/2017		38 58	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW1-ROX-071117	7/11/2017		37 24	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW1-ROX-100617	10/6/2017		37 63	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW1-ROX-010518	1/5/2018		40 06	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0 0097 UJ	<0 0097	<0.0097	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097
	MW1-ROX-040618	4/6/2018		40 82	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002 UJ	<0.01	<0 01	<0.01	<0 01
	MW1-ROX-070618	7/6/2018		41.40	NE	<0.00022	<0 00022	<0 00022	<0.00022	<0.00022	<0.00022	<0 00022	<0 00022	<0.032	<0 011	<0.011	<0.011	<0.011	<0.00022	<0.00022	<0 011	<0.011	<0 011	<0.011
	MW1-ROX-101018	10/10/2018	48.80 - 58 80	41.17	NE	<0.000095	<0.000095	<0.000095	<0 000095	<0.000095	<0 000095	<0.000095	<0.000095	<0 048 UJ	<0 048	<0 0095	<0.0095	<0 0095	<0.000095	<0 000095	<0.0095	<0.0095	<0.0095	<0 0095
MW-02	MW2-ROX-011416	1/14/2016	49.87 - 59 87	42 04	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW2-ROX-041316	4/13/2016		41 59	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	0.0044 J	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW2-ROX-071416	7/14/2016		40.79	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01 UJ	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW2-ROX101316	10/13/2016		40.10	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0 029 UJ	<0.0097	<0 0097	<0.0097	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097
	MW2-ROX-011217	1/12/2017		39 58	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.028	<0.0093	<0 0093	<0.0093	<0 0093	<0.00019	<0.00019	<0.0093	<0.0093	<0.0093	<0 0093
	MW2-ROX-041717	4/17/2017		39 69	NE	<0.00021	<0 00021	<0 00021	<0.00021	<0.00021	<0.00021	<0 00021	<0 00021	<0.031	<0.01	<0.01	<0.0035 U	<0.01	<0.00021	<0.00021	<0.01	<0 01	<0.01	<0 01
	MW2-ROX-071217	7/12/2017		38 66	NE	<0.00039	<0 00039	<0 00039	<0.00039	<0.00039	<0.00039	<0 00039	<0 00039	<0.029	<0.0097	<0 0097	<0.0097	<0 0097	<0.00039	<0.00039	<0.0097	<0.0097	<0.0097	<0 0097
	MW2-ROX-101217	10/12/2017		39 03	NE	<0.00019	<0 00019	<0 00019	<0.00095 UJ	<0 00095 UJ	<0.00095 UJ	<0.00095 UJ	<0.00095 UJ	<0 029 UJ	<0.0095	<0 0095	<0.0095	<0 0095	<0 00095 UJ	<0 00095 UJ	<0.0095	<0.0095	0.0059 J	<0 0095
	MW2-ROX-011118	1/11/2018		41 24	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.000044 U	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0.0095 UJ	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW2-ROX-040918	4/9/2018		42.10	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01 UJ	<0 01	0.013	<0 01
	MW2ROX-071018	7/10/2018		42 59	NE	<0.00022	<0 00022	<0 00022	<0.00022	<0.00022	<0.00022	<0 00022	<0 00022	<0.034	<0 011	<0.011	<0.0083 U	<0.011	<0.00022	<0.00022	<0 011	<0.011	<0 011	<0.011
	MW2-ROX-101218	10/12/2018	49.87 - 59 87	42.71	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 029 UJ	<0 0098 UJ	<0.0098 UJ	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	MW2-ROX-101218-DUP	10/12/2018		42.71	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0 029 UJ	<0 0097 UJ	<0.0097 UJ	<0.0097	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097
MW-03	MW3-ROX-010716	1/7/2016	34.67 - 44 67	27 92	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW3-ROX-040616	4/6/2016		27 07	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW3-ROX-070816	7/8/2016		26 51	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002 UJ	<0.01	<0 01	<0.01	<0 01
	MW3-ROX100716	10/7/2016		25.79	NE	<0.0002	<0.0002 UJ	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW3-ROX-010617	1/6/2017		25 65	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0 028 UJ	<0.0093	<0 0093	<0.0093	<0 0093	<0.00019	<0.00019	<0.0093	<0.0093 UJ	<0.0093	<0 0093
	MW3-ROX-041117	4/11/2017		26.13	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0097	<0 0097	<0.0097	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097
	MW3-ROX-071217	7/12/2017		24 25	NE	<0.0004	<0.0004	<0.0004	<0.0004	<0 0004	<0.0004	<0.0004	<0.0004	<0 03	<0.0099	<0 0099	<0.0099	<0 0099	<0 0004	<0.0004	<0.0099	<0.0099	<0.0099	<0 0099
	MW3-ROX-100517	10/5/2017		25 02	NE	<0.00021	<0 00021	<0 00021	<0.00021	<0.00021	<0.00021	<0 00021	<0 00021	<0.032	<0 011	<0.011	<0.011	<0.011	<0.00021	<0.00021	<0 011	<0.011	<0 011	<0.011
	MW3-ROX-010818	1/8/2018		27 28	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW3-ROX-040518	4/5/2018		27 98	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	MW3-ROX-070618	7/6/2018		28 30	NE	<0.00021	<0 00021	<0 00021	<0.00021	<0.00021	<0.00021	<0 00021	<0 00021	<0.032	<0 011	<0.011	<0.011	<0.011	<0.00021	<0.00021	<0 011	<0.011	<0 011	<0.011
	MW3-ROX-100518	10/5/2018	34.67 - 44 67	28.18	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	0 000062 J	<0.0098	<0.0098	<0.0098	<0 0098
MW-04	MW4-ROX-011316	1/13/2016	45.06 - 55 06	39.10	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0 0002 UJ	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW4-ROX-041916	4/19/2016		38 50	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW4-ROX-071416	7/14/2016		37 85	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01 UJ	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW4-ROX-100616	10/6/2016		37.18	NE	<0.0002	<0.0002 UJ	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW4-ROX-010917	1/9/2017		36 84	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0097	<0 0097	0.013	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097
	MW4-ROX-041017	4/10/2017		37 08	NE	<0.0002	<0.0002	<0.0002	0 000047 J	<0 0002	<0.0002	<0.0002	<0.0002	<0.031	<0.01	<0.01	<0.01	<0.01	<0 0002	0 000051 J	<0.01	<0 01	<0.01	<0 01
	MW4-ROX-071017	7/10/2017		35 68	NE	<0.00019	<0 00019	<0 00019	<0.00019	0.000039 J	0 000051 J	<0 00024 U	<0 00019	<0.029	<0.0096	<0 0096	0.039 J	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	MW4-ROX-100517	10/5/2017		36 32	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0096	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	MW-4-ROX-010918	1/9/2018		38 65	NE	<0.00019	<0 00019	<0 00019	<0.00019	0.000048 J	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW4-ROX-040918	4/9/2018		39 32	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01 UJ	<0 01	<0.01	<0 01
	MW4-ROX-071018	7/10/2018		39 60	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0 0098	<0.0036 U	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	MW4-ROX-100818	10/8/2018	45.06 - 55 06	39 61	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0097	<0 0097	<0.0097	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs															
						Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethoxy)methane	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	Diethyl phthalate	2,4-Dimethylphenol	Di-n-butyl phthalate
Screening Values (mg/L)						0.42 [1]	0.21 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]		0.006 [2]	1.4 [2]	0.012 [1]	0.0003 [1]	0.007 [3]	5.6 [1]	0.14 [2]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																		
MW-05	MW5-ROX-011416	1/14/2016	33.97 - 43 97	27.19	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW5-ROX-040616	4/6/2016		26 80	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW5-ROX-070816	7/8/2016		26 28	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002 UJ	<0.01	<0 01	<0.01	<0 01
	MW5-ROX-101016	10/10/2016		25.47	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 029 UJ	<0 0098 UJ	0.00073 J	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098 UJ	<0 0098 UJ	<0 0098
	MW5-ROX-010617	1/6/2017		25 33	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0 028 UJ	<0.0093	<0 0093	<0.0093	<0 0093	<0.00019	<0.00019	<0.0093	<0.0093 UJ	<0.0093	<0 0093
	MW5-ROX-041217	4/12/2017		25 69	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0096	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	MW5-ROX-071217	7/12/2017		23 96	NE	<0.0004	<0.0004	<0.0004	<0.0004	<0 0004	<0.0004	<0.0004	<0.0004	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0004	<0.0004	<0.01	<0 01	<0.01	<0 01
	MW5-ROX-101217	10/12/2017		25 04	NE	<0.00019	<0 00019	<0 00096	<0.00096	<0.00096	<0.00096	<0 00096	<0 00096	<0 029 UJ	<0.0096	<0 0096	<0.0096	<0 0096	<0.00096	<0.00096	<0.0096	<0.0096	<0.0096	<0 0096
	MW5-ROX-011118	1/11/2018		26 98	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0.0095 UJ	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW5-ROX-040918	4/9/2018		27.78	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0099	<0 0099	<0.0099	<0 0099	<0 0002	<0.0002	<0 0099 UJ	<0.0099	<0.0099	<0 0099
	MW5-ROX-071018	7/10/2018		27 87	NE	<0.00022	<0 00022	<0 00022	<0.00022	<0.00022	<0.00022	<0 00022	<0 00022	<0.033	<0 011	<0.011	<0.0029 U	<0.011	<0.00022	<0.00022	<0 011	<0.011	<0 011	<0.011
	MW5-ROX-101218	10/12/2018	33.97 - 43 97	27 95	NE	<0.00022	<0 00022	<0 00022	<0.00022	<0.00022	<0.00022	<0 00022	<0 00022	<0 032 UJ	<0.011 UJ	<0.011 UJ	<0.011	<0.011	<0.00022	<0.00022	<0 011	<0.011	<0 011	<0.011
MW-06A	MW6A-ROX-011116	1/11/2016	34.83 - 44 83	29 36	NE	0.00017 J	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW6A-ROX-040716	4/7/2016		29 07	NE	0.00012 J	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW6A-ROX-071116	7/11/2016		28.45	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW6A-ROX-101116	10/11/2016		27 51	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01 UJ	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW6A-ROX-011017	1/10/2017		27.43	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.028	<0.0093	<0 0093	<0.0093	<0 0093	<0.00019	<0.00019	<0.0093	<0.0093	<0.0093	<0 0093
	MW6A-ROX-041217	4/12/2017		27 69	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0096	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	MW6A-ROX-071117	7/11/2017		26.16	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.0034 U	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW6A-ROX-100417	10/4/2017		27 09	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0096	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	MW6A-ROX-010518	1/5/2018		29 22	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0 0095 UJ	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW6A-ROX-040518	4/5/2018	33.85 - 43 85	29 83	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW6A-ROX-070518	7/5/2018		30.10	NE	<0.00021	<0 00021	<0 00021	<0.00021	<0.001	<0 001	<0.001	<0.001	<0.031	<0.01	<0.01	<0.0075 U	<0.01	<0.000045 U	<0.001	<0.01	<0 01	<0.01	<0 01
	MW6A-ROX-100418	10/4/2018	33.85 - 43 85	30.10	NE	<0.0002	<0.0002	<0.0002	0 000045 J	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0099	<0 0099	<0.0028 U	<0 0099	0.000072 J	<0.0002	<0.0099	<0.0099	<0.0099	<0 0099
MW-06B	MW6B-ROX-011116	1/11/2016	64.05 - 69 05	29.41	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW6B-ROX-040716	4/7/2016		29.11	NE	0.00005 J	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW6B-ROX-071116	7/11/2016		28.49	NE	<0.0002	<0.0002	<0.0002	0 000054 J	0.000082 J	0.00014 J	0.000079 J	0 00013 J	<0 03	<0.01	<0.01	<0.01	<0.01	0.00004 J	0 000069 J	<0.01	<0 01	<0.01	<0 01
	MW6B-ROX-101116	10/11/2016		27 56	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01 UJ	<0.01	<0.0028 U	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW6B-ROX-011017	1/10/2017		27.49	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.028	<0.0093	<0 0093	0.0025 J	<0 0093	<0.00019	<0.00019	<0.0093	<0.0093	<0.0093	<0 0093
	MW6B-ROX-041217	4/12/2017		27.75	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW6B-ROX-071117	7/11/2017		26.18	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0099	<0 0099	<0 01 U	<0 0099	<0 0002	<0.0002	<0.0099	<0.0099	<0.0099	<0 0099
	MW6B-ROX-100417	10/4/2017		27.16	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0096	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	MW6B-ROX-010518	1/5/2018		29 25	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0 0095 UJ	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW6B-ROX-040518	4/5/2018		29 95	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0099	<0 0099	<0.0099	<0 0099	<0 0002	<0.0002	<0.0099	<0.0099	<0.0099	<0 0099
	MW6B-ROX-070518	7/5/2018		30.15	NE	<0.00022	<0 00022	<0 00022	<0.00022	<0.00022	<0.00022	<0 00022	<0 00022	<0.033	<0 011	<0.011	<0.0044 U	<0.011	<0.00022	<0.00022	<0 011	<0.011	<0 011	<0.011
	MW6B-ROX-100418	10/4/2018	64.05 - 69 05	30.13	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.0099	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
MW-06C	MW6C-ROX-010816	1/8/2016	84.95 - 89 95	29 31	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW6C-ROX-040716	4/7/2016		28 91	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW6C-ROX-071116	7/11/2016		28 30	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW6C-ROX-101016	10/10/2016		27 37	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0 0095 UJ	<0 0095	0.0026 J	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW6C-ROX-011017	1/10/2017		27 26	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.028	<0.0093	<0 0093	<0.0093	<0 0093	<0.00019	<0.00019	<0.0093	<0.0093	<0.0093	<0 0093
	MW6C-ROX-041217	4/12/2017		27 56	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW6C-ROX-071117	7/11/2017		25 99	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0029 U	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	MW6C-ROX-100417	10/4/2017		26 98	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.0068 U	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW6C-ROX-010818	1/8/2018		29 05	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW6C-ROX-040518	4/5/2018		29.74	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW6C-ROX-070518	7/5/2018		29 93	NE	<0.00021	<0 00021	<0 00021	<0.00021	<0.00021	<0.00021	<0 00021	<0 00021	<0.031	<0.01	<0.01	<0.0034 U	<0.01	<0.00021	<0.00021	<0.01	<0 01	<0.01	<0 01
	MW6C-ROX-070518-DUP	7/5/2018		29 93	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.031	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW6C-ROX-100418	10/4/2018	84.95 - 89 95	29 93	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs															
						Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethoxy)methane	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	Diethyl phthalate	2,4-Dimethylphenol	Di-n-butyl phthalate
Screening Values (mg/L)						0.42 [1]	0.21 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]		0.006 [2]	1.4 [2]	0.012 [1]	0.0003 [1]	0.007 [3]	5.6 [1]	0.14 [2]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																		
MW-06D	MW6D-ROX-010816	1/8/2016	104.72 - 109.72	29 59	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW6D-ROX-010816-DUP	1/8/2016		29 59	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW6D-ROX-040716	4/7/2016		28.76	NE	0.000058 J	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW6D-ROX-040716-DUP	4/7/2016		28.76	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW6D-ROX-071116	7/11/2016		28.16	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	0.013	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW6D-ROX-071116-DUP	7/11/2016		28.16	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW6D-ROX-101016	10/10/2016		27 26	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 029 UJ	<0 0098 UJ	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0.0098 UJ	<0 0098 UJ	<0 01
	MW6D-ROX-101016-DUP	10/10/2016		27 26	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 029 UJ	<0 0098 UJ	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0.0098 UJ	<0 0098 UJ	<0 01
	MW6D-ROX-011017	1/10/2017		27.14	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.028	<0.0093	<0 0093	<0.0093	<0 0093	<0.00019	<0.00019	<0.0093	<0.0093	<0.0093	<0 0093
	MW6D-ROX-011017-DUP	1/10/2017		27.14	NE	<0.00019	<0 00019	<0 00019	0 000062 J	0.000057 J	0.00007 J	0.000075 J	0.000072 J	<0.028	<0.0093	<0 0093	<0.0093	<0 0093	0.000068 J	0 000086 J	<0.0093	<0.0093	<0.0093	<0 0093
	MW6D-ROX-041217	4/12/2017		27.43	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0096	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	MW6D-ROX-041217-DUP	4/12/2017		27.43	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW6D-ROX-071117	7/11/2017		25 83	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	0.00016 J	<0.0002	<0 03	<0.0099	<0 0099	<0.0022 U	<0 0099	<0 0002	<0.0002	<0.0099	<0.0099	<0.0099	<0 0099
	MW6D-ROX-071117-DUP	7/11/2017		25 83	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0099	<0 0099	<0.0099	<0 0099	<0 0002	<0.0002	<0.0099	<0.0099	<0.0099	<0 0099
	MW6D-ROX-100517	10/5/2017		26 83	NE	<0.00021	<0 00021	<0 00021	<0.00021	<0.00021	<0.00021	<0 00021	<0 00021	<0.031	<0.01	<0.01	<0.01	<0.01	<0.00021	<0.00021	<0.01	<0 01	<0.01	<0 01
	MW6D-ROX-010818	1/8/2018		28 90	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	0.0029 J	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW6D-ROX-040518	4/5/2018		29 52	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0099	<0 0099	<0.0099	<0 0099	<0 0002	<0.0002	<0.0099	<0.0099	<0.0099	<0 0099
	MW6D-ROX-070518	7/5/2018		29.76	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.031	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW6D-ROX-100418	10/4/2018		29.76	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0099	<0 0099	<0.0099	<0 0099	<0 0002	<0.0002	<0.0099	<0.0099	<0.0099	<0 0099
MW-07	MW7-ROX-011416	1/14/2016	42.92 - 52 92	41 02	NE	0.00019 J	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	0.018 J	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	0.0035 J	<0 01
	MW7-ROX-011416-DUP	1/14/2016		41 02	NE	0 00023	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	0.022 J	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	0.0036 J	<0 01
	MW7-ROX-041916	4/19/2016		40 68	NE	0 00024	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	0.031	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	0.0048 J	<0 01
	MW7-ROX-041916-DUP	4/19/2016		40 68	NE	0 00021	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	0.021 J	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	0.0042 J	<0 01
	MW7-ROX-071416	7/14/2016		39 99	NE	0 00031	0.000058 J	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01 UJ	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW7-ROX-071416-DUP	7/14/2016		39 99	NE	0 00023	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01 UJ	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW7-ROX-100616	10/6/2016		39 24	NE	0.00017 J	<0.0002 UJ	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW7-ROX-100616-DUP	10/6/2016		39 24	NE	0.00016 J	<0.0002 UJ	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	0.0023 J	<0.01	<0 0002	<0.0002	<0.01	<0 01	0.0038 J	<0 01
	MW7-ROX-010917	1/9/2017		38 90	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW7-ROX-041017	4/10/2017		38 92	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	0.015 J *	<0.0097	<0 0097	<0.0097	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	0.0051 J	<0 0097
	MW7-ROX-041017-DUP	4/10/2017		38 92	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	0.016 J *	<0.0097	<0 0097	<0.0097	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	0 005 J	<0 0097
	MW7 ROX-071117	7/11/2017		37.79	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0097	<0 0097	<0.0097	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097
	MW7 ROX-071117-DUP	7/11/2017		37.79	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0097	<0 0097	<0.0077 U	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	0.0038 J	<0 0097
	MW7-ROX-100517	10/5/2017		38.45	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	0.0067 J	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	0.0069 J	<0 0096
	MW7-ROX-010918	1/9/2018		40 67	NE	0 00023	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0 029 UJ	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW7-ROX-040918	4/9/2018		41 38	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.03 UJ	<0 0099 UJ	<0 0099	<0.0099	<0 0099	<0 0002	<0.0002	<0 0099 UJ	<0.0099	<0 0099 UJ	<0 0099
	MW7-ROX-040918-DUP	4/9/2018		41 38	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01 UJ	<0 01	0.0056 J	<0 01
	MW7-ROX-071018	7/10/2018		41 64	NE	<0.00022	<0 00022	<0 00022	<0.00022	<0.00022	<0.00022	<0 00022	<0 00022	<0.033	<0 011	<0.011	<0.011	<0.011	<0.00022	<0.00022	<0 011	<0.011	<0 011	<0.011
	MW7-ROX-071018-DUP	7/10/2018		41 64	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	0.0087 J	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	MW7-ROX-100818	10/8/2018	42.92 - 52 92	41 69	NE	0 00025	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
MW-08	MW8-ROX-011416	1/14/2016	33.60 - 43 60	31.79	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	0 008 J	<0 01
	MW8-ROX-041916	4/19/2016		31.45	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	0.012	<0 01
	MW8-ROX-071416	7/14/2016		30 80	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01 UJ	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW8-ROX-100616	10/6/2016		29 99	NE	<0.0002	<0.0002 UJ	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	0.0035 J	<0 01
	MW8-ROX-010917	1/9/2017		29.79	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	0.0083 J
	MW8-ROX-041017	4/10/2017		30 02	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0 01	<0 0002	<0.0002	<0.01	<0 01	0.0061 J	<0 01
	MW8-ROX-071017	7/10/2017		28.48	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0096	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	0.0067 J	<0 0096
	MW8-ROX-100517	10/5/2017		29 28	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	0.0065 J	<0 0095
	MW8-ROX-100517-DUP	10/5/2017		29 28	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	0.012	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	0 004 J	<0 0096
	MW8-ROX-010918	1/9/2018		31 60	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	0 000046 J	<0 00019	0.000046 J	<0 029 UJ	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW8-ROX-040918	4/9/2018		32 27	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01 UJ	<0 01	0.0093 J	<0 01
	MW8-ROX-071018	7/10/2018		32.42	NE	<0.00021	<0 00021	<0 00021	<0.00021	<0.00021	<0.00021	<0 00021	<0 00021	<0.032	<0 011	<0.011	<0.0034 U	<0.011	<0.00021	<0.00021	<0 011	<0.011	0.0052 J	<0.011
	MW8-ROX-100818	10/8/2018	33.60 - 43 60	32.45	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	0 000061 J	0.000046 J	0.000054 J	<0.029	<0.0098	<0 0098	0.0062 J	<0 0098	<0 0002	0 000075 J	<0.0098	<0.0098	0.0048 J	<0 0098
	MW8-ROX-100818-DUP	10/8/2018		32.45	NE	0.00013 J	<0.0002	<0.0002	<0.00098	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0 0098	<0.0098	<0 0098	<0.00098	<0.0002	<0.0098	<0.0098	0.0046 J	<0 0098

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs															
						Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethoxy)methane	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	Diethyl phthalate	2,4-Dimethylphenol	Di-n-butyl phthalate
Screening Values (mg/L)						0.42 [1]	0.21 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]		0.006 [2]	1.4 [2]	0.012 [1]	0.0003 [1]	0.007 [3]	5.6 [1]	0.14 [2]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																		
MW-09	MW9-ROX-011316	1/13/2016	46.45 - 56.45	42 63	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0 0002 UJ	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW9-ROX-041216	4/12/2016		41 98	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW9-ROX-071316	7/13/2016		40 93	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW9-ROX-101316	10/13/2016		40 39	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.03 UJ	<0.01	<0.01	0.0052 J	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW9-ROX-011117	1/11/2017		40 06	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.028	<0.0093	<0 0093	<0.005 U	<0 0093	<0.00019	<0.00019	<0.0093	<0.0093	<0.0093	<0 0093
	MW9-ROX-041417	4/14/2017		40 67	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0096	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	MW9-ROX-071217	7/12/2017		38 86	NE	<0.00038	<0 00038	<0 00038	<0.00038	<0.00038	<0.00038	<0 00038	<0 00038	<0.029	<0.0096	<0 0096	<0.0096	<0 0096	<0.00038	<0.00038	<0.0096	<0.0096	<0.0096	<0 0096
	MW9-ROX-100917	10/9/2017		39.17	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0096	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	MW9-ROX-011018	1/10/2018		41.10	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.028	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW9-ROX-040618	4/6/2018	46.04 - 56 04	42 29	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0099	<0 0099	<0.0099	<0 0099	<0 0002	<0.0002 UJ	<0.0099	<0.0099	<0.0099	<0 0099
	MW9-ROX-070918	7/9/2018		42 82	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	MW9-ROX-101018	10/10/2018	46.04 - 56 04	42 88	NE	<0.000095	<0.000095	<0.000095	<0 000095	<0.000095	<0 000095	<0.000095	<0.000095	<0 048 UJ	<0 048	<0 0095	<0.0095	<0 0095	<0.000095	<0 000095	<0.0095	<0.0095	<0.0095	<0 0095
MW-10	MW10-ROX-011316	1/13/2016	44.43 - 54.43	42 53	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0 0002 UJ	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW10-ROX-041116	4/11/2016		41 88	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW10-ROX-071316	7/13/2016		41 00	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW10-ROX-101216	10/12/2016		40 27	NE	<0.00021	<0 00021	<0 00021	<0.00021	<0.00021	<0.00021	<0 00021	<0 00021	<0 032 UJ	<0 011	<0.011	<0.011	<0.011	<0.00021	<0.00021	<0 011	<0.011	<0.011	<0 011
	MW10-ROX-011117	1/11/2017		39 88	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.028	<0.0093	<0 0093	<0.0093	<0 0093	<0.00019	<0.00019	<0.0093	<0.0093	<0.0093	<0 0093
	MW10-ROX-041417	4/14/2017		40 50	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	0.0025 J	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW10-ROX-071117	7/11/2017		38 86	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW10-ROX-100917	10/9/2017		38 94	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW10-ROX-100917-DUP	10/9/2017		38 94	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW10-ROX-011018	1/10/2018		40 88	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW10-ROX-011018-DUP	1/10/2018		40 88	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.028	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW10-ROX-040518	4/5/2018		41 94	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW10-ROX-070918	7/9/2018		42 88	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	MW10-ROX-101018	10/10/2018	44.43 - 54.43	42 87	NE	<0.000095	<0.000095	<0.000095	<0 000095	<0.000095	<0 000095	<0.000095	<0.000095	<0 047 UJ	<0 047	<0 0095	<0.0095	<0 0095	<0.000095	<0 000095	<0.0095	<0.0095	<0.0095	<0 0095
MW-11	MW11-ROX-011216	1/12/2016	41.66 - 51 66	40 33	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0 0002 UJ	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW11-ROX-041116	4/11/2016		39.49	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW11-ROX-071316	7/13/2016		38 59	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	0.011	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW11-ROX-101216	10/12/2016		37 93	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 029 UJ	<0.0098	<0 0098	0.0042 J	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	MW11-ROX-011117	1/11/2017		37 63	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.028	<0.0093	<0 0093	0.0045 J	<0 0093	<0.00019	<0.00019	<0.0093	<0.0093	<0.0093	<0 0093
	MW11-ROX-041417	4/14/2017		38.17	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.028	<0.0095	<0 0095	0.0027 J	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW11-ROX-071017	7/10/2017		36 39	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	0.003 J J	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW11-ROX-100917	10/9/2017		36 32	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0096	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	MW11-ROX-011018	1/10/2018		39 00	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.028	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW11-ROX-040618	4/6/2018		39 98	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002 UJ	<0.0098	<0.0098	<0.0098	<0 0098
	MW11-ROX-070918	7/9/2018		40 54	NE	<0.00021	<0 00021	<0 00021	<0.00021	<0.00021	<0.00021	<0 00021	<0 00021	<0.032	<0 011	<0.011	<0.011	<0.011	<0.00021	<0.00021	<0 011	<0.011	<0.011	<0 011
	MW11-ROX-101118	10/11/2018	41.66 - 51 66	40 65	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0 0098 UJ	<0.0098 UJ	0.0086 J	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
MW-12	MW12-ROX-011116	1/11/2016	41.92 - 51 92	40 98	NE	<0.0002	<0.0002	<0.0002	0 000085 J	0.00016 J	0 00035	0.00019 J	0 00014 J	<0 03	<0.01	<0.01	<0.01	<0.01	0.00028	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW12-ROX-040716	4/7/2016		39 82	NE	0.000069 J	<0.0002	<0.0002	<0.0002	0.000054 J	0 000064 J	0.000045 J	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW12-ROX-071216	7/12/2016		38 89	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW12-ROX-101116	10/11/2016		38 85	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	0 000061 J	<0.0002	<0.0002	0.0087 J	<0.01 UJ	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW12-ROX-010917	1/9/2017		38.11	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	0.0028 J	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW12-ROX-041417	4/14/2017		38 50	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW-12-ROX-07072017	7/7/2017		36 84	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0097	<0 0097	<0.0097	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097
	MW12-ROX-100617	10/6/2017		37 23	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0096	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	MW12-ROX-011118	1/11/2018		39 62	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.000048 U	<0.00019	<0 00019	<0 00019	<0.028	<0.0094	<0.0094 UJ	<0.0094	<0 0094	<0.00019	<0.00019	<0.0094	<0.0094	<0.0094	<0 0094
	MW12-ROX-040518	4/5/2018		40 50	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0099	<0 0099	<0.0099	<0 0099	<0 0002	<0.0002	<0.0099	<0.0099	<0.0099	<0 0099
	MW12-ROX-040518-DUP	4/5/2018		40 50	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0099	<0 0099	<0.0099	<0 0099	<0 0002	<0.0002	<0.0099	<0.0099	<0.0099	<0 0099
	MW12-ROX-070618	7/6/2018		41 03	NE	<0.00021	<0 00021	<0 00021	<0.00021	<0 00021 UJ	<0.00021	<0 00021	<0 00021	<0.032	<0 011	<0.011	<0.011 UJ	<0.011	<0.00021	<0.00021	<0 011	<0.011	<0.011	<0 011
	MW12-ROX-101018	10/10/2018	41.92 - 51 92	40 84	NE	<0.000095	<0.000095	<0.000095	0 000031 J	0.000061 J J	0 00011	0.000064 J	0.000039 J	<0 048 UJ	<0 048	<0 0095	<0.0095	<0 0095	0.000059 J	<0 000095	<0.0095	<0.0095	<0.0095	<0 0095

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs															
						Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethoxy)methane	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	Diethyl phthalate	2,4-Dimethylphenol	Di-n-butyl phthalate
Screening Values (mg/L)						0.42 [1]	0.21 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]		0.006 [2]	1.4 [2]	0.012 [1]	0.0003 [1]	0.007 [3]	5.6 [1]	0.14 [2]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																		
MW-13	MW13-ROX-010716	1/7/2016	25.57 - 35 57	27.16	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW13-ROX-040816	4/8/2016		26 81	NE	0.00015 J	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01 UJ	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW13-ROX-071116	7/11/2016		26 01	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW13-ROX100716	10/7/2016		25.16	NE	<0.0002	<0.0002 UJ	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW13-ROX-010617	1/6/2017		25 54	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.03 UJ	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0.01 UJ	<0.01	<0 01
	MW13-ROX-041317	4/13/2017		25.75	NE	<0 001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0 03	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.01	<0 01	<0.01	<0 01
	MW13-ROX-070717	7/7/2017		23 64	NE	<0.00095	<0 00095	<0 00095	<0.00095	<0.00095	<0.00095	<0 00095	<0 00095	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00095	<0.00095	<0.0095	<0.0095	<0.0095	<0 0095
	MW13-ROX-101017	10/10/2017		25 20	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0076 U	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	MW13-ROX-010918	1/9/2018		27 20	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0 029 UJ	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW13-ROX-040618	4/6/2018	24.80 - 34 80	27.71	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002 UJ	<0.0098	<0.0098	<0.0098	<0 0098
	MW13-ROX-070918	7/9/2018		27.6	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0 0098	<0.0073 U	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	MW13-ROX-101118	10/11/2018	24.80 - 34 80	27 66	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0 0097 UJ	<0.0097 UJ	<0.0097	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097
MW-14	MW-14-ROX-010816	1/8/2016	33.42 - 43.42	31 64	NE	0.00015 J	<0.0002	<0.0002	<0.0002	0.000054 J	0 000046 J	0.000075 J	0.000048 J	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW14-ROX-041416	4/14/2016		31 32	NE	0.000074 J	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW14-ROX-071116	7/11/2016		30 59	NE	0.000059 J	0 00002 J	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW14-ROX-101416	10/14/2016		29 62	NE	0 000054 J *	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0 029 UJ	<0 0095 UJ	<0.0095 UJ	<0 0095 UJ	<0.0095 UJ	<0.00019	<0.00019	<0 0095 UJ	<0.0095 UJ	<0 0095 UJ	<0.0095 UJ
	MW14-ROX-011117	1/11/2017		29 61	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0 0098	0.0039 J	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	MW14-ROX-041317	4/13/2017		29 54	NE	0.000025 J	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0099	<0 0099	0.0022 J	<0 0099	<0 0002	<0.0002	<0.0099	<0.0099	<0.0099	<0 0099
	MW14-ROX-070717	7/7/2017		28 28	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	0 000042 J	<0.0095	<0.0095	<0.0095	<0 0095
	MW14-ROX-101017	10/10/2017		29.44	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0096	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	MW14-ROX-010918	1/9/2018		31 34	NE	<0.000014	<0.000014	<0.000014	<0 000014	<0.000014	<0 000014	<0.000014	<0.000014	<0 029 UJ	<0 00071	<0.00071	<0 00071	<0.00071	<0.000014	<0 000014	<0.00071	<0.00071	<0.00071	<0.00071
	MW14-ROX-010918-DUP	1/9/2018		31 34	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0 029 UJ	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW14-ROX-041018	4/10/2018		31 96	NE	<0.0002	<0.0002	<0 00005 U	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.031	<0.01 UJ	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW14-ROX-071118	7/11/2018		32 06	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.003 U	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	MW14-ROX-101518	10/15/2018	33.42 - 43.42	32 32	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
MW-16	MW16-ROX-011216	1/12/2016	37.06 - 47 06	41 99	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0 0002 UJ	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW16-ROX-040816	4/8/2016		41.17	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01 UJ	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW16-ROX-071216	7/12/2016		39 93	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW16-ROX-101116	10/11/2016		39 64	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0 0099 UJ	<0 0099	<0.0099	<0 0099	<0 0002	<0.0002	<0.0099	<0.0099	<0.0099	<0 0099
	MW16-ROX-010917	1/9/2017		39.15	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	MW16-ROX-041417	4/14/2017		39.45	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0097	<0 0097	<0.0097	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097
	MW16-ROX-071017	7/10/2017		38.16	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0096	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	MW16-ROX-100617	10/6/2017		38 04	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0096	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	MW16-ROX-010818	1/8/2018		40.71	NE	<0.00019	<0 00019	<0 00019	<0.00019	0.000044 J	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW16-ROX-040618	4/6/2018	37.50 - 47 50	41 54	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	MW16-ROX-070618	7/6/2018		42 35	NE	<0.00022	<0 00022	<0 00022	<0.00022	<0.00022	<0.00022	<0 00022	<0 00022	<0.033	<0 011	<0.011	<0.011	<0.011	<0.00022	<0.00022	<0 011	<0.011	<0.011	<0 011
	MW16-ROX-100518	10/5/2018	37.50 - 47 50	42 24	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs															
						Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethoxy)methane	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	Diethyl phthalate	2,4-Dimethylphenol	Di-n-butyl phthalate
Screening Values (mg/L)						0.42 [1]	0.21 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]		0.006 [2]	1.4 [2]	0.012 [1]	0.0003 [1]	0.007 [3]	5.6 [1]	0.14 [2]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																		
MW-22	MW22-ROX-011516	1/15/2016	37.88 - 47.88	40.42	NE	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.02 J	<0.01	<0.01	<0.01	<0.01	<0.002	<0.002	<0.01	<0.01	0.021	<0.01
	MW22-ROX-011516-DUP	1/15/2016		40.42	NE	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.018 J	<0.01	<0.01	<0.01	<0.01	<0.002	<0.002	<0.01	<0.01	0.019	<0.01
	MW22-ROX-041316	4/13/2016		39.56	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.03 UJ	<0.01 UJ	<0.01 UJ	0.0023 J H J	<0.01 UJ	<0.0002	<0.0002	<0.01 UJ	0.0041 J H J	0.035 H J	<0.01 UJ
	MW22-ROX-041316-DUP	4/13/2016		39.56	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.03	<0.01	<0.01	<0.01	<0.01	<0.0002	<0.0002	<0.01	0.0031 J	0.037	<0.01
	MW22-ROX-071516	7/15/2016		38.97	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.03	<0.01	<0.01	<0.01	<0.01	<0.0002	<0.0002	<0.01	0.0055 J J	0.0071 J	<0.01
	MW22-ROX-071516-DUP	7/15/2016		38.97	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.03	<0.01	<0.01	<0.01	<0.01	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.01
	MW22-ROX-101716	10/17/2016		38.17	NE	<0.00098	<0.00098	<0.00098	<0.00098	<0.00098	<0.00098	<0.00098	<0.00098	<0.029	<0.0098	<0.0098	<0.0098	<0.0098	<0.00098	<0.00098	<0.0098	<0.0098	0.035	<0.0098
	MW22-ROX-101716-DUP	10/17/2016		38.17	NE	<0.00098	<0.00098	<0.00098	<0.00098	<0.00098	<0.00098	<0.00098	<0.00098	<0.029	<0.0098	<0.0098	<0.0098	<0.0098	<0.00098	<0.00098	<0.0098	<0.0098	0.042	<0.0098
	MW22-ROX-011217	1/12/2017		37.80	NE	<0.00093	<0.00093	<0.00093	<0.00093	<0.00093	<0.00093	<0.00093	<0.00093	0.028 *	<0.0093	<0.0093	0.0024 J	<0.0093	<0.00093	<0.00093	<0.0093	<0.0093	<0.0093	<0.0093
	MW22-ROX-011217-DUP	1/12/2017		37.80	NE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.031 *	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01
	MW22-ROX-041717	4/17/2017		38.24	NE	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.029	<0.0095	<0.0095	<0.0095	<0.0095	<0.00019	<0.00019	<0.0095	<0.0095	0.0046 J	<0.0095
	MW22-ROX-041717-DUP	4/17/2017		38.24	NE	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.029	<0.0096	<0.0096	<0.0096	<0.0096	<0.00019	<0.00019	<0.0096	<0.0096	0.0053 J	<0.0096
	MW22-ROX-071217	7/12/2017		36.83	NE	<0.00041	<0.00041	<0.00041	<0.00041	<0.00041	<0.00041	<0.00041	<0.00041	<0.03	<0.01	<0.01	<0.01	<0.01	<0.00041	<0.00041	<0.01	<0.01	<0.01	<0.01
	MW22-ROX-071217-DUP	7/12/2017		36.83	NE	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.03	<0.01	<0.01	<0.01 UJ	<0.01 UJ	<0.0004	<0.0004	<0.01	<0.01	0.0069 J	<0.01
	MW22-ROX-101317	10/13/2017		36.94	NE	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.029 UJ	<0.0095	<0.0095	<0.0095	<0.0095	<0.00019	<0.00019	<0.0095	<0.0095	0.0044 J	<0.0095
	MW22-ROX-101317-DUP	10/13/2017		36.94	NE	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.029 UJ	<0.0096	<0.0096	<0.0096	<0.0096	<0.00019	<0.00019	<0.0096	<0.0096	0.0045 J	<0.0096
	MW22-ROX-011118	1/11/2018		39.25	NE	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.029	<0.0096	<0.0096 UJ	<0.0096	<0.0096	<0.00019	<0.00019	<0.0096	<0.0096	0.0049 J	<0.0096
	MW22-ROX-011118-DUP	1/11/2018		39.25	NE	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.029	<0.0095	<0.0095 UJ	<0.0095	<0.0095	<0.00019	<0.00019	<0.0095	<0.0095	0.0063 J	<0.0095
	MW22-ROX-041018	4/10/2018	NM	NE	<0.0002 UJ	<0.0002 UJ	<0.0002 UJ	<0.0002 UJ	<0.0002 UJ	<0.0002 UJ	<0.0002 UJ	<0.0002 UJ	<0.0002 UJ	<0.03 UJ	<0.0099 UJ	<0.0099 UJ	<0.0099 UJ	<0.0099 UJ	<0.0002 UJ	<0.0002 UJ	<0.0099 UJ	<0.0099 UJ	0.014 J	<0.0099 UJ
	MW22-ROX-071018	7/10/2018	38.43 - 48.43	40.88	NE	<0.00022	<0.00022	<0.00022	<0.00022	<0.00022	<0.00022	<0.00022	<0.00022	<0.033	<0.011	<0.011	<0.011	<0.011	<0.00022	<0.00022	<0.011	<0.011	0.014	<0.011
	MW22-ROX-101518	10/15/2018	38.43 - 48.43	41.11	NE	<0.00021	<0.00021	<0.00021	<0.00021	<0.00021	<0.00021	<0.00021	<0.00021	<0.16	<0.053	<0.053	<0.053	<0.053	<0.00021	<0.00021	<0.053	<0.053	<0.053	<0.053
MW-23	MW-23-ROX-010716	1/7/2016	29.02 - 39.02	28.78	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.03	<0.01	<0.01	<0.01	<0.01	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.01
	MW-23-ROX-040616	4/6/2016		27.96	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.03	<0.01	<0.01	<0.01	<0.01	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.01
	MW-23-ROX-070816	7/8/2016		27.54	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0091 J	<0.01	<0.01	0.0024 J F1	<0.01	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.01
	MW23-ROX-BP-100716	10/7/2016		26.64	NE	<0.0002	<0.0002 UJ	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0.0098	<0.0098	<0.0098	<0.0002	<0.0002	<0.0098	<0.0098	<0.0098	<0.0098
	MW23-ROX-011017	1/10/2017		26.83	NE	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	0.0089 J	<0.0096	<0.0096	<0.0096	<0.0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	0.004 J
	MW23-ROX-041117	4/11/2017		27.54	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0.0098	<0.0098	<0.0098	<0.0002	<0.0002	<0.0098	<0.0098	<0.0098	<0.0098
	MW23-ROX-071017	7/10/2017		25.13	NE	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.029	<0.0095	<0.0095	0.003 J	<0.0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0.0095
	MW23-ROX-100517	10/5/2017		26.42	NE	<0.00019	<0.00019	<0.00019	<0.00019 UJ	<0.00019 UJ	<0.00019 UJ	<0.00019 UJ	<0.00019 UJ	<0.029	<0.0095	<0.0095	<0.0095	<0.0095	<0.00019 UJ	<0.00019 UJ	<0.0095	<0.0095	<0.0095	<0.0095
	MW23-ROX-010518	1/5/2018		28.52	NE	<0.00019	<0.00019	0.000025 J	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.029	<0.0095 UJ	<0.0095	<0.0095	<0.0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0.0095
	MW-23-ROX-040918	4/9/2018		29.24	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.03	<0.01	<0.01	<0.01	<0.01	<0.0002	<0.0002	<0.01 UJ	<0.01	<0.01	<0.01
	MW23-ROX-070918	7/9/2018		29.1	NE	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.033	<0.011	<0.011	<0.011	<0.011	<0.0011	<0.0011	<0.011	<0.011	<0.011	<0.011
	MW23-ROX-100918	10/9/2018	29.02 - 39.02	29.00	NE	0.000082 J	0.00004 J	<0.000096	<0.000096	<0.000096	<0.000096	<0.000096	<0.000096	<0.048 UJ	<0.048	<0.0095	<0.0095	<0.0095	<0.000096	<0.000096	<0.0095	<0.0095	<0.0095	<0.0095 UJ
MW-24	MW24-ROX-011316	1/13/2016	38.89 - 48.89	41.44	NE	<0.0002	<0.0002	<0.0002	0.000078 J	0.000059 J	0.00006 J	0.000067 J J	0.000096 J	<0.03	<0.01	<0.01	<0.01	<0.01	0.000092 J	0.000081 J	<0.01	<0.01	<0.01	<0.01
	MW24-ROX-040816	4/8/2016		40.79	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.03	<0.01 UJ	<0.01	<0.01	<0.01	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.01
	MW24-ROX-071216	7/12/2016		39.67	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.03	<0.01	<0.01	<0.01	<0.01	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.01
	MW24-ROX-101116	10/11/2016		39.19	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.03	<0.01 UJ	<0.01	<0.01	<0.01	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.01
	MW24-ROX-010917	1/9/2017		38.97	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.03	<0.0099	<0.0099	<0.0099	<0.0099	<0.0002	<0.0002	<0.0099	<0.0099	<0.0099	<0.0099
	MW24-ROX-041717	4/17/2017		39.42	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.03	<0.0099	<0.0099	<0.0099	<0.0099	<0.0002	<0.0002	<0.0099	<0.0099	<0.0099	<0.0099
	MW-24-ROX-07072017	7/7/2017		37.68	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0.0098	<0.0099	<0.0098	<0.0002	<0.0002	<0.0098	<0.0098	<0.0098	<0.0098
	MW24-ROX-100617	10/6/2017		37.93	NE	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.029	<0.0095	<0.0095	<0.0095	<0.0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0.0095
	MW24-ROX-010818	1/8/2018		40.36	NE	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.028	<0.0095	<0.0095	<0.0095	<0.0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0.0095
	MW24-ROX-040618	4/6/2018	39.61 - 49.61	41.28	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.03	<0.01	<0.01	<0.01	<0.01	<0.0002	<0.0002 UJ	<0.01	<0.01	<0.01	<0.01
	MW24-ROX-040618-DUP	4/6/2018		41.28	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.03	<0.01	<0.01	<0.01	<0.01	<0.0002	<0.0002 UJ	<0.01	<0.01	<0.01	<0.01
	MW24-ROX-070618	7/6/2018		41.87	NE	<0.00022	<0.00022	<0.00022	<0.00022	<0.00022	<0.00022	<0.00022	<0.00022	<0.033	<0.011	<0.011	<0.011	<0.011	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.011
	MW24-ROX-100518	10/5/2018	39.61 - 49.61	41.81	NE	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.029	<0.0097	<0.0097	<0.0097	<0.0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0.0097

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs															
						Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethoxy)methane	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	Diethyl phthalate	2,4-Dimethylphenol	Di-n-butyl phthalate
Screening Values (mg/L)						0.42 [1]	0.21 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]		0.006 [2]	1.4 [2]	0.012 [1]	0.0003 [1]	0.007 [3]	5.6 [1]	0.14 [2]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																		
MW-25	MW25-ROX-011416	1/14/2016	35.59 - 45 59	36.12	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW25-ROX-041916	4/19/2016		35 67	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW25-ROX-071816	7/18/2016		35.19	NE	<0 0002 UJ	<0.0002 UJ	<0.0002 UJ	<0.0002 UJ	<0.0002 UJ	<0 0002 UJ	<0 0002 UJ	<0.0002 UJ	<0.03 UJ	<0.01 UJ	<0 01 UJ	<0.01 UJ	<0 01 UJ	<0.0002 UJ	<0.0002 UJ	<0.01 UJ	<0.01 UJ	<0.01 UJ	<0.01 UJ
	MW25-ROX-100616	10/6/2016		34 27	NE	<0.0002	<0.0002 UJ	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW25-ROX-011117	1/11/2017		34 00	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0097	<0 0097	0.0034 J	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097
	MW25-ROX-041117	4/11/2017		34 31	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW25-ROX-071017	7/10/2017		32.75	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0 029 UJ	<0 0096 UJ	<0.0096 UJ	<0 0096 UJ	<0.0096 UJ	<0.00019	<0.00019	<0 0096 UJ	<0.0096 UJ	<0 0096 UJ	<0.0096 UJ
	MW25-ROX-100517	10/5/2017		33 52	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	0.012	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW25-ROX-010918	1/9/2018		35 80	NE	<0.0002	<0.0002	<0.0002	<0.0002	0.000059 J	0 000041 J	<0.0002	<0.0002	<0 029 UJ	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW25-ROX-040918	4/9/2018		36.49	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.031	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01 UJ	<0 01	<0.01	<0 01
	MW25-ROX-071018	7/10/2018		36.71	NE	<0.00021	<0 00021	<0 00021	<0.00021	<0.00021	<0.00021	<0 00021	<0 00021	<0.031	<0.01	<0.01	<0.01	<0.01	<0.00021	<0.00021	<0.01	<0 01	<0.01	<0 01
	MW25-ROX-100818	10/8/2018	35.59 - 45 59	36.73	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0097	<0 0097	<0.0097	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097
MW-26	MW26-ROX-010716	1/7/2016	38.15 - 48.15	39 55	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW26-ROX-040616	4/6/2016		38.44	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW26-ROX-071216	7/12/2016		37.74	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW26-ROX-101016	10/10/2016		37.13	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01 UJ	<0.01	0.0031 J	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW26-ROX-010617	1/6/2017		36.74	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0 028 UJ	<0.0093	<0 0093	<0.0093	<0 0093	<0.00019	<0.00019	<0.0093	<0.0093 UJ	<0.0093	<0 0093
	MW26-ROX-041417	4/14/2017		36 91	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW-26-ROX-07072017	7/7/2017		35 61	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0097	<0 0097	<0.004 U	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097
	MW26-ROX-100517	10/5/2017		36.10	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.003 UJ	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW26-ROX-010818	1/8/2018		38.41	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW26-ROX-040518	4/5/2018		39 22	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	MW26-ROX-070618	7/6/2018		39.73	NE	<0.00022	<0 00022	<0 00022	<0.00022	<0.00022	<0.00022	<0 00022	<0 00022	<0.032	<0 011	<0.011	<0.011	<0.011	<0.00022	<0.00022	<0 011	<0.011	<0 011	<0.011
	MW26-ROX-100918	10/9/2018	38.15 - 48.15	39 53	NE	0.000023 J	<0.000096	<0.000096	<0 000096	<0.000096	<0 000096	<0.000096	<0.000096	<0 047 UJ	<0 047	<0 0095	<0.0095	<0 0095	<0.000096	<0 000096	<0.0095	<0.0095	<0.0095	<0.0095 UJ
MW-27	MW27-ROX-011316	1/13/2016	39.79 - 49.79	40 68	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0 0002 UJ	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW27-ROX-041116	4/11/2016		39.73	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW-27-ROX-071316	7/13/2016		38 94	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW27-ROX-101216	10/12/2016		38 50	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 029 UJ	<0.0098	<0 0098	0.0077 J	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	MW27-ROX-011117	1/11/2017		38 05	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.028	<0.0093	<0 0093	<0.0093	<0 0093	<0.00019	<0.00019	<0.0093	<0.0093	<0.0093	<0 0093
	MW27-ROX-041417	4/14/2017		38.72	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW27-ROX-071017	7/10/2017		37 23	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0099	<0 0099	<0.0099	<0 0099	<0 0002	<0.0002	<0.0099	<0.0099	<0.0099	<0 0099
	MW27-ROX-100917	10/9/2017		37.17	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0096	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	MW27-ROX-011018	1/10/2018		38 98	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW27-ROX-040618	4/6/2018		40 34	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002 UJ	<0.0098	<0.0098	<0.0098	<0 0098
	MW27-ROX-070918	7/9/2018		41.16	NE	0.000029 J	<0 00022	<0 00022	<0.00022	<0.00022	<0.00022	<0 00022	<0 00022	<0.032	<0 011	<0.011	<0.011	<0.011	<0.00022	<0.00022	<0 011	<0.011	<0 011	<0.011
	MW27-ROX-100918	10/9/2018	39.79 - 49.79	41 06	NE	0.000028 J	<0.000096	<0.000096	<0 000096	<0.000096	<0 000096	<0.000096	<0.000096	<0 048 UJ	<0 048	<0 0095	<0.0095	<0 0095	<0.000096	<0 000096	<0.0095	<0.0095	<0.0095	<0.0095 UJ
MW-28	MW28-ROX-011416	1/14/2016	33.61 - 43 61	39 98	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW28-ROX-041216	4/12/2016		39 20	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW28-ROX-071416	7/14/2016		38.49	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01 UJ	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	MW28-ROX-101316	10/13/2016		37 86	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 029 UJ	<0.0098	<0 0098	0.0032 J	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	MW28-ROX-011217	1/12/2017		37.14	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	0.014 J *	<0.0093	<0 0093	<0.0093	<0 0093	<0.00019	<0.00019	<0.0093	<0.0093	<0.0093	<0 0093
	MW28-ROX-041717	4/17/2017		38 05	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0099	<0 0099	<0.0099	<0 0099	<0 0002	<0.0002	<0.0099	<0.0099	<0.0099	<0 0099
	MW28-ROX-071217	7/12/2017		36.48	NE	<0.0004	<0.0004	<0.0004	<0.0004	<0 0004	<0.0004	<0.0004	<0.0004	<0 03	<0.0099	<0 0099	<0.0099	<0 0099	<0 0004	<0.0004	<0.0099	<0.0099	<0.0099	<0 0099
	MW28-ROX-100917	10/9/2017		36.44	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0096	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	MW28-ROX-011018	1/10/2018		38.18	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	MW28-ROX-040618	4/6/2018		39 25	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002 UJ	<0.01	<0 01	<0.01	<0 01
	MW28-ROX-070918	7/9/2018		40 08	NE	<0.00021	<0 00021	<0 00021	<0.00021	<0.00021	<0.00021	<0 00021	<0 00021	<0.032	<0 011	<0.011	<0.0079 U	<0.011	<0.00021	<0.00021	<0 011	<0.011	<0 011	<0.011
	MW28-ROX-101118	10/11/2018	33.61 - 43 61	40 25	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0 0098 UJ	<0.0098 UJ	0.01 F1 J	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs															
						Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethoxy)methane	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	Diethyl phthalate	2,4-Dimethylphenol	Di-n-butyl phthalate
Screening Values (mg/L)						0.42 [1]	0.21 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]		0.006 [2]	1.4 [2]	0.012 [1]	0.0003 [1]	0.007 [3]	5.6 [1]	0.14 [2]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																		
P-54	P54-ROX-011216	1/12/2016	38.00 - 63 00	40 22	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0 0002 UJ	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P54-ROX-041216	4/12/2016		39.42	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P54-ROX-071216	7/12/2016		38.44	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	0.0024 J	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P54-ROX-101216	10/12/2016		37 85	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 029 UJ	<0.0098	<0 0098	0.006 J	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	P54-ROX-010917	1/9/2017		37 80	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P54-ROX-041717	4/17/2017		38 30	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.0027 U	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P54-ROX-071017	7/10/2017		36 35	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0099	<0 0099	<0.0099	<0 0099	<0 0002	<0.0002	<0.0099	<0.0099	<0.0099	<0 0099
	P54-ROX-100617	10/6/2017		36.79	NE	<0.00021	<0 00021	<0 00021	<0.00021	<0.00021	<0.00021	<0 00021	<0 00021	<0.031	<0.01	<0.01	<0.01	<0.01	<0.00021	<0.00021	<0.01	<0 01	<0.01	<0 01
	P54-ROX-011118	1/11/2018		39.10	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.000047 U	<0 000039 U	<0 00019	<0 00019	<0.029	<0.0096	<0.0096 UJ	<0.0096	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	P54-ROX-040618	4/6/2018		40 05	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	0.00004 J	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002 UJ	<0.01	<0 01	<0.01	<0 01
	P54-ROX-070618	7/6/2018		40 51	NE	<0.00022	<0 00022	<0 00022	<0.00022	<0.00022	<0.00022	<0 00022	<0 00022	<0.033	<0 011	<0.011	<0.011	<0.011	<0.00022	<0.00022	<0 011	<0.011	<0 011	<0.011
	P54-ROX-100518	10/5/2018	38.00 - 63 00	40.46	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
P-56	P56-ROX-011116	1/11/2016	40.82 - 65 82	44.78	NE	0 00057	0.000092 J	0.00021	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	0.0089 J	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P56-ROX-041416	4/14/2016		43.73	NE	0 00069	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	0.00054 J	<0 01	<0.01	<0 01
	P56-ROX-071216	7/12/2016		42 87	NE	0 00026	<0.0002	0.000067 J	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	0.0023 J	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P56-ROX-101716	10/17/2016		42 35	NE	0 00043	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P56-ROX-011217	1/12/2017		42 01	NE	0 00061	0.0001 J	0 00007 J	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0097	<0 0097	<0.0097	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097
	P56-ROX-040617	4/6/2017		42.46	NE	0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	0.0027 J * J	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P56-ROX-071217	7/12/2017		41.11	NE	<0.00041	<0 00041	<0 00041	<0.00041	<0.00041	<0.00041	<0 00041	<0 00041	<0.031	<0.01	<0.01	<0.01	<0.01	<0.00041	<0.00041	<0.01	<0 01	<0.01	<0 01
	P56-ROX-101117	10/11/2017		41 08	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	P56-ROX-011018	1/10/2018		43 63	NE	0 00044	0.000077 J	0.000078 J	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0096	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	P56-ROX-041118	4/11/2018		44.40	NE	0.00015 J	<0.0002	0.000061 J	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0 0098 UJ	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	P56-ROX-071118	7/11/2018		45 25	NE	0 00037	0 00005 J	0.000059 J	0 000068 J	<0.00022	<0.00022	<0.00022	<0 00022	<0.033	<0 011	<0.011	<0.011	<0.011	<0.00022	<0.00022	<0 011	<0.011	<0 011	<0.011
	P56-ROX-101518	10/15/2018	40.82 - 65 82	45 37	NE	0 00037	<0.0002	0.000069 J	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0 0098 UJ	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
P-57	P57-ROX-011216	1/12/2016	44.19 - 54.19	45 61	NE	0.00046 J	0 00022 J	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0 03	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	0 001 J	<0 01	<0.01	<0 01
	P57-ROX-041816	4/18/2016		44 80	NE	0 00028 H J	<0.0002 UJ	<0.0002 UJ	0.000041 J H J	<0.0002 UJ	<0 0002 UJ	<0 0002 UJ	<0.0002 UJ	<0.03 UJ	<0.01 UJ	<0 01 UJ	<0.01 UJ	<0 01 UJ	<0.0002 UJ	<0.0002 UJ	<0.01 UJ	<0.01 UJ	<0.01 UJ	<0.01 UJ
	P57-ROX-071316	7/13/2016		44 02	NE	0.00041 J	<0.001	<0.001	<0 001	<0.001	<0 001	<0 001	<0.001	<0 03	<0.01	<0.01	0.038	<0.01	<0 001	<0.001	<0.01	<0 01	<0.01	<0 01
	P57-ROX-101816	10/18/2016		43.17	NE	0 00058	0 00013 J	0.000032 J	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.03 UJ	<0.01 UJ	<0.01	<0.01	<0.01	<0 0002	<0.0002	0.00054 J	<0.01 UJ	<0.01	<0 01
	P57-ROX-011617	1/16/2017		42 82	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	P57-ROX-040717	4/7/2017		43 05	NE	0.00025 J	<0.001	<0.001	0.00023 J	<0.001	<0 001	<0 001	<0.001	<0 029 UJ	<0 0097 UJ	<0.0097 UJ	<0 0097 UJ	<0.0097 UJ	<0.001	<0.001	<0 0097 UJ	<0.0097 UJ	<0 0097 UJ	<0.0097 UJ
	P57-ROX-071317	7/13/2017		41 95	NE	0 00056	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.03 UJ	<0.0099	<0 0099	<0.0041 U	<0 0099	<0 0002	<0.0002	<0.0099	<0.0099	0.025	<0 0099
	P57-ROX-101617	10/16/2017		42 64	NE	0.0005	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0 028 UJ	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	0.0039 J	<0 0095
	P57-ROX-011818	1/18/2018		44 86	NE	0 00031	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	0.000052 J	<0 00019	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	P57-ROX-011818-DUP	1/18/2018		44 86	NE	0.0005	0 00016 J	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	0.00068 J *	<0.0095	<0.0095	<0 0095
	P57-ROX-041018	4/10/2018		45.45	NE	0.00015 J	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01 UJ	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P57-ROX-071118	7/11/2018		45.76	NE	0 00022	<0 00021	<0 00021	<0.00021	<0.00021	<0.00021	<0 00021	<0 00021	<0.032	<0 011	<0.011	<0.011	<0.011	<0.00021	<0.00021	0.00056 J	<0.011	<0 011	<0.011
	P57-ROX-071118-DUP	7/11/2018		45.76	NE	0.0002 J	<0 00022	0.000029 J	<0.00022	<0.00022	<0.00022	<0 00022	<0 00022	<0.032	<0 011	<0.011	<0.011	<0.011	<0.00022	<0.00022	<0 011	<0.011	<0 011	<0.011
	P57-ROX-101618	10/16/2018	44.19 - 54.19	45 86	NE	0 00023	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0097	<0 0097	<0.0097	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097
	P57-ROX-101618-DUP	10/16/2018		45 86	NE	0 00021	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0097	<0 0097	<0.0097	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097
P-58	P58-ROX-011316	1/13/2016	40.21 - 65 21	43.18	NE	0 00069	0.00022	0.000067 J	<0.0002	<0 0002	<0.0002	<0 0002 UJ	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P58-ROX-041816	4/18/2016		42 68	NE	0 00081 H J	<0.0002 UJ	<0.0002 UJ	<0.0002 UJ	<0.0002 UJ	<0 0002 UJ	<0 0002 UJ	<0.0002 UJ	0 013 J H * J	<0.01 UJ	<0 01 UJ	<0.01 UJ	<0 01 UJ	0 00015 J H J	<0.0002 UJ	0 0018 J H J	<0.01 UJ	<0.01 UJ	<0.01 UJ
	P58-ROX-071516	7/15/2016		42 05	NE	0.0003	0 00013 J	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	0.004 J
	P58-ROX-101816	10/18/2016		41 05	NE	0.00051 J	0 00021 J	<0 00098	<0.00098	<0.00098	<0.00098	<0 00098	<0 00098	<0 029 UJ	<0 098 UJ	<0 0098	<0.0098	<0 0098	<0.00098	<0.00098	0.0014 J	<0.0098 UJ	<0.0098	<0 0098
	P58-ROX-011617	1/16/2017		40.73	NE	<0.00095	<0 00095	<0 00095	<0.00095	<0.00095	<0.00095	<0 00095	<0 00095	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00095	<0.00095	0.0015 J	0.0013 J	<0.0095	<0 0095
	P58-ROX-041117	4/11/2017		40.74	NE	0.00063 J	0 00017 J	<0 00095	<0.00095	<0.00095	<0.00095	<0 00095	<0 00095	<0.028	<0.0095	<0 0095	<0.0095	<0 0095	0.00027 J	<0.00095	0.0013 J	<0.0095	<0.0095	<0 0095
	P58-ROX-071317	7/13/2017		39 88	NE	0 00058 H J	<0.00039 UJ	<0.00039 UJ	<0.00039 UJ	0.000083 J H J	<0.00039 UJ	<0.00039 UJ	<0.00039 UJ	<0.03 UJ	<0.01 UJ	<0 01 UJ	<0.01 UJ	<0 01 UJ	<0 00039 UJ	<0 00039 UJ	<0.01 UJ	<0.01 UJ	<0.01 UJ	<0.01 UJ
	P58-ROX-041118	4/11/2018		43.19	NE	0 00059	0.00027	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	0.0017 J	<0 01	<0.01	<0 01
	P58-ROX-041118-DUP	4/11/2018		43.19	NE	0 00057	0.00032	<0 00019	<0.00019	<0.00097	<0.00097	<0 00097	<0 00097	<0.029	<0.0097	<0 0097	<0.0097	<0 0097	<0.00019	<0.00097	0.0019 J	<0.0097	<0.0097	<0 0097
	P58-ROX-101618	10/16/2018	40.21 - 65 21	43 66	NE	0.0006	<0 00019	<0 00019	<0.00019	0.00018 J	0.0001 J	<0 00019	0.000057 J	<0.029	<0.0097	<0 0097	<0.0097	<0 0097	0.00032	<0.00019	0.0014 J	<0.0097	<0.0097	<0 0097

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethoxy)methane	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	Diethyl phthalate	2,4-Dimethylphenol	Di-n-butyl phthalate
Screening Values (mg/L)						0.42 [1]	0.21 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]		0.006 [2]	1.4 [2]	0.012 [1]	0.0003 [1]	0.007 [3]	5.6 [1]	0.14 [2]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																		
P-59	P59-ROX-011216	1/12/2016	47.91 - 72 91	46.10	NE	0.00036 J	0 00019 J	0 00021 J	<0 001	<0.001	<0 001	<0.001	<0.001	<0 03	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.01	<0 01	0.0095 J	<0 01
	P59-ROX-041816	4/18/2016		44 28	NE	<0 0002 UJ	0.00013 J J	0 00048 J	<0.0002 UJ	<0.0002 UJ	<0 0002 UJ	<0 0002 UJ	<0.0002 UJ	0 012 J J	<0.01 UJ	<0 01 UJ	<0.01 UJ	<0 01 UJ	<0.0002 UJ	<0.0002 UJ	<0.01 UJ	<0.01 UJ	0.01 J	<0.01 UJ
	P59-ROX-071316	7/13/2016		44 01	NE	<0 001	<0.001	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0 03	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.01	<0 01	0.063	<0 01
	P59-ROX-101816	10/18/2016		43 39	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0 0098 UJ	<0 0098	0.0025 J	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098 UJ	0.045	<0 0098
	P59-ROX-011617	1/16/2017		42 83	NE	<0.00099	<0 00099	<0 00099	<0.00099	<0.00099	<0.00099	<0 00099	<0 00099	<0 03	<0.0099	<0 0099	<0.0099	<0 0099	<0.00099	<0.00099	<0.0099	<0.0099	<0.0099	<0 0099
	P59-ROX-040717	4/7/2017		43 31	NE	0.00017 J	<0 00095	<0 00095	<0.00095	<0.00095	<0.00095	<0 00095	<0 00095	<0 029 UJ	<0 0097 UJ	<0.0097 UJ	0.0063 J H J	<0.0097 UJ	<0.00095	<0.00095	<0 0097 UJ	<0.0097 UJ	0 012 H J	<0.0097 UJ
	P59-ROX-071317	7/13/2017		42.16	NE	0 00042	<0.0002	<0.0002	<0.0002	0.000051 J	0 000051 J	<0.0002	<0.0002	<0.03 UJ	<0.01	<0.01	<0.014 U	<0.01	0.000056 J	<0.0002	<0.01	<0 01	0.012	<0 01
	P59-ROX-101317	10/13/2017		41 87	NE	<0.00039 UJ	<0.00039 UJ	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0 029 UJ	<0.0097	<0 0097	<0.0097	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097
	P59-ROX-101317-DUP	10/13/2017		41 87	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 00039 UJ	<0.00039 UJ	<0.00039 UJ	<0.00039 UJ	<0 029 UJ	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0 00039 UJ	<0.0098	<0.0098	<0.0098	<0 0098
	P59-ROX-011118	1/11/2018		44.44	NE	<0.00096	<0 00096	<0 00096	<0.00096	<0.00096	<0.0002 U	0 00026 J B	<0 00096	<0.029	<0.0096	<0.0096 UJ	<0.0096	<0 0096	<0.00096	<0.0004 U	<0.0096	<0.0096	0.035	<0 0096
	P59-ROX-041218	4/12/2018		45.13	NE	0.00014 J	<0.0002	0.000093 J	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P59-ROX-071118	7/11/2018		46.16	NE	<0.00022	<0 00022	0.00046	0.00012 J	<0.00022	<0.00022	<0 00022	<0 00022	<0.033	<0 011	<0.011	<0.011	<0.011	0.00021 J	<0.00022	<0 011	<0.011	0.013	<0.011
	P59-ROX-101618	10/16/2018	47.91 - 72 91	45 99	NE	0.000098 J	<0 00019	0 0018	0.00031	0.000093 J	<0.00019	0.000067 J	<0 00019	<0.029	<0.0097	<0 0097	<0.0097	<0 0097	0.00063	<0.00019	<0.0097	<0.0097	0.0035 J	<0 0097
P-66	P-66-ROX-010816	1/8/2016	34.72 - 59.72	34 64	NE	0 00071	0.00022	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	0.0012 J	<0 01	<0.01	<0 01
	P66-ROX-041516	4/15/2016		34 33	NE	0 00039	<0.0002	<0.0002	<0.0002	0.00004 J	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	0.0014 J	<0 01	<0.01	<0 01
	P66-ROX-071116	7/11/2016		33 58	NE	0.0006 J	0 00028 J	<0.001	<0 001	<0.001	<0 001	<0.001	<0.001	<0 03	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.01	0.0019 J	<0.01	<0 01
	P66-ROX-101416	10/14/2016		32 61	NE	0.001 *	<0 00095	<0 00095	<0.00095	<0.00095	<0.00095	<0 00095	<0 00095	0 019 J H J	<0 0095 UJ	<0.0095 UJ	<0 0095 UJ	<0.0095 UJ	<0.00095	<0.00095	<0 0095 UJ	<0.0095 UJ	<0 0095 UJ	<0.0095 UJ
	P66-ROX-011117	1/11/2017		32.41	NE	<0.00097	<0 00097	<0 00097	<0.00097	<0.00097	<0.00097	<0 00097	<0 00097	<0.029	<0.0097	<0 0097	0.0026 J	<0 0097	<0.00097	<0.00097	<0.0097	<0.0097	<0.0097	<0 0097
	P66-ROX-041317	4/13/2017		32.19	NE	0 00041	0 00014 J	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	P66-ROX-071217	7/12/2017		31 38	NE	<0.0004	<0.0004	<0.0004	<0.0004	<0 0004	<0.0004	<0.0004	<0.0004	<0 03	<0.01	<0.01	0.0045 J	<0.01	<0 0004	<0.0004	<0.01	<0 01	<0.01	<0 01
	P66-ROX-101017	10/10/2017		32 27	NE	0 00036	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0097	<0 0097	<0.0097	<0 0097	<0.00019	<0.00019	0.0011 J	<0.0097	<0.0097	<0 0097
	P66-ROX-011118	1/11/2018		34 09	NE	0 00056	0.00019	0 0004	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0.0096 UJ	<0.0096	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	P66-ROX-041018	4/10/2018		34 93	NE	0 00047	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0 0099 UJ	<0 0099	<0.0099	<0 0099	<0 0002	<0.0002	<0.0099	<0.0099	<0.0099	<0 0099
	P66-ROX-071118	7/11/2018		35.10	NE	0.00072 J	<0.0019	<0 00097	<0.00097	<0.00097	<0.00097	<0 00097	<0 00097	<0.029	<0.0097	<0 0097	<0.0097	<0 0097	<0.00097	<0.00097	0 002 J	<0.0097	<0.0097	<0 0097
	P66-ROX-071118-DUP	7/11/2018		35.10	NE	0.0003 J	<0.002	<0 00099	<0.00099	<0.00099	<0.00099	<0 00099	<0 00099	<0 03	<0.0099	<0 0099	<0.0067 U	<0 0099	<0.00099	<0.00099	<0.0099	<0.0099	<0.0099	<0 0099
	P66-ROX-101518	10/15/2018	34.72 - 59.72	35 31	NE	0.00066 J	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.15	<0 049	<0.049	<0.049	<0.049	<0.00019	<0.00019	<0 049	<0.049	<0 049	<0.049
	P66-ROX-101518-DUP	10/15/2018		35 31	NE	<0 0002 UJ	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.15	<0 049	<0.049	<0.049	<0.049	<0 0002	<0.0002	<0 049	<0.049	<0 049	<0.049
P-74	P74-ROX-011116	1/11/2016	44.43 - 69.43	40 67	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P74-ROX-041516	4/15/2016		40.40	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P74-ROX-071216	7/12/2016		39 56	NE	0.000042 J	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P74-ROX-101416	10/14/2016		39.44	NE	0 000064 J *	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0 029 UJ	<0 0095 UJ	<0.0095 UJ	<0 0095 UJ	<0.0095 UJ	<0.00019	<0.00019	<0 0095 UJ	<0.0095 UJ	<0 0095 UJ	<0.0095 UJ
	P74-ROX-011217	1/12/2017		38 64	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	0.011 J *	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P74-ROX-040717	4/7/2017		38 92	NE	<0.00022	<0 00022	<0 00022	<0.00022	<0.00022	<0.00022	<0 00022	<0 00022	<0 031 UJ	<0.01 UJ	<0 01 UJ	<0.01 UJ	<0 01 UJ	<0.00022	<0.00022	<0.01 UJ	<0.01 UJ	<0.01 UJ	<0.01 UJ
	P74-ROX-071217	7/12/2017		38 08	NE	0.000038 J	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0099	<0 0099	<0.0099	<0 0099	<0 0002	<0.0002	<0.0099	<0.0099	<0.0099	<0 0099
	P74-ROX-101617	10/16/2017		38 57	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0 029 UJ	<0.0096	<0 0096	<0.0067 U	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	P74-ROX-01108	1/10/2018		40 25	NE	0.000066 J	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	P74-ROX-041018	4/10/2018	43.83 - 68 83	40 69	NE	<0.0002	<0.0002	<0.000042 U	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0 0099 UJ	<0 0099	<0.0099	<0 0099	<0 0002	<0.0002	<0.0099	<0.0099	<0.0099	<0 0099
	P74-ROX-041018-DUP	4/10/2018		40 69	NE	<0.0002	<0.0002	<0.000039 U	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0 0099 UJ	<0 0099	<0.0099	<0 0099	<0 0002	<0.0002	<0.0099	<0.0099	<0.0099	<0 0099
	P74-ROX-071118	7/11/2018		42 22	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0097	<0 0097	<0.0097	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097
	P74-ROX-101618	10/16/2018	43.83 - 68 83	42.18	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0097	<0 0097	<0.0097	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs															
						Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethoxy)methane	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	Diethyl phthalate	2,4-Dimethylphenol	Di-n-butyl phthalate
Screening Values (mg/L)						0.42 [1]	0.21 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]		0.006 [2]	1.4 [2]	0.012 [1]	0.0003 [1]	0.007 [3]	5.6 [1]	0.14 [2]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																		
P-93A	P-93A-ROX-011216	1/12/2016	43.07 - 53 07	43.73	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P-93A-ROX-011216-DUP	1/12/2016		43.73	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	0 01 J	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P93A-ROX-041916	4/19/2016		43 08	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P93A-ROX-041916-DUP	4/19/2016		43 08	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P93A-ROX-071316	7/13/2016		42 20	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P93A-ROX-071316-DUP	7/13/2016		42 20	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P93A-ROX-101816	10/18/2016		41 35	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01 UJ	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0.01 UJ	<0.01	<0 01
	P93A-ROX-101816-DUP	10/18/2016		41 35	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01 UJ	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0.01 UJ	<0.01	<0 01
	P93A-ROX-011217	1/12/2017		41 04	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0 0098	0.0028 J	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	P93A-ROX-011217-DUP	1/12/2017		41 04	NE	<0.00021	<0 00021	<0 00021	<0.00021	<0.00021	<0.00021	<0 00021	<0 00021	<0.032	<0 011	<0.011	<0.011	<0.011	<0.00021	<0.00021	<0 011	<0.011	<0 011	<0.011
	P93A-ROX-040717	4/7/2017		41 26	NE	<0.00019	<0 00019	<0 00019	0.00014 J	0.00012 J	0.00015 J	0.0002	0 00015 J	<0 029 UJ	<0 0095 UJ	<0.0095 UJ	<0 0095 UJ	<0.0095 UJ	0.00013 J	0 00019	<0 0095 UJ	<0.0095 UJ	<0 0095 UJ	<0.0095 UJ
	P93A-ROX-040717-DUP	4/7/2017		41 26	NE	<0.00021	<0 00021	<0 00021	0 000044 J	<0.00021	0 000053 J	<0 00021	<0 00021	<0 032 UJ	<0.011 UJ	<0.011 UJ	<0.011 UJ	<0.011 UJ	<0.00021	<0.00021	<0.011 UJ	<0 011 UJ	<0.011 UJ	<0 011 UJ
	P93A-ROX-071317	7/13/2017		40.11	NE	<0.00037	<0 00037	<0 00037	<0.00037	<0.00037	<0.00037	<0 00037	<0 00037	<0 056 UJ	<0 019	<0.019	<0.0094 U	<0.019	<0.00037	<0.00037	<0 019	<0.019	<0 019	<0.019
	P93A-ROX-101117	10/11/2017		40 87	NE	<0.00019	<0 00019	<0 00019	<0.00019 UJ	<0 00019 UJ	<0.00019 UJ	<0.00019 UJ	<0.00019 UJ	<0.029	<0.0095	<0 0095	<0.0043 U	<0 0095	<0 00019 UJ	<0 00019 UJ	<0.0095	<0.0095	<0.0095	<0 0095
	P93A-ROX-011118	1/11/2018		42.71	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0.0096 UJ	<0.0096	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	P93A-ROX-011118-DUP	1/11/2018		42.71	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0.0096 UJ	<0.0096	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	P93A-ROX-041118	4/11/2018		43.48	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0 0099 UJ	<0 0099	<0.0099	<0 0099	<0 0002	<0.0002	<0.0099	<0.0099	<0.0099	<0 0099
	P93A-ROX-052218	5/22/2018		43.48	NE																			
	P93A-ROX-071218	7/12/2018		44 03	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	P93A-ROX-101618	10/16/2018	43.07 - 53 07	44 05	NE	0.000086 J	<0 00019	0.000045 J	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0097	<0 0097	<0.0097	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097
P-93B	P93B-ROX-011316	1/13/2016	74.60 - 76 60	44 96	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0 0002 UJ	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P93B-ROX-041916	4/19/2016		44 54	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P93B-ROX-071516	7/15/2016		43 65	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P93B-ROX-101816	10/18/2016		42.73	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01 UJ	<0.01	0.0024 J	<0.01	<0 0002	<0.0002	<0.01	<0.01 UJ	<0.01	<0 01
	P93B-ROX-011017	1/10/2017		42.41	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P93B-ROX-011017-DUP	1/10/2017		42.41	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	P93B-ROX-040617	4/6/2017		42 59	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	0.0044 J * J	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	P93B-ROX-07117	7/11/2017		41 59	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	P93B-ROX-07117-DUP	7/11/2017		41 59	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0052 U	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	P93B-ROX-101117	10/11/2017		42 21	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0096	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	P93B-ROX-101117-DUP	10/11/2017		42 21	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	P93B-ROX-011518	1/15/2018		44.42	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.028	<0.0095	<0.0095 UJ	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	P93B-ROX-041218	4/12/2018	74.88 - 76 88	44.75	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0099	<0 0099	<0.0099	<0 0099	<0 0002	<0.0002	<0.0099	<0.0099	<0.0099	<0 0099
	P93B-ROX-041218-DUP	4/12/2018		44.75	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	P93B-ROX-071218	7/12/2018		45 36	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0097	<0 0097	0.0026 J	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097
	P93B-ROX-071218-DUP	7/12/2018		45 36	NE	<0.00019	<0 00019	<0 00097	<0.00097	<0.00097	<0.00097	<0 00097	<0 00097	<0.029	<0.0097	<0 0097	0.0027 J	<0 0097	<0.00097	<0.00097	<0.0097	<0.0097	<0.0097	<0 0097
	P93B-ROX-101518	10/15/2018	74.88 - 76 88	45 64	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0 0097 UJ	<0 0097	<0.0097	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097
	P93B-ROX-101518-DUP	10/15/2018		45 64	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0 0096 UJ	<0 0096	<0.0096	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
P-93C	P-93C-ROX-010816	1/8/2016	92.47 - 97.47	44 68	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P93C-ROX-041816	4/18/2016		44 06	NE	<0 0002 UJ	<0.0002 UJ	0 000025 J J	<0.0002 UJ	<0.0002 UJ	<0 0002 UJ	<0 0002 UJ	<0.0002 UJ	<0.03 UJ	<0.01 UJ	<0 01 UJ	<0.01 UJ	<0 01 UJ	<0.0002 UJ	<0.0002 UJ	<0.01 UJ	<0.01 UJ	<0.01 UJ	<0.01 UJ
	P93C-ROX-071216	7/12/2016		43 37	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	0.00004 J	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	0 000048 J	<0.01	<0 01	<0.01	<0 01
	P93C-ROX-101816	10/18/2016		42.49	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0 0095 UJ	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095 UJ	<0.0095	<0 0095
	P93C-ROX-011117	1/11/2017		42 20	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	0.0089 J	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	P93C-ROX-040517	4/5/2017		42.19	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.028	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	0 000048 J	<0.0095	<0.0095	<0.0095	<0 0095
	P93C-ROX-071217	7/12/2017		41 30	NE	<0.00039	<0 00039	<0 00039	<0.00039	<0.00039	<0.00039	<0 00039	<0 00039	<0 03	<0.0098	<0 0098	0.0042 J	<0 0098	<0.00039	<0.00039	<0.0098	<0.0098	<0.0098	<0 0098
	P93C-ROX-101117	10/11/2017		42 04	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0033 U	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	P93C-ROX-011118	1/11/2018		43 95	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0.0095 UJ	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	P93C-ROX-041118	4/11/2018	92.88 - 97 88	44 69	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01 UJ	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P93C-ROX-071218	7/12/2018		45 22	NE	<0.00021	<0 00021	<0 00021	<0.00021	<0.00021	<0.00021	<0 00021	<0 00021	<0.031	<0.01	<0 01	<0.01	<0 01	<0.00021	<0.00021	<0.01	<0 01	<0.01	<0 01
	P93C-ROX-101518	10/15/2018	92.88 - 97 88	45 31	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0 0098 UJ	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs															
						Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethoxy)methane	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	Diethyl phthalate	2,4-Dimethylphenol	Di-n-butyl phthalate
Screening Values (mg/L)						0.42 [1]	0.21 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]		0.006 [2]	1.4 [2]	0.012 [1]	0.0003 [1]	0.007 [3]	5.6 [1]	0.14 [2]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																		
P-93D	P93D-ROX-011316	1/13/2016	125.75 - 127.75	45.10	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0 0002 UJ	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P93D-ROX-041916	4/19/2016		44 61	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P93D-ROX-071516	7/15/2016		43 83	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P93D-ROX-101716	10/17/2016		42.78	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	P93D-ROX-011017	1/10/2017		42 59	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0097	<0 0097	<0.0097	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097
	P93D-ROX-040617	4/6/2017		42 80	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.028	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	P93D-ROX-07117	7/11/2017		41 64	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0087 U	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	P93D-ROX-101117	10/11/2017		42.42	NE	<0.00019	<0 00019	<0 00019	<0.00019 UJ	<0 00019 UJ	<0.00019 UJ	<0.00019 UJ	<0.00019 UJ	<0.029	<0.0096	<0 0096	<0.0096	<0 0096	<0 00019 UJ	<0 00019 UJ	<0.0096	<0.0096	<0.0096	<0 0096
	P93D-ROX-011718	1/17/2018		44 80	NE	<0.00019 UJ	<0.00019 UJ	<0.00019 UJ	<0.00019 UJ	<0 00019 UJ	<0.00019 UJ	<0.00019 UJ	<0.00019 UJ	<0 029 UJ	<0 0095 UJ	<0.0095 UJ	<0 0095 UJ	<0.0095 UJ	<0 00019 UJ	<0 00019 UJ	<0 0095 UJ	<0.0095 UJ	<0 0095 UJ	<0.0095 UJ
	P93D-ROX-041218	4/12/2018		45 95	NE	<0.0002	<0.0002	<0.0002	0 000046 J	<0 0002	<0.0002	0.00023	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P93D-ROX-071218	7/12/2018		45 57	NE	<0.00021	<0 00021	<0 00021	<0.0011	<0 0011	<0.0011	<0.0011	<0.0011	<0.032	<0 011	<0.011	<0.011	<0.011	<0 0011	<0.0011	<0 011	<0.011	<0 011	<0.011
	P93D-ROX-101518	10/15/2018	125.75 - 127.75	45.70	NE	<0.00019	<0 00019	<0 00019	<0.00019	0.000051 J	<0.00019	0.000043 J	<0 00019	<0.029	<0 0097 UJ	<0 0097	<0.0097	<0 0097	<0.00019	0 000097 J	<0.0097	<0.0097	<0.0097	<0 0097
P-114R	P114R-ROX-010716	1/7/2016	23.01 - 33 01	25 62	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P114R-ROX-040816	4/8/2016		25 65	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	0.0088 J	<0.01 UJ	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P114R-ROX-070816	7/8/2016		24 95	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.15	<0.05	<0.05	<0.05	<0.05	<0 0002	<0.0002	<0.05	<0 05	<0.05	<0 05
	P114R-ROX-100716	10/7/2016		23 89	NE	<0.00019	<0.00019 UJ	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	0.0098 J	<0.0095	<0 0095	0.0025 J	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	P114R-ROX-010617	1/6/2017		24 81	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.03 UJ	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0.01 UJ	<0.01	<0 01
	P114R-ROX-041317	4/13/2017		25 05	NE	<0.0002	<0.0002	0.000062 J	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	0.0042 J	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	P114R-ROX-071117	7/11/2017		22.45	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0034 U	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	P114R-ROX-101017	10/10/2017		24.45	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0082 U	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	P114R-ROX-010918	1/9/2018		26 37	NE	0.00014 J	<0 00095	0 00025 J	<0.00095	<0.00095	<0.00095	<0 00095	<0 00095	<0 029 UJ	<0.0095	<0 0095	<0.0095	<0 0095	<0.00095	<0.00095	<0.0095	<0.0095	<0.0095	<0 0095
	P114R-ROX-040618	4/6/2018		26.76	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0099	<0 0099	<0.0099	<0 0099	<0 0002	<0.0002 UJ	<0.0099	<0.0099	<0.0099	<0 0099
	P114R-ROX-070918	7/9/2018		26 38	NE	<0.00019	<0 00019	0.00026	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0097	<0 0097	<0.0054 U	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097
	P114R-ROX-101118	10/11/2018	23.01 - 33 01	26 27	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0 0098 UJ	<0.0098 UJ	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	P114R-ROX-101118-DUP	10/11/2018		26 27	NE	<0.0002	<0.0002	0.000055 J	<0.00039	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0 0098 UJ	<0.0098 UJ	<0.0098	<0 0098	<0.00039	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
ROST-3-MW	ROST3MW-ROX-011416	1/14/2016	37.81 - 47 81	40 30	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	ROST3MW-ROX-041216	4/12/2016		39 69	NE	0.00017 J	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002 UJ	<0.01	<0 01	<0.01	<0 01
	ROST3MW-ROX-071416	7/14/2016		38.70	NE	0.000079 J	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01 UJ	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	ROST3MW-ROX-101316	10/13/2016		38.19	NE	0.00013 J	0.000023 J	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 029 UJ	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	ROST3MW-ROX-011117	1/11/2017		37 50	NE	0 00034	0 00008 J	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.028	<0.0093	<0 0093	<0.0093	<0 0093	<0.00019	<0.00019	<0.0093	0 00068 J	<0.0093	<0 0093
	ROST3MW-ROX-041417	4/14/2017		38.16	NE	0 00027	0.000039 J	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	ROST3MW-ROX-071117	7/11/2017		36 61	NE	0.00016 J	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.0024 U	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	ROST3MW-ROX-101217	10/12/2017		38 05	NE	0 00027	0.000056 J	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0 029 UJ	<0.0096	<0 0096	0.0031 J	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	ROST3MW-ROX-112017-R	11/20/2017		38 05	NE																			
	ROST3MW-ROX-011518	1/15/2018		40 00	NE	0 00024	<0 00019	0.000022 J	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0.0095 UJ	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	ROST3MW-ROX-022618	2/26/2018		40 00	NE																			
	ROST3MW-ROX-040618	4/6/2018		39 98	NE	0 00028	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002 UJ	<0.0098	<0.0098	<0.0098	<0 0098
	ROST3MW-ROX-070518	7/5/2018		40.74	NE	0.00013 J	<0 00021	<0 00021	<0.00021	<0.00021	<0.00021	<0 00021	<0 00021	<0.031	<0.01	<0.01	<0.0044 U	<0.01	<0.00021	<0.00021	<0.01	<0 01	<0.01	<0 01
	ROST3MW-ROX-100918	10/9/2018	37.81 - 47 81	40.72	NE	0.00041 J	0.000076 J	<0.000095	<0 000095	<0.000095	<0 000095	<0.000095	<0.000095	<0 048 UJ	<0 048	<0 0095	<0.0095	<0 0095	<0.000095	<0 000095	<0.0095	<0.0095	<0.0095	<0.0095 UJ
ROST-4-PZ(C)	ROST4PZC-ROX-011516	1/15/2016	34.95 - 44 95	40 54	NE	0.00046 J	<0.002	<0.002	<0 002	<0.002	<0 002	<0.002	<0.002	<0 03	<0.01	<0.01	<0.01	<0.01	<0.002	<0.002	<0.01	<0 01	0.0046 J	<0 01
	ROST4PZC-ROX-041316	4/13/2016		39 61	NE	0 00051	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	0.0072 J	<0 01
	ROST4PZC-ROX-071516	7/15/2016		38 93	NE	0 00025	0.000041 J	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	0.0027 J	0.00084 J	<0 0002	<0.0002	<0.01	0.0014 J J	0.013	<0 01
	ROST4PZC-ROX-101316	10/13/2016		38.45	NE	0 00099	0.0001 J	0.000048 J	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0 029 UJ	<0.0096	<0 0096	<0.0096	<0 0096	<0.00019	<0.00019	0.00083 J	0 00074 J	<0.0096	<0 0096
	ROST4PZC-ROX-011217	1/12/2017		37 88	NE	0.0014	0.00019	0.00021	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.028	<0.0094	<0 0094	<0.0094	<0 0094	<0.00019	<0.00019	0.00077 J	0 00084 J	<0.0094	<0 0094
	ROST4PZC-ROX-041717	4/17/2017		38 24	NE	0.0012	0 00016 J	0 00017 J	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0097	<0 0097	<0.0097	<0 0097	<0.00019	<0.00019	<0.0097	0 00075 J	<0.0097	<0 0097
	ROST4PZC-ROX-071217	7/12/2017		37 20	NE	0 00024	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.03 UJ	<0.01 UJ	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01 UJ	<0 01
	ROST4PZC-ROX-101217	10/12/2017		36 88	NE	0.0017	<0 00019	0.00038	<0.00096 UJ	<0 00096 UJ	<0.00096 UJ	<0.00096 UJ	<0.00096 UJ	<0 029 UJ	<0.0096	<0 0096	<0.0096	<0 0096	<0 00096 UJ	<0 00096 UJ	<0.0096	<0.0096	0.012	<0 0096
	ROST4PZC-ROX-011518	1/15/2018		39 04	NE	0 00089	0 00016 J	0 0003	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.028	<0.0095	<0.0095 UJ	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	ROST4PZC-ROX-040918	4/9/2018		40.13	NE	0 00024	<0.0002	0.0001 J	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01 UJ	<0 01	<0.01	<0 01
	ROST4PZC-ROX-070918	7/9/2018		40 87	NE	0 00028	<0 00022	0.000094 J	<0.00022	<0.00022	<0.00022	<0 00022	<0 00022	<0.033	<0 011	<0.011	0.013 B	<0.011	<0.00022	<0.00022	<0 011	<0.011	<0 011	<0.011
	ROST4PZC-ROX-101218	10/12/2018		40 91	NE	0 00044	<0.0002	0 00014 J	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 029 UJ	<0 0098 UJ	<0.0098 UJ	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethoxy)methane	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	Diethyl phthalate	2,4-Dimethylphenol	Di-n-butyl phthalate
Screening Values (mg/L)						0.42 [1]	0.21 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]		0.006 [2]	1.4 [2]	0.012 [1]	0.0003 [1]	0.007 [3]	5.6 [1]	0.14 [2]	0.7 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																		
ROST-4-PZ(E)	ROST-4-PZ(E)-ROX-101317	10/13/2017	34.75 - 44.75	35 98	NE	0.0017	<0.0002	0.00061	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.03 UJ	<0.0099	<0 0099	<0.0099	<0 0099	<0 0002	<0.0002	0.00066 J	<0.0099	<0.0099	<0 0099
	ROST4PZE-ROX-011518	1/15/2018		38 07	NE	0.0016	<0 00019	0.00041	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0095	<0.0095 UJ	<0.0095	<0 0095	<0.00019	<0.00019	0.00072 J	<0.0095	<0.0095	<0 0095
	ROST4PZE-ROX-040918	4/9/2018		38 93	NE	<0.0002	<0.0002	0.00066	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01 UJ	<0 01	<0.01	<0 01
	ROST4PZE-ROX-071018	7/10/2018		39 52	NE	0.0017	<0 00022	<0 00022	<0.00022	<0.00022	<0.00022	<0 00022	<0 00022	<0.033	<0 011	<0.011	<0.011	<0.011	0.00018 J	<0.00022	<0 011	<0.011	<0 011	<0.011
	ROST4PZE-ROX-101518	10/15/2018	34.75 - 44.75	39.76	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.15	<0 049	<0.049	<0.049	<0.049	<0 0002	<0.0002	<0 049	<0.049	<0 049	<0.049
ROST-4-PZ(G)	ROST4PZG-ROX-101217	10/12/2017	34.28 - 44 28	36 58	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0 029 UJ	<0.0097	<0 0097	<0.0097	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097
	ROST4PZG-ROX-01118	1/11/2018		38 95	NE	0.000019 J	0.000027 J	0.000038 J	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.028	<0.0095	<0.0095 UJ	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0 0095
	ROST4PZG-ROX-040918	4/9/2018		40 07	NE	<0.0002	<0.0002	0.000057 J	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0 0098	<0.0098	<0.0098 UJ	<0 0002	<0.0002	<0 0098 UJ	<0.0098	<0.0098	<0 0098
	ROST4PZG-ROX-070918	7/9/2018		40 81	NE	<0.00021	<0 00021	<0 00021	<0.00021	<0.00021	<0.00021	<0 00021	<0 00021	<0.032	<0 011	<0.011	<0.011	<0.011	<0.00021	<0.00021	<0 011	<0.011	<0 011	<0.011
	ROST4PZG-ROX-101218	10/12/2018	34.28 - 44 28	40 93	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0 029 UJ	<0 0097 UJ	<0.0097 UJ	<0.0097	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	<0 0097
T-12	T12-ROX-011216	1/12/2016	46.83 - 72 83	44.13	NE	0 00042	<0.0004	0 00015 J	<0.0004	<0 0004	<0.0004	<0.0004	<0.0004	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0004	<0.0004	<0.01	<0 01	<0.01	<0 01
	T12-ROX-041516	4/15/2016		42 07	NE	0 00037	0.000062 J	0.000074 J	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	0.0037 J	<0 01
	T12-ROX-071216	7/12/2016		41 50	NE	0 00035	0.000053 J	0.000083 J	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0 01	<0.01	<0 01
	T12-ROX-101716	10/17/2016		41.19	NE	0 00038	0.000067 J	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	0 02	<0 0098
	T12-ROX-011217	1/12/2017		40.70	NE	0 00046	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	0.0047 J	<0 0098
	T12-ROX-040617	4/6/2017		41.18	NE	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0096	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	0.0038 J
	T12-ROX-071317	7/13/2017		40.10	NE	0 00046	<0 00019	0 00014 J	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0 029 UJ	<0.0095	<0 0095	<0.0095	<0 0095	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	0.0035 J
	T12-ROX-101317	10/13/2017		39.48	NE	0.0005	0.000067 J	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 029 UJ	<0.0098	<0 0098	<0.0098	<0 0098	<0 0002	<0.0002	<0.0098	<0.0098	<0.0098	<0 0098
	T12-ROX-011018	1/10/2018		42.14	NE	0 00035	<0 00019	0.000092 J	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0096	<0 0096	<0.0096	<0 0096	<0.00019	<0.00019	<0.0096	<0.0096	<0.0096	<0 0096
	T12-ROX-041218	4/12/2018		43 03	NE	0 00026	<0.0002	0 00015 J	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0099	<0 0099	<0.0099	<0 0099	<0 0002	<0.0002	<0.0099	<0.0099	<0.0099	<0 0099
	T12-ROX-071118	7/11/2018		44.12	NE	0 00027	<0 00022	0.000081 J	<0.00022	<0.00022	<0.00022	<0 00022	<0 00022	<0.033	<0 011	<0.011	<0.0044 U	<0.011	<0.00022	<0.00022	<0 011	<0.011	<0 011	<0.011
	T12-ROX-101618	10/16/2018	46.83 - 72 83	43 90	NE	0 00039	<0 00019	0 00016 J	<0.00019	<0.00019	<0.00019	<0 00019	<0 00019	<0.029	<0.0097	<0 0097	<0.0097	<0 0097	<0.00019	<0.00019	<0.0097	<0.0097	<0.0097	0.003 J

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						Di-n-octyl phthalate	2,4-Dinitrophenol	1,4-Dioxane	Fluoranthene	Fluorene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	2-Nitrophenol	4-Nitrophenol	Pentachlorophenol	Phenanthrene	Phenol	Pyrene	Pyridine
Screening Values (mg/L)						0.14 [2]	0.014 [2]	0.0077 [1]	0.28 [1]	0.28 [1]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]			0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]	0.007 [3]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																		
MW-01	MW1-ROX-010816	1/8/2016	48 80 - 58 80	40 93	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	0 000062 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW1-ROX-041216	4/12/2016		40 35	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.00005 J	0 000068 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW1-ROX-071416	7/14/2016		39.43	NE	<0 00086 U	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW1-ROX-101316	10/13/2016		38.79	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.000033 J	0 000041 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW-1-ROX-011217	1/12/2017		38 35	NE	0 00048 J B	<0.028	<0.0093	<0 00019	<0.00019	<0.0093	<0.00019	<0.0093	<0.00019	<0.00019	<0 0093	<0.019	<0.0093	<0.0093	<0.019	<0 00019	<0.0093	<0.00019	<0.0093
	MW1-ROX-041717	4/17/2017		38 58	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW1-ROX-071117	7/11/2017		37 24	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.000041 J	0 000063 J	<0.01	<0.02	<0.01	<0.01 UJ	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW1-ROX-100617	10/6/2017		37 63	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	0 000024 J	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW1-ROX-010518	1/5/2018		40 06	NE	<0.0097	<0.029	<0.0097	<0 00019	<0.00019	<0.0097	<0.00019	<0.0097	<0.00019	<0.00019	<0 0097	<0.019	<0.0097	<0.0097	<0.019	<0 00019	<0.0097	<0.00019	<0.0097
	MW1-ROX-040618	4/6/2018		40 82	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	0 000021 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW1-ROX-070618	7/6/2018		41.40	NE	<0 011	<0.032	<0.011	<0 00022	<0.00022	<0 011	<0.00022	<0.011	<0.00022	<0.00022	<0.011	<0.022	<0.011	<0.011	<0.022	<0 00022	<0 011	<0.00022	<0.011
	MW1-ROX-101018	10/10/2018	48 80 - 58 80	41.17	NE	<0.0095	<0.024	<0.0095	<0.000095	<0 000095	<0.0095	<0.000095	<0.0095	<0.000095	<0 000095	<0 0095	<0.0095	<0.0095	<0.024	<0.024	<0.000095	<0.0095	<0.000095	<0.0095
MW-02	MW2-ROX-011416	1/14/2016	49 87 - 59 87	42 04	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.011	0 013	<0.01	0 001 J	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW2-ROX-041316	4/13/2016		41 59	NE	<0.01	0.0082 J	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0 0093	0.0065	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW2-ROX-071416	7/14/2016		40.79	NE	<0 00089 U	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0 0068	0 014	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW2-ROX101316	10/13/2016		40.10	NE	<0.0097	<0.029	<0.0097	<0 00019	<0.00019	<0.0097	<0.00019	<0.0097	0 0088	0.0095	<0 0097	<0.019	<0.0097	<0.0097	<0.019	<0 00019	<0.0097	<0.00019	<0.0097
	MW2-ROX-011217	1/12/2017		39 58	NE	0 00091 J B	<0.028	<0.0093	<0 00019	<0.00019	<0.0093	<0.00019	<0.0093	0.013	0.0074	<0 0093	<0.019	<0.0093	<0.0093	<0.019	<0 00019	<0.0093	<0.00019	<0.0093
	MW2-ROX-041717	4/17/2017		39 69	NE	<0.01	<0.031	<0 01	<0 00021	<0.00021	<0.01	<0.00021	<0 01	0.012	0.02	<0.01	<0.021	<0.01	<0 01	0 0019 J	<0 00021	<0.01	<0.00021	<0.01
	MW2-ROX-071217	7/12/2017		38 66	NE	0.00048 J	<0.029	<0.0097	<0 00039	<0.00039	<0.0097	<0.00039	<0.0097	0.01	0.0057	<0 0097	<0.019	<0.0097	<0.0097	<0.019	<0 00039	<0.0097	<0.00039	<0.0097
	MW2-ROX-101217	10/12/2017		39 03	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00095 UJ	<0.0095	0.013	0 025	<0 0095	0.0011 J	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00095 UJ	<0.0095
	MW2-ROX-011118	1/11/2018		41 24	NE	<0.0095	<0.029	<0.0095 UJ	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095 UJ	0.01	0.0068	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095 UJ
	MW2-ROX-040918	4/9/2018		42.10	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0.01 UJ	0.015	0 031	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW2ROX-071018	7/10/2018		42 59	NE	<0 011	<0.034	<0.011	<0 00022	<0.00022	<0 011	0 000062 J	<0.011	0 0087	0.0069	<0.011	<0.022	<0.011	<0.011	<0.022	<0 00022	<0 011	<0.00022	<0.011
	MW2-ROX-101218	10/12/2018	49 87 - 59 87	42.71	NE	<0.0098	<0.029	<0.0098 UJ	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098 UJ	0 0048	0.003 J	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0 0098 UJ	<0 0002	<0.0098 UJ
	MW2-ROX-101218-DUP	10/12/2018		42.71	NE	<0.0097	<0.029	<0.0097 UJ	<0 00019	<0.00019	<0.0097	<0.00019	<0.0097 UJ	0 0051	0.0018 J	<0 0097	<0.019	<0.0097	<0.0097	<0.019	<0 00019	<0 0097 UJ	<0.00019	<0.0097 UJ
MW-03	MW3-ROX-010716	1/7/2016	34 67 - 44 67	27 92	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.00053	0 00045	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW3-ROX-040616	4/6/2016		27 07	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.00082	0 00068	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW3-ROX-070816	7/8/2016		26 51	NE	<0.0013 U	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.00044	0 00029	<0.01	<0.02	<0.01	<0 01	0 0018 J H	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW3-ROX100716	10/7/2016		25.79	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.00041	0 00022	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW3-ROX-010617	1/6/2017		25 65	NE	0.00058 J	<0.028	<0.0093	<0 00019	<0.00019	<0.0093	<0.00019	<0.0093	0 0016	0 00081	<0 0093	<0.019	<0.0093	<0.0093	<0.019	<0 00019	<0.0093	<0.00019	<0.0093
	MW3-ROX-041117	4/11/2017		26.13	NE	<0.0097	<0.029	<0.0097	<0 00019	<0.00019	<0.0097	<0.00019	<0.0097	0.00097	0 00057	<0 0097	<0.019	<0.0097	<0.0097	<0.019	<0 00019	<0.0097	<0.00019	<0.0097
	MW3-ROX-071217	7/12/2017		24 25	NE	0.00055 J	<0.03	<0.0099	<0.0004	<0.0004	<0.0099	<0.0004	<0.0099	0.00094	0 00067	<0 0099	<0.02	<0.0099	<0.0099	<0.02	<0.0004	<0.0099	<0 0004	<0.0099
	MW3-ROX-100517	10/5/2017		25 02	NE	<0 011	<0.032	<0.011	<0 00021	<0.00021	<0 011	<0.00021	<0.011	0.00018 J	<0.00021	<0.011	<0.021	<0.011	<0.011	<0.021	<0 00021	<0 011	<0.00021	<0.011
	MW3-ROX-010818	1/8/2018		27 28	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	0 0012	0 00051	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095 UJ
	MW3-ROX-040518	4/5/2018		27 98	NE	<0.0098	<0.029	<0.0098 UJ	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	0.00058	0 00024	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098 UJ
	MW3-ROX-070618	7/6/2018		28 30	NE	<0 011	<0.032	<0.011	<0 00021	<0.00021	<0 011	<0.00021	<0.011	0.00078	0 00036	<0.011	<0.021	<0.011	<0.011	<0.021	<0 00021	<0 011	<0.00021	<0.011
	MW3-ROX-100518	10/5/2018	34 67 - 44 67	28.18	NE	<0.0098	<0.029	<0.0098	<0.0002	<0.0002	<0.0098	0 000056 J	<0.0098	0.00058	0 000099 J	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098
MW-04	MW4-ROX-011316	1/13/2016	45 06 - 55 06	39.10	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.00028	0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW4-ROX-041916	4/19/2016		38 50	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.00015 J	0 000089 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW4-ROX-071416	7/14/2016		37 85	NE	<0 00072 U	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.00015 J	0 000069 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW4-ROX-100616	10/6/2016		37.18	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.00016 J	0 000069 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW4-ROX-010917	1/9/2017		36 84	NE	<0 00064 U	<0.029	<0.0097	<0 00019	<0.00019	<0.0097	<0.00019	<0.0097	0.000066 J	<0.00019	<0 0097	<0.019	<0.0097	<0.0097	<0.019	<0 00019	<0.0097	<0.00019	<0.0097
	MW4-ROX-041017	4/10/2017		37 08	NE	<0.01	<0.031	0.0014 J	0 000036 J	<0.0002	<0.01	0 000041 J	<0 01	0.000088 J	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	0.000038 J	<0.01
	MW4-ROX-071017	7/10/2017		35 68	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	0 000095 J	<0.0096	0.00018 J	0 000029 J	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096
	MW4-ROX-100517	10/5/2017		36 32	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	0.000024 J	0 000028 J	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096
	MW-4-ROX-010918	1/9/2018		38 65	NE	<0 00063 U	<0.029	<0.0095	0 000023 J	<0.00019	<0.0095	0 000062 J	<0.0095	0.000021 J	0 000028 J	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	0.000019 J	<0.0095
	MW4-ROX-040918	4/9/2018		39 32	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0.01 UJ	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW4-ROX-071018	7/10/2018		39 60	NE	<0.0098	<0.029	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	0.000044 J	0 000022 J	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098
	MW4-ROX-100818	10/8/2018	45 06 - 55 06	39 61	NE	<0.0097	<0.029	<0.0097	<0 00019	<0.00019	<0.0097	<0.00019	<0.0097	0.000078 J	<0.00019	<0 0097	<0.019	<0.0097	<0.0097	<0.019	<0 00019	<0.0097	<0.00019	<0.0097

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						Di-n-octyl phthalate	2,4-Dinitrophenol	1,4-Dioxane	Fluoranthene	Fluorene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	2-Nitrophenol	4-Nitrophenol	Pentachlorophenol	Phenanthrene	Phenol	Pyrene	Pyridine
Screening Values (mg/L)						0.14 [2]	0.014 [2]	0.0077 [1]	0.28 [1]	0.28 [1]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]			0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]	0.007 [3]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																		
MW-05	MW5-ROX-011416	1/14/2016	33 97 - 43 97	27.19	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW5-ROX-040616	4/6/2016		26 80	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.00034	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW5-ROX-070816	7/8/2016		26 28	NE	<0.001 U	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW5-ROX-101016	10/10/2016		25.47	NE	<0.0098	<0.029 UJ	0.0015 J	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	0.00012 J	0 000041 J	<0.0098 UJ	<0.02 UJ	<0.0098 UJ	<0.0098 UJ	<0 02 UJ	<0.0002	<0 0098 UJ	<0 0002	<0.0098
	MW5-ROX-010617	1/6/2017		25 33	NE	0.00067 J	<0.028	<0.0093	<0 00019	<0.00019	<0.0093	<0.00019	<0.0093	0.00063	<0.00019	<0 0093	<0.019	<0.0093	<0.0093	<0.019	<0 00019	<0.0093	<0.00019	<0.0093
	MW5-ROX-041217	4/12/2017		25 69	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	<0.00019	<0.00019	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096
	MW5-ROX-071217	7/12/2017		23 96	NE	<0.01	<0.03	<0 01	<0.0004	<0.0004	<0.01	<0.0004	<0 01	0.00013 J	<0.0004	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0004	<0.01	<0 0004	<0.01
	MW5-ROX-101217	10/12/2017		25 04	NE	<0.0096	<0.029	<0.0096	<0 00096	<0.00019	<0.0096	<0.00096	<0.0096	<0.00096	<0.00096	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00096	<0.0096	<0.00096	<0.0096
	MW5-ROX-011118	1/11/2018		26 98	NE	<0.0095	<0.029	<0.0095 UJ	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095 UJ	0.000034 J	0 000028 J	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095 UJ
	MW5-ROX-040918	4/9/2018		27.78	NE	<0.0099	<0.03	<0.0099	<0.0002	<0.0002	<0.0099	<0.0002	<0.0099 UJ	<0.0002	<0.0002	<0 0099	<0.02	<0.0099	<0.0099	<0.02	<0.0002	<0.0099	<0 0002	<0.0099 UJ
	MW5-ROX-071018	7/10/2018		27 87	NE	<0 011	<0.033	<0.011	<0 00022	<0.00022	<0 011	0 000074 J	<0.011	<0.00022	<0.00022	<0.011	<0.022	<0.011	<0.011	<0.022	<0 00022	<0 011	<0.00022	<0.011
	MW5-ROX-101218	10/12/2018	33 97 - 43 97	27 95	NE	<0 011	<0.032	<0.011 UJ	<0 00022	<0.00022	<0 011	<0.00022	<0 011 UJ	0.000026 J	<0.00022	<0.011	<0.022	<0.011	<0.011	<0.022	<0 00022	<0.011 UJ	<0.00022	<0.011 UJ
MW-06A	MW6A-ROX-011116	1/11/2016	34 83 - 44 83	29 36	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW6A-ROX-040716	4/7/2016		29 07	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.000036 J	0 000047 J	<0.01	<0.02	<0.01	<0 01	<0.02	0 00005 J	<0.01	<0 0002	<0.01
	MW6A-ROX-071116	7/11/2016		28.45	NE	0.00086 J	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW6A-ROX-101116	10/11/2016		27 51	NE	<0.01	<0.03	<0.01 UJ	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01 UJ	<0.02 UJ	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW6A-ROX-011017	1/10/2017		27.43	NE	<0 00066 U	<0.028	<0.0093	<0 00019	<0.00019	<0.0093	<0.00019	<0.0093	<0.00019	<0.00019	<0 0093	<0.019	<0.0093	<0.0093	<0.019	<0 00019	<0.0093	<0.00019	<0.0093
	MW6A-ROX-041217	4/12/2017		27 69	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	<0.00019	<0.00019	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096
	MW6A-ROX-071117	7/11/2017		26.16	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.000023 J	0 000024 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW6A-ROX-100417	10/4/2017		27 09	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	0.000026 J	0 000031 J	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096
	MW6A-ROX-010518	1/5/2018		29 22	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	<0.00019	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW6A-ROX-040518	4/5/2018	33 85 - 43 85	29 83	NE	<0.01	<0.03	<0.01 UJ	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	0.000052 J	<0 01 UJ
	MW6A-ROX-070518	7/5/2018		30.10	NE	<0.01	<0.031	<0 01	<0 00021	<0.00021	<0.01	<0 001	<0 01	<0.00021	<0.00021	<0.01	<0.021	<0.01	<0 01	<0.021	<0 00021	<0.01	<0.000043 U	<0.01
	MW6A-ROX-100418	10/4/2018	33 85 - 43 85	30.10	NE	<0.0099	<0.03	<0.0099	0 000062 J	<0.0002	<0.0099	<0.0002	<0.0099	<0.00059 UJ	<0 00059 UJ	<0 0099	<0.02	<0.0099	<0.0099	<0.02	0.000094 J	<0.0099	0 00007 J	<0.0099
MW-06B	MW6B-ROX-011116	1/11/2016	64 05 - 69 05	29.41	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.000029 J	0 000067 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW6B-ROX-040716	4/7/2016		29.11	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.000045 J	0 000088 J	<0.01	<0.02	<0.01	<0 01	<0.02	0.000079 J	<0.01	<0 0002	<0.01
	MW6B-ROX-071116	7/11/2016		28.49	NE	0.00055 J	<0.03	<0 01	<0.0002	<0.0002	<0.01	0.00011 J	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW6B-ROX-101116	10/11/2016		27 56	NE	<0.01	<0.03	<0.01 UJ	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.000038 J	0.00006 J	<0.01 UJ	<0.02 UJ	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW6B-ROX-011017	1/10/2017		27.49	NE	<0 00051 U	<0.028	<0.0093	<0 00019	<0.00019	<0.0093	<0.00019	<0.0093	<0.00019	<0.00019	<0 0093	<0.019	<0.0093	<0.0093	<0.019	<0 00019	<0.0093	<0.00019	<0.0093
	MW6B-ROX-041217	4/12/2017		27.75	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	<0.00019	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW6B-ROX-071117	7/11/2017		26.18	NE	<0.0099	<0.03	<0.0099	<0.0002	<0.0002	<0.0099	<0.0002	<0.0099	0.000037 J	0 000071 J	<0 0099	<0.02	<0.0099	<0.0099	<0.02	<0.0002	<0.0099	<0 0002	<0.0099 UJ
	MW6B-ROX-100417	10/4/2017		27.16	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	0.000026 J	0 000038 J	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096
	MW6B-ROX-010518	1/5/2018		29 25	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	<0.00019	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW6B-ROX-040518	4/5/2018		29 95	NE	<0.0099	<0.03	<0.0099 UJ	<0.0002	<0.0002	<0.0099	<0.0002	<0.0099	<0.0002	<0.0002	<0 0099	<0.02	<0.0099	<0.0099	<0.02	<0.0002	<0.0099	<0 0002	<0.0099 UJ
	MW6B-ROX-070518	7/5/2018		30.15	NE	<0 011	<0.033	<0.011	<0 00022	<0.00022	<0 011	<0.00022	<0.011	<0.00022	<0.00022	<0.011	<0.022	<0.011	<0.011	<0.022	<0 00022	<0 011	<0.00022	<0.011
	MW6B-ROX-100418	10/4/2018	64 05 - 69 05	30.13	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
MW-06C	MW6C-ROX-010816	1/8/2016	84 95 - 89 95	29 31	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW6C-ROX-040716	4/7/2016		28 91	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.00003 J	0 000055 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW6C-ROX-071116	7/11/2016		28 30	NE	0.00059 J	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.000043 J	0 000047 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW6C-ROX-101016	10/10/2016		27 37	NE	<0 0095 UJ	<0.029	<0.0095 UJ	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	0.000049 J	0 000077 J	<0 0095	<0.019 UJ	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW6C-ROX-011017	1/10/2017		27 26	NE	<0 00049 U	<0.028	<0.0093	<0 00019	<0.00019	<0.0093	<0.00019	<0.0093	<0.00019	<0.00019	<0 0093	<0.019	<0.0093	<0.0093	<0.019	<0 00019	<0.0093	<0.00019	<0.0093
	MW6C-ROX-041217	4/12/2017		27 56	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	<0.00019	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW6C-ROX-071117	7/11/2017		25 99	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	0.000034 J	0 000056 J	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096 UJ
	MW6C-ROX-100417	10/4/2017		26 98	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	0.000021 J	0 000026 J	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW6C-ROX-010818	1/8/2018		29 05	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.000059 U	<0.0095	0.000036 J	0 000048 J	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095 UJ
	MW6C-ROX-040518	4/5/2018		29.74	NE	<0.01	<0.03	<0.01 UJ	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW6C-ROX-070518	7/5/2018		29 93	NE	<0.01	<0.031	<0 01	<0 00021	<0.00021	<0.01	<0.00021	<0 01	<0.00021	<0.00021	<0.01	<0.021	<0.01	<0 01	<0.021	<0 00021	<0.01	<0.00021	<0.01
	MW6C-ROX-070518-DUP	7/5/2018		29 93	NE	<0.01	<0.031	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW6C-ROX-100418	10/4/2018	84 95 - 89 95	29 93	NE	<0.0098	<0.03	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	<0.0002	<0.0002	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs															
						Di-n-octyl phthalate	2,4-Dinitrophenol	1,4-Dioxane	Fluoranthene	Fluorene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	2-Nitrophenol	4-Nitrophenol	Pentachlorophenol	Phenanthrene	Phenol	Pyrene	Pyridine
Screening Values (mg/L)						0.14 [2]	0.014 [2]	0.0077 [1]	0.28 [1]	0.28 [1]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]			0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]	0.007 [3]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																	
MW-06D	MW6D-ROX-010816	1/8/2016	104.72 - 109.72	29 59	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW6D-ROX-010816-DUP	1/8/2016		29 59	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW6D-ROX-040716	4/7/2016		28.76	NE	<0.01	<0.03	<0 01	<0.0002	0.00005 J	<0.01	<0.0002	<0 01	0.000051 J	0.0001 J	<0.01	<0.02	<0.01	<0 01	<0.02	0.0001 J	<0.01	<0 0002	<0.01
	MW6D-ROX-040716-DUP	4/7/2016		28.76	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.000034 J	0 000064 J	<0.01	<0.02	<0.01	<0 01	<0.02	0.000045 J	<0.01	<0 0002	<0.01
	MW6D-ROX-071116	7/11/2016		28.16	NE	0.00079 J	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.000045 J	0 000051 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW6D-ROX-071116-DUP	7/11/2016		28.16	NE	0.00082 J	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW6D-ROX-101016	10/10/2016		27 26	NE	<0.01	<0.029 UJ	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.000032 J	0 000058 J	<0.0098 UJ	<0.02 UJ	<0.0098 UJ	<0.0098 UJ	<0 02 UJ	<0.0002	<0 0098 UJ	<0 0002	<0.01
	MW6D-ROX-101016-DUP	10/10/2016		27 26	NE	<0.01	<0.029 UJ	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.000038 J	0 000064 J	<0.0098 UJ	<0.02 UJ	<0.0098 UJ	<0.0098 UJ	<0 02 UJ	<0.0002	<0 0098 UJ	<0 0002	<0.01
	MW6D-ROX-011017	1/10/2017		27.14	NE	<0.0093	<0.028	<0.0093	<0 00019	<0.00019	<0.0093	<0.00019	<0.0093	<0.00019	<0.00019	<0 0093	<0.019	<0.0093	<0.0093	<0.019	<0 00019	<0.0093	<0.00019	<0.0093
	MW6D-ROX-011017-DUP	1/10/2017		27.14	NE	<0 00075 U	<0.028	<0.0093	<0 00019	<0.00019	<0.0093	0.00009 J	<0.0093	<0.00019	<0.00019	<0 0093	<0.019	<0.0093	<0.0093	<0.019	<0 00019	<0.0093	<0.00019	<0.0093
	MW6D-ROX-041217	4/12/2017		27.43	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	<0.00019	<0.00019	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096
	MW6D-ROX-041217-DUP	4/12/2017		27.43	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	<0.00019	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW6D-ROX-071117	7/11/2017		25 83	NE	<0.0099	<0.03	<0.0099	<0.0002	<0.0002	<0.0099	0 000051 J	<0.0099	0.00003 J	0 000034 J	<0 0099	<0.02	<0.0099	<0.0099	<0.02	<0.0002	<0.0099	<0 0002	<0.0099 UJ
	MW6D-ROX-071117-DUP	7/11/2017		25 83	NE	<0.0099	<0.03	<0.0099	<0.0002	<0.0002	<0.0099	<0.0002	<0.0099	0.000038 J	0 000066 J	<0 0099	<0.02	<0.0099	<0.0099	<0.02	<0.0002	<0.0099	<0 0002	<0.0099 UJ
	MW6D-ROX-100517	10/5/2017		26 83	NE	<0.01	<0.031	<0 01	<0 00021	<0.00021	<0.01	<0.00021	<0 01	0.000025 J	0 000033 J	<0.01	<0.021	<0.01	<0 01	<0.021	<0 00021	<0.01	<0.00021	<0.01
	MW6D-ROX-010818	1/8/2018		28 90	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	<0.00019	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095 UJ
	MW6D-ROX-040518	4/5/2018		29 52	NE	<0.0099	<0.03	<0.0099 UJ	<0.0002	<0.0002	<0.0099	<0.0002	<0.0099	<0.0002	<0.0002	<0 0099	<0.02	<0.0099	<0.0099	<0.02	<0.0002	<0.0099	<0 0002	<0.0099 UJ
	MW6D-ROX-070518	7/5/2018		29.76	NE	<0.01	<0.031	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.00002 U	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW6D-ROX-100418	10/4/2018	104.72 - 109.72	29.76	NE	<0.0099	<0.03	<0.0099	<0.0002	<0.0002	<0.0099	<0.0002	<0.0099	0.000023 J	0 000026 J	<0 0099	<0.02	<0.0099	<0.0099	<0.02	<0.0002	<0.0099	<0 0002	<0.0099
MW-07	MW7-ROX-011416	1/14/2016	42 92 - 52 92	41 02	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	0.0018 J	<0.0002	<0 01	0.004	0.0053	<0.01	0.0017 J	<0.01	<0 01	<0.02	0.00041	0.18	<0 0002	<0.01
	MW7-ROX-011416-DUP	1/14/2016		41 02	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	0.0019 J	<0.0002	<0 01	0 0048	0.0061	<0.01	0 002 J	<0.01	<0 01	<0.02	0.00056	0 32	<0 0002	<0.01
	MW7-ROX-041916	4/19/2016		40 68	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	0.0023 J	<0.0002	<0 01	0 0034	0.0051	<0.01	0.0034 J	<0.01	<0 01	<0.02	0.00021	0 25	<0 0002	<0.01
	MW7-ROX-041916-DUP	4/19/2016		40 68	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	0.0022 J	<0.0002	<0 01	0.004	0.0059	<0.01	0.0026 J	<0.01	<0 01	<0.02	0.00025	0.18	<0 0002	<0.01
	MW7-ROX-071416	7/14/2016		39 99	NE	<0 00075 U	<0.03	<0 01	<0.0002	0.00026	<0.01	<0.0002	<0 01	0.004 J	0.005 J	<0.01	<0.02	<0.01	<0 01	<0.02	0.00041	0.16	<0 0002	<0.01
	MW7-ROX-071416-DUP	7/14/2016		39 99	NE	<0.01	<0.03	<0 01	<0.0002	0.00018 J	0.0014 J	<0.0002	<0 01	0.0028 J	0.0034 J	<0.01	0.0026 J	<0.01	<0 01	<0.02	0.00031	0.19	<0 0002	<0.01
	MW7-ROX-100616	10/6/2016		39 24	NE	<0.01 UJ	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0 0031	0.0043	0.004 J	0.0049 J	<0.01	<0 01	<0.02	<0.0002	0.46	<0 0002	<0.01
	MW7-ROX-100616-DUP	10/6/2016		39 24	NE	0.00046 J	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0 0029	0.0039	0 0044 J	<0.02	<0.01	<0 01	<0.02	<0.0002	0.43	<0 0002	<0.01
	MW7-ROX-010917	1/9/2017		38 90	NE	<0 00049 U	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.002	0 003	0 0039 J	0.0044 J	<0.01	<0 01	<0.02	0 00014 J	0.17	<0 0002	<0.01
	MW7-ROX-041017	4/10/2017		38 92	NE	<0.0097	<0.029	<0.0097	<0 00019	<0.00019	0.0024 J	0.00004 J	<0.0097	0 0019	0.0027	0 0043 J	0.0056 J	<0.0097	<0.0097	<0.019	<0 00019	0 27	<0.00019	<0.0097
	MW7-ROX-041017-DUP	4/10/2017		38 92	NE	<0.0097	<0.029	<0.0097	<0 00019	<0.00019	0.0022 J	0 000039 J	<0.0097	0 0019	0.0027	0 0045 J	0.0059 J	<0.0097	<0.0097	<0.019	<0 00019	0 31	<0.00019	<0.0097
	MW7 ROX-071117	7/11/2017		37.79	NE	<0.0097	<0.029	<0.0097	<0 00019	<0.00019	<0.0097	<0.00019	<0.0097	0 0019	0 003	0 0035 J	0.0042 J	<0.0097	<0.0097 UJ	<0.019	0 00013 J	0 27	<0.00019	<0.0097 UJ
	MW7 ROX-071117-DUP	7/11/2017		37.79	NE	<0.0097	<0.029	<0.0097	<0 00019	<0.00019	<0.0097	<0.00019	<0.0097	0 0016	0.0025	0 0034 J	0.0047 J	<0.0097	<0.0097 UJ	<0.019	<0 00019	0 24	<0.00019	<0.0097 UJ
	MW7-ROX-100517	10/5/2017		38.45	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	0.0023 J	<0.00019	<0.0096	0 0088	0 004	<0 0096	0.0042 J	<0.0096	<0.0096	<0.019	<0 00019	0.17	<0.00019	<0.0096
	MW7-ROX-010918	1/9/2018		40 67	NE	<0 00048 U	<0.029 UJ	<0.0095	<0 00019	0.00013 J	0.0019 J	<0.00019	<0.0095	0 0027	0.0038	0 0031 J	<0.019	<0.0095	<0.0095 UJ	<0.019 UJ	0.00021	0.077	<0.00019	<0.0095
	MW7-ROX-040918	4/9/2018		41 38	NE	<0.0099	<0 03 UJ	<0.0099	<0.0002	<0.0002	0.0025 J	<0.0002	<0.0099 UJ	0 0018	0.0027	<0.0099 UJ	<0.02 UJ	<0.0099 UJ	<0.0099 UJ	<0 02 UJ	0.000082 J	0 013 J	<0 0002	<0.0099 UJ
	MW7-ROX-040918-DUP	4/9/2018		41 38	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	0.0025 J	<0.0002	<0.01 UJ	0 0023	0.0029	0.003 J	0.0034 J	<0.01	<0 01	<0.02	0 00011 J	0 087 J	<0 0002	<0 01 UJ
	MW7-ROX-071018	7/10/2018		41 64	NE	<0 011	<0.033	<0.011	<0 00022	0 000089 J	0.0018 J	<0.00022	<0.011	0 0021	0.0029	<0.011	0.0026 J	<0.011	<0.011	<0.022	0 00013 J	0.18	<0.00022	<0.011
	MW7-ROX-071018-DUP	7/10/2018		41 64	NE	<0.0098	<0.03	<0.0098	<0.0002	<0.0002	0.002 J	<0.0002	<0.0098	0 0022	0.0033	<0 0098	0.0028 J	<0.0098	<0.0098	<0.02	0 00015 J	0.18	<0 0002	<0.0098
	MW7-ROX-100818	10/8/2018	42 92 - 52 92	41 69	NE	<0.0098	<0.029	<0.0098	<0.0002	0.00021	<0.0098	<0.0002	<0.0098	0 0014	0.0019	<0 0098	0.0022 J	<0.0098	<0.0098	<0.02	0.00029	0.086	0.000058 J	<0.0098
MW-08	MW8-ROX-011416	1/14/2016	33 60 - 43 60	31.79	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	0.0023 J	<0.0002	<0 01	0.015	0 007	0 0077 J	0 016 J	<0.01	<0 01	<0.02	<0.0002	0 22	<0 0002	<0.01
	MW8-ROX-041916	4/19/2016		31.45	NE	<0.01	<0.03	<0 01	<0.0002	0.00035	0.0019 J	<0.0002	<0 01	0.014	0.0063	0 0028 J	0.0036 J	<0.01	<0 01	<0.02	0 00013 J	0 27	<0 0002	<0.01
	MW8-ROX-071416	7/14/2016		30 80	NE	<0 00071 U	<0.03	<0 01	<0.0002	0.00024	0.0014 J	<0.0002	<0 01	0 0082	0.0038	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	0.13	<0 0002	<0.01
	MW8-ROX-100616	10/6/2016		29 99	NE	<0.01 UJ	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0 0098	0.0028	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	0 29	<0 0002	<0.01
	MW8-ROX-010917	1/9/2017		29.79	NE	<0 00061 U	<0.029	<0.0098	<0.0002	<0.0002	0.0039 J	<0.0002	<0.0098	0.015	0.0038	<0 0098	<0.02	<0.0098	<0.0098	0 0018 J	<0.0002	0 22	<0 0002	<0.0098
	MW8-ROX-041017	4/10/2017		30 02	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	0.0017 J	<0.0002	<0 01	0 0087	0.0036	<0.01	0.0014 J	<0.01	<0 01	0 0021 J	<0.0002	0 22	<0 0002	<0.01
	MW8-ROX-071017	7/10/2017		28.48	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	0 0092	0.0052	<0 0096	0.0023 J	<0.0096	<0.0096	0 0018 J	<0 00019	0.14	<0.00019	<0.0096
	MW8-ROX-100517	10/5/2017		29 28	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	0.0019 J	<0.00019	<0.0095	0.0086 J	0.004 J	<0 0095	0.0039 J	<0.0095	<0.0095	<0.019	<0 00019	0.16	<0.00019	<0.0095
	MW8-ROX-100517-DUP	10/5/2017		29 28	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	0.0022 J	0.0031 J	0 0036 J	0.0045 J	<0.0096	<0.0096	<0.019	<0 00019	0.16	<0.00019	<0.0096
	MW8-ROX-010918	1/9/2018		31 60	NE	<0.0006 U	<0.029 UJ	<0.0095	<0 00019	0.00024	<0.0095	<0.00019	<0.0095	0.01	0.0046	<0 0095	<0.019	<0.0095	<0.0095 UJ	0.002 J H J	0.000085 J	0.043	<0.00019	<0.0095
	MW8-ROX-040918	4/9/2018		32 27	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	0.0018 J	<0.0002	<0.01 UJ	0 0098	0.0035	<0.01	0.0011 J	<0.01	<0 01	0 0019 J	0 00013 J	0 08	<0 0002	<0 01 UJ
	MW8-ROX-071018	7/10/2018		32.42	NE	<0 011	<0.032	<0.011	<0 00021	0 0002 J	0.0028 J	<0.00021	<0.011	0 0074	0.0031	<0.011	<0.021	<0.011	<0.011	<0.021	0 00011 J	0.19	<0.00021	<0.011
	MW8-ROX-100818	10/8/2018	33 60 - 43 60	32.45	NE	<0.0098	<0.029	<0.0098	<0.0002	0.00031	0.0031 J	0 000057 J	<0.0098	0.0057 J	0.0023	<0 0098	<0.02	<0.0098	<0.0098	0 0024 J	0 00013 J	0.085	<0 0002	<0.0098
	MW8-ROX-100818-DUP	10/8/2018		32.45	NE	<0.0098	<0.029	<0.0098	<0.0002	0.00055	0.0027 J	<0.0002	<0.0098	0.0095 J	0.0035	<0 0098	<0.02	<0.0098	<0.0098	0 0023 J	0 00015 J	0 09	<0.00098	<0.0098

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						Di-n-octyl phthalate	2,4-Dinitrophenol	1,4-Dioxane	Fluoranthene	Fluorene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	2-Nitrophenol	4-Nitrophenol	Pentachlorophenol	Phenanthrene	Phenol	Pyrene	Pyridine
Screening Values (mg/L)						0.14 [2]	0.014 [2]	0.0077 [1]	0.28 [1]	0.28 [1]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]			0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]	0.007 [3]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																	
MW-09	MW9-ROX-011316	1/13/2016	46.45 - 56.45	42 63	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW9-ROX-041216	4/12/2016		41 98	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	0 000025 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW9-ROX-071316	7/13/2016		40 93	NE	<0 00066 U	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.000027 J	0 000027 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW9-ROX-101316	10/13/2016		40 39	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	0 000026 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW9-ROX-011117	1/11/2017		40 06	NE	<0.0093	<0.028	<0.0093	<0 00019	<0.00019	<0.0093	<0.00019	<0.0093	<0.00019	<0.00019	<0 0093	<0.019	<0.0093	<0.0093	<0.019	<0 00019	<0.0093	<0.00019	<0.0093
	MW9-ROX-041417	4/14/2017		40 67	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	<0.00019	<0.00019	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096
	MW9-ROX-071217	7/12/2017		38 86	NE	<0.0096	<0.029	<0.0096	<0 00038	<0.00038	<0.0096	<0.00038	<0.0096	<0.00038	<0.00038	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00038	<0.0096	<0.00038	<0.0096
	MW9-ROX-100917	10/9/2017		39.17	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	<0.00019	<0.00019	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096
	MW9-ROX-011018	1/10/2018		41.10	NE	<0.0095	<0.028	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	<0.00019	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW9-ROX-040618	4/6/2018	46 04 - 56 04	42 29	NE	<0.0099	<0.03	<0.0099	0 000024 J	<0.0002	<0.0099	<0.0002	<0.0099	<0.0002	<0.0002	<0 0099	<0.02	<0.0099	<0.0099	<0.02	<0.0002	<0.0099	0.000034 J	<0.0099
	MW9-ROX-070918	7/9/2018		42 82	NE	<0.0098	<0.029	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	<0.0002	<0.0002	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098
	MW9-ROX-101018	10/10/2018	46 04 - 56 04	42 88	NE	<0.0095	<0.024	<0.0095	<0.000095	<0 000095	<0.0095	<0.000095	<0.0095	<0.000095	<0 000095	<0 0095	<0.0095	<0.0095	<0.024	<0.024	<0.000095	<0.0095	<0.000095	<0.0095
MW-10	MW10-ROX-011316	1/13/2016	44.43 - 54.43	42 53	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW10-ROX-041116	4/11/2016		41 88	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	0 000034 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW10-ROX-071316	7/13/2016		41 00	NE	<0 00056 U	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.00003 J	0 000033 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW10-ROX-101216	10/12/2016		40 27	NE	<0 011	<0.032	<0.011	<0 00021	<0.00021	<0 011	<0.00021	<0.011	<0.00021	<0.00021	<0.011	<0.021	<0.011	<0.011	<0.021	<0 00021	<0 011	<0.00021	<0.011
	MW10-ROX-011117	1/11/2017		39 88	NE	<0.0093	<0.028	<0.0093	<0 00019	<0.00019	<0.0093	<0.00019	<0.0093	<0.00019	<0.00019	<0 0093	<0.019	<0.0093	<0.0093	<0.019	<0 00019	<0.0093	<0.00019	<0.0093
	MW10-ROX-041417	4/14/2017		40 50	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	<0.00019	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW10-ROX-071117	7/11/2017		38 86	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.00002 J	0 000021 J	<0.01	<0.02	<0.01	<0.01 UJ	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW10-ROX-100917	10/9/2017		38 94	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	0 000022 J	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW10-ROX-100917-DUP	10/9/2017		38 94	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	0.000021 J J	0 000027 J	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW10-ROX-011018	1/10/2018		40 88	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	<0.00019	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW10-ROX-011018-DUP	1/10/2018		40 88	NE	<0.0095	<0.028	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	<0.00019	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW10-ROX-040518	4/5/2018		41 94	NE	<0.01	<0.03	<0.01 UJ	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW10-ROX-070918	7/9/2018		42 88	NE	<0.0098	<0.029	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	<0.0002	<0.0002	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098
	MW10-ROX-101018	10/10/2018	44.43 - 54.43	42 87	NE	<0.0095	<0.024	<0.0095	<0.000095	<0 000095	<0.0095	<0.000095	<0.0095	<0.000095	<0 000095	<0 0095	<0.0095	<0.0095	<0.024	<0.024	<0.000095	<0.0095	<0.000095	<0.0095
MW-11	MW11-ROX-011216	1/12/2016	41 66 - 51 66	40 33	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW11-ROX-041116	4/11/2016		39.49	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW11-ROX-071316	7/13/2016		38 59	NE	<0 00065 U	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW11-ROX-101216	10/12/2016		37 93	NE	<0.0098	<0.029	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	<0.0002	<0.0002	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098
	MW11-ROX-011117	1/11/2017		37 63	NE	<0 00097 U	<0.028	<0.0093	<0 00019	<0.00019	<0.0093	<0.00019	<0.0093	<0.00019	<0.00019	<0 0093	<0.019	<0.0093	<0.0093	<0.019	<0 00019	<0.0093	<0.00019	<0.0093
	MW11-ROX-041417	4/14/2017		38.17	NE	<0 00051 U	<0.028	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	0.00004 J	0.000057 J J	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW11-ROX-071017	7/10/2017		36 39	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW11-ROX-100917	10/9/2017		36 32	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	<0.00019	<0.00019	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096
	MW11-ROX-011018	1/10/2018		39 00	NE	<0.0095	<0.028	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	<0.00019	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW11-ROX-040618	4/6/2018		39 98	NE	<0.0098	<0.03	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	<0.0002	<0.0002	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098
	MW11-ROX-070918	7/9/2018		40 54	NE	<0 011	<0.032	<0.011	<0 00021	<0.00021	<0 011	<0.00021	<0.011	<0.00021	<0.00021	<0.011	<0.021	<0.011	<0.011	<0.021	<0 00021	<0 011	<0.00021	<0.011
	MW11-ROX-101118	10/11/2018	41 66 - 51 66	40 65	NE	<0.0098	<0.029	<0.0098 UJ	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098 UJ	<0.0002	<0.0002	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0 0098 UJ	<0 0002	<0.0098 UJ
MW-12	MW12-ROX-011116	1/11/2016	41 92 - 51 92	40 98	NE	<0.01	<0.03	<0 01	0 00037	<0.0002	<0.01	0.00014 J	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	0.000088 J	<0.01	0 00016 J	<0.01
	MW12-ROX-040716	4/7/2016		39 82	NE	<0.01	<0.03	<0 01	0 000074 J	0 000069 J	<0.01	0 000064 J	<0 01	0.000046 J	0 000086 J	<0.01	<0.02	<0.01	<0 01	<0.02	0 00014 J	<0.01	0.000039 J	<0.01
	MW12-ROX-071216	7/12/2016		38 89	NE	0.00055 J J	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	0.000051 J J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW12-ROX-101116	10/11/2016		38 85	NE	<0.01	<0.03	<0.01 UJ	0 000052 J	<0.0002	<0.01	<0.0002	<0 01	0.000025 J	0 000036 J	<0.01 UJ	<0.02 UJ	<0.01	<0 01	<0.02	<0.0002	<0.01	0.000029 J	<0.01
	MW12-ROX-010917	1/9/2017		38.11	NE	0 00051 J B	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW12-ROX-041417	4/14/2017		38 50	NE	<0.01	<0.03	<0 01	0 000021 J	<0.0002	<0.01	<0.0002	<0 01	0.000025 J	0.000036 J J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW-12-ROX-07072017	7/7/2017		36 84	NE	<0.0097	<0.029	<0.0097	<0 00019	<0.00019	<0.0097	<0.00019	<0.0097	0.000031 J	0 000045 J	<0 0097	<0.019	<0.0097	<0.0097	<0.019	<0 00019	<0.0097	<0.00019	<0.0097
	MW12-ROX-100617	10/6/2017		37 23	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	<0.00019	0 000024 J	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096
	MW12-ROX-011118	1/11/2018		39 62	NE	<0.0094	<0.028	<0.0094 UJ	0.00003 J	<0.00019	<0.0094	<0.000063 U	<0.0094 UJ	<0.00019	<0.00019	<0 0094	<0.019	<0.0094	<0.0094	<0.019	<0 00019	<0.0094	0 00002 J	<0.0094 UJ
	MW12-ROX-040518	4/5/2018		40 50	NE	<0.0099	<0.03	<0.0099 UJ	0 000025 J	<0.0002	<0.0099	<0.0002	<0.0099	<0.0002	<0.0002	<0 0099	<0.02	<0.0099	<0.0099	<0.02	<0.0002	<0.0099	0.000031 J	<0.0099 UJ
	MW12-ROX-040518-DUP	4/5/2018		40 50	NE	<0.0099	<0.03	<0.0099 UJ	0 000023 J	<0.0002	<0.0099	<0.0002	<0.0099	<0.0002	<0.0002	<0 0099	<0.02	<0.0099	<0.0099	<0.02	<0.0002	<0.0099	0.000028 J	<0.0099 UJ
	MW12-ROX-070618	7/6/2018		41 03	NE	<0.011 UJ	<0.032	<0.011	<0 00021	<0.00021	<0 011	<0.00021	<0.011	<0.00021	<0.00021	<0.011	<0.021	<0.011	<0.011	<0.021	<0 00021	<0 011	<0.00021	<0.011
	MW12-ROX-101018	10/10/2018	41 92 - 51 92	40 84	NE	<0.0095	<0.024	<0.0095	0 000077 J	<0 000095	<0.0095	0 000066 J	<0.0095	<0.000095	<0 000095	<0 0095	<0.0095	<0.0095	<0.024	<0.024	<0.000095	<0.0095	0.000071 J	<0.0095

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs															
						Di-n-octyl phthalate	2,4-Dinitrophenol	1,4-Dioxane	Fluoranthene	Fluorene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	2-Nitrophenol	4-Nitrophenol	Pentachlorophenol	Phenanthrene	Phenol	Pyrene	Pyridine
Screening Values (mg/L)						0.14 [2]	0.014 [2]	0.0077 [1]	0.28 [1]	0.28 [1]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]			0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]	0.007 [3]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																	
MW-13	MW13-ROX-010716	1/7/2016	25 57 - 35 57	27.16	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.00021	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW13-ROX-040816	4/8/2016		26 81	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW13-ROX-071116	7/11/2016		26 01	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW13-ROX100716	10/7/2016		25.16	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW13-ROX-010617	1/6/2017		25 54	NE	0.0005 J	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW13-ROX-041317	4/13/2017		25.75	NE	<0.01	<0.03	<0 01	<0 001	<0.001	<0.01	<0 001	<0 01	<0.001	<0.001	<0.01	<0.02	<0.01	<0 01	<0.02	<0.001	<0.01	<0.001	<0.01
	MW13-ROX-070717	7/7/2017		23 64	NE	<0.0095	<0.029	<0.0095	<0 00095	<0.00095	<0.0095	<0.00095	<0.0095	<0.00095	<0.00095	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00095	<0.0095	<0.00095	<0.0095
	MW13-ROX-101017	10/10/2017		25 20	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	<0.00019	<0.00019	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096
	MW13-ROX-010918	1/9/2018		27 20	NE	<0 00045 U	<0.029 UJ	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	<0.00019	<0 0095	<0.019	<0.0095	<0.0096 UJ	<0.019 UJ	<0 00019	<0.0095	<0.00019	<0.0095
	MW13-ROX-040618	4/6/2018	24 80 - 34 80	27.71	NE	<0.0098	<0.029	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	<0.0002	<0.0002	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098
	MW13-ROX-070918	7/9/2018		27.6	NE	<0.0098	<0.029	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	<0.0002	<0.0002	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098
	MW13-ROX-101118	10/11/2018	24 80 - 34 80	27 66	NE	<0.0097	<0.029	<0.0097 UJ	<0 00019	<0.00019	<0.0097	<0.00019	<0.0097 UJ	<0.00019	<0.00019	<0 0097	<0.019	<0.0097	<0.0097	<0.019	<0 00019	<0 0097 UJ	<0.00019	<0.0097 UJ
MW-14	MW-14-ROX-010816	1/8/2016	33.42 - 43.42	31 64	NE	<0.01	<0.03	<0 01	<0.0002	0 000095 J	<0.01	0 000066 J	<0 01	0.00013 J	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW14-ROX-041416	4/14/2016		31 32	NE	<0.01	<0.03	<0 01	<0.0002	0 000084 J	<0.01	<0.0002	<0 01	0.000084 J	0.00004 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW14-ROX-071116	7/11/2016		30 59	NE	0.00054 J J	<0.03	<0 01	<0.0002	0 000029 J	<0.01	<0.0002	<0 01	0.000057 J	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW14-ROX-101416	10/14/2016		29 62	NE	0.00055 J H J	<0.029 UJ	<0.0095 UJ	<0 00019	0.00004 J *	<0 0095 UJ	<0.00019	<0.0095 UJ	0.000095 J J	0.000046 J J	<0.0095 UJ	<0.019 UJ	<0.0095 UJ	<0.0095 UJ	<0.019 UJ	<0 00019	<0 0095 UJ	<0.00019	<0.0095 UJ
	MW14-ROX-011117	1/11/2017		29 61	NE	0.0005 J	<0.029	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	<0.0002	<0.0002	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098
	MW14-ROX-041317	4/13/2017		29 54	NE	<0.0099	<0.03	<0.0099	<0.0002	<0.0002	<0.0099	<0.0002	<0.0099	0.000026 J	<0.0002	<0 0099	<0.02	<0.0099	<0.0099	<0.02	<0.0002	<0.0099	<0 0002	<0.0099
	MW14-ROX-070717	7/7/2017		28 28	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	0.000056 J	<0.00019	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW14-ROX-101017	10/10/2017		29.44	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	<0.00019	<0.00019	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096
	MW14-ROX-010918	1/9/2018		31 34	NE	<0.000034 U	<0.029 UJ	<0 00071	<0.000014	<0 000014	<0.00071	<0.000014	<0 00071	0 0000015 J	<0 000014	<0.00071	<0.0014	<0.00071	<0.0096 UJ	<0.019 UJ	<0.000014	<0.00071	<0.000014	<0.00071
	MW14-ROX-010918-DUP	1/9/2018		31 34	NE	<0.0007 U	<0.029 UJ	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	0.000021 J	<0.00019	<0 0095	<0.019	<0.0095	<0.0096 UJ	<0.019 UJ	<0 00019	<0.0095	<0.00019	<0.0095
	MW14-ROX-041018	4/10/2018		31 96	NE	<0.01	<0.031	<0 01	<0.0002	<0.0002	<0 01 UJ	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01 UJ	<0 0002	<0 01 UJ
	MW14-ROX-071118	7/11/2018		32 06	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	0.000032 J J	0.000033 J J	<0 0096	<0.019	<0.0096	<0.0096 UJ	<0.019	<0 00019	<0.0096	<0.00019	<0.0096 UJ
	MW14-ROX-101518	10/15/2018	33.42 - 43.42	32 32	NE	0.0019 J	<0.029	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	0.000083 J	0.00012 J	<0 0098	<0.02	<0.0098	<0.0098 UJ	<0.02	<0.0002	<0.0098	<0 0002	<0.0098
MW-16	MW16-ROX-011216	1/12/2016	37 06 - 47 06	41 99	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW16-ROX-040816	4/8/2016		41.17	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW16-ROX-071216	7/12/2016		39 93	NE	0.00072 J J	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW16-ROX-101116	10/11/2016		39 64	NE	<0.0099	<0.03	<0.0099 UJ	<0.0002	<0.0002	<0.0099	<0.0002	<0.0099	0.00002 J	0 000033 J	<0.0099 UJ	<0.02 UJ	<0.0099	<0.0099	<0.02	<0.0002	<0.0099	<0 0002	<0.0099
	MW16-ROX-010917	1/9/2017		39.15	NE	<0 00052 U	<0.029	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	<0.0002	<0.0002	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098
	MW16-ROX-041417	4/14/2017		39.45	NE	<0.0097	<0.029	<0.0097	<0 00019	<0.00019	<0.0097	<0.00019	<0.0097	<0.00019	<0.00019	<0 0097	<0.019	<0.0097	<0.0097	<0.019	<0 00019	<0.0097	<0.00019	<0.0097
	MW16-ROX-071017	7/10/2017		38.16	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	<0.00019	<0.00019	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096
	MW16-ROX-100617	10/6/2017		38 04	NE	<0.0096	<0.029	0.0017 J	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	<0.00019	0.00002 J	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096
	MW16-ROX-010818	1/8/2018		40.71	NE	<0.0095	<0.029	<0.0095	0 000027 J	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	<0.00019	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	0 00002 J	<0.0095 UJ
	MW16-ROX-040618	4/6/2018	37 50 - 47 50	41 54	NE	<0.0098	<0.029	<0.0098 UJ	0 000023 J	<0.0002	<0.0098	<0.0002	<0.0098	<0.0002	<0.0002	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	0.000033 J	<0.0098 UJ
	MW16-ROX-070618	7/6/2018		42 35	NE	<0 011	<0.033	<0.011	<0 00022	<0.00022	<0 011	<0.00022	<0.011	<0.00022	<0.00022	<0.011	<0.022	<0.011	<0.011	<0.022	0 000029 J J	<0 011	<0.00022	<0.011
	MW16-ROX-100518	10/5/2018	37 50 - 47 50	42 24	NE	<0.0098	<0.029	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	<0.0002	<0.0002	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						Di-n-octyl phthalate	2,4-Dinitrophenol	1,4-Dioxane	Fluoranthene	Fluorene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	2-Nitrophenol	4-Nitrophenol	Pentachlorophenol	Phenanthrene	Phenol	Pyrene	Pyridine
Screening Values (mg/L)						0.14 [2]	0.014 [2]	0.0077 [1]	0.28 [1]	0.28 [1]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]			0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]	0.007 [3]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																		
MW-22	MW22-ROX-011516	1/15/2016	37 88 - 47 88	40.42	NE	<0.01	<0.03	<0 01	<0 002	<0.002	0.029	<0 002	<0 01	0.022	0 038	0 0095 J	0.021	<0.01	<0 01	<0.02	<0.002	0.015	<0.002	0 0032 J
	MW22-ROX-011516-DUP	1/15/2016		40.42	NE	<0.01	<0.03	<0 01	<0 002	<0.002	0.027	<0 002	<0 01	0.019	0 033	0 0083 J	0 019 J	<0.01	<0 01	<0.02	<0.002	0.013	<0.002	<0.01
	MW22-ROX-041316	4/13/2016		39 56	NE	<0.01 UJ	<0 03 UJ	<0.01 UJ	<0.0002	<0.0002	0 032 H J	<0.0002	<0.01 UJ	0.019	0 026	<0.01 UJ	0 018 J H J	<0 01 UJ	<0.01 UJ	<0 02 UJ	<0.0002	<0.01 UJ	<0 0002	<0 01 UJ
	MW22-ROX-041316-DUP	4/13/2016		39 56	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	0.02	<0.0002	<0 01	0.014	0 016	0 016	0 014 J	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW22-ROX-071516	7/15/2016		38 97	NE	<0 00072 U	<0.03	<0 01	<0.0002	<0.0002	0.0043 J	<0.0002	<0 01	0.0032 J	0.0048	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW22-ROX-071516-DUP	7/15/2016		38 97	NE	<0 00086 U	<0.03	<0 01	<0.0002	<0.0002	0.005 J	<0.0002	<0 01	0.0041 J	0 006	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW22-ROX-101716	10/17/2016		38.17	NE	<0.0098	<0.029	<0.0098	<0 00098	<0.00098	<0.0098	<0.00098	<0.0098	0 0061	0.0079 J	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0 00098	<0.0098	<0.00098	<0.0098
	MW22-ROX-101716-DUP	10/17/2016		38.17	NE	<0 0098 UJ	<0.029	<0.0098	<0 00098	<0.00098	0.0076 J	<0.00098	<0.0098	0 0048	0.006 J	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0 00098	<0.0098	<0.00098	<0.0098
	MW22-ROX-011217	1/12/2017		37 80	NE	<0 00056 U	<0.028	<0.0093	<0 00093	<0.00093	0.0064 J	<0.00093	<0.0093	0 0055	0.0089	<0 0093	<0.019	<0.0093	<0.0093	<0.019	<0 00093	<0.0093	<0.00093	<0.0093
	MW22-ROX-011217-DUP	1/12/2017		37 80	NE	0 00073 J B	<0.031	<0 01	<0 001	<0.001	0.0067 J	<0 001	<0 01	0 0057	0.0093	<0.01	<0.02	<0.01	<0 01	<0.02	<0.001	<0.01	<0.001	<0.01
	MW22-ROX-041717	4/17/2017		38 24	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	0.0084 J	<0.00019	<0.0095	0 0072	0.011 J	<0 0095	0.0025 J	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW22-ROX-041717-DUP	4/17/2017		38 24	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	0.01	<0.00019	<0.0096	0 0091	0.015 J	<0 0096	0.0023 J	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096
	MW22-ROX-071217	7/12/2017		36 83	NE	<0.01	<0.03	<0 01	<0 00041	<0.00041	0.0047 J	<0.00041	<0 01	0.005	0.0065	<0.01	<0.02	<0.01	<0 01	<0.02	<0 00041	<0.01	<0.00041	<0.01
	MW22-ROX-071217-DUP	7/12/2017		36 83	NE	<0.01 UJ	<0.03	<0 01	<0.0004	<0.0004	0.0048 J	<0.0004	<0 01	0 0053	0.0071	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0004	<0.01	<0 0004	<0.01
	MW22-ROX-101317	10/13/2017		36 94	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	0.0015 J	<0.00019	0 00066 J	0.0014 J	0.0015 J	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW22-ROX-101317-DUP	10/13/2017		36 94	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	0.0017 J	<0.00019	0 00063 J	0.00092 J	0.0011 J	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096
	MW22-ROX-011118	1/11/2018		39 25	NE	<0.0096	<0.029	<0.0096 UJ	<0 00019	<0.00019	0.0097	<0.00019	<0.0096 UJ	0.012 J	0.02 J	<0 0096	0.0043 J	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096 UJ
	MW22-ROX-011118-DUP	1/11/2018		39 25	NE	<0.0095	<0.029	<0.0095 UJ	<0 00019	<0.00019	0.013	<0.00019	<0.0095 UJ	0.016 J	0.026 J	<0 0095	0 006 J	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095 UJ
	MW22-ROX-041018	4/10/2018	38.43 - 48.43	NM	NE	<0 0099 UJ	<0 03 UJ	<0.0099 UJ	<0 0002 UJ	<0.0002 UJ	0.02 J	<0 0002 UJ	<0.0099 UJ	0.028 J	0.04 J	<0.0099 UJ	0.011 J J	<0.0099 UJ	<0.0099 UJ	<0 02 UJ	<0.0002 UJ	<0 0099 UJ	<0.0002 UJ	<0.0099 UJ
	MW22-ROX-071018	7/10/2018		40 88	NE	<0 011	<0.033	<0.011	<0 00022	<0.00022	0.031	<0.00022	<0.011	0.024	0 035	<0.011	0.0099 J	<0.011	<0.011	<0.022	<0 00022	<0 011	<0.00022	<0.011
	MW22-ROX-101518	10/15/2018	38.43 - 48.43	41.11	NE	<0 053	<0.16	<0.053	<0 00021	<0.00021	0.019 J	<0.00021	<0.053	0.019	0 028	<0.053	<0.11	<0.053	<0.053 UJ	<0.11	0 00016 J	<0 053	0.000026 J	<0.053
MW-23	MW-23-ROX-010716	1/7/2016	29 02 - 39 02	28.78	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	0 000022 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	0.000027 J	<0.01
	MW-23-ROX-040616	4/6/2016		27 96	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW-23-ROX-070816	7/8/2016		27 54	NE	<0.0015 U	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.000033 J	0 000039 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW23-ROX-BP-100716	10/7/2016		26 64	NE	<0 0098 UJ	<0.029	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	0.00002 J	0 000024 J	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098
	MW23-ROX-011017	1/10/2017		26 83	NE	<0 00052 U	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	<0.00019	<0.00019	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096
	MW23-ROX-041117	4/11/2017		27 54	NE	<0.0098	<0.029	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	0.000049 J	0 000049 J	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098
	MW23-ROX-071017	7/10/2017		25.13	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	<0.00019	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW23-ROX-100517	10/5/2017		26.42	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019 UJ	<0.0095	<0.00019	<0.00019	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019 UJ	<0.0095
	MW23-ROX-010518	1/5/2018		28 52	NE	<0.0095	<0.029	0.0013 J	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	<0.00019	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	0 00002 J	<0.0095
	MW-23-ROX-040918	4/9/2018		29 24	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0.01 UJ	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW23-ROX-070918	7/9/2018		29.1	NE	<0 011	<0.033	<0.011	<0.0011	<0.0011	<0 011	<0.0011	<0.011	<0.0011	<0.0011	<0.011	<0.022	<0.011	<0.011	<0.022	<0.0011	<0 011	<0 0011	<0.011
	MW23-ROX-100918	10/9/2018		29 00	NE	<0 0095 UJ	<0.024	<0.0095	<0.000096	0.0001	<0.0095	<0.000096	<0.0095 UJ	0.000055 J	0 000087 J	<0 0095	<0.0095	<0.0095	<0.024	<0.024 UJ	0.00018	<0.0095	0.000025 J	<0.0095
MW-24	MW24-ROX-011316	1/13/2016	38 89 - 48 89	41.44	NE	<0.01	<0.03	<0 01	0 000036 J	<0.0002	<0.01	0 000057 J	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	0.000034 J	<0.01
	MW24-ROX-040816	4/8/2016		40.79	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW24-ROX-071216	7/12/2016		39 67	NE	0.00073 J J	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.00003 J	0.000035 J J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW24-ROX-101116	10/11/2016		39.19	NE	<0.01	<0.03	<0.01 UJ	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.000021 J	0 000029 J	<0.01 UJ	<0.02 UJ	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW24-ROX-010917	1/9/2017		38 97	NE	<0 00072 U	<0.03	<0.0099	<0.0002	<0.0002	<0.0099	<0.0002	<0.0099	<0.0002	<0.0002	<0 0099	<0.02	<0.0099	<0.0099	<0.02	<0.0002	<0.0099	<0 0002	<0.0099
	MW24-ROX-041717	4/17/2017		39.42	NE	<0.0099	<0.03	<0.0099	<0.0002	<0.0002	<0.0099	<0.0002	<0.0099	0.00003 J	0 000048 J	<0 0099	<0.02	<0.0099	<0.0099	<0.02	<0.0002	<0.0099	<0 0002	<0.0099
	MW-24-ROX-07072017	7/7/2017		37 68	NE	<0.0098	<0.029	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	<0.0002	0 000023 J	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098
	MW24-ROX-100617	10/6/2017		37 93	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	0 000022 J	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW24-ROX-010818	1/8/2018		40 36	NE	<0.0095	<0.028	<0.0095	0 000024 J	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	<0.00019	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095 UJ
	MW24-ROX-040618	4/6/2018	39 61 - 49 61	41 28	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	0.000027 J	<0.01
	MW24-ROX-040618-DUP	4/6/2018		41 28	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW24-ROX-070618	7/6/2018		41 87	NE	<0 011	<0.033	<0.011	<0 00022	<0.00022	<0 011	<0.00022	<0.011	<0.00022	<0.00022	<0.011	<0.022	<0.011	<0.011	<0.022	<0 00022	<0 011	<0.00022	<0.011
	MW24-ROX-100518	10/5/2018	39 61 - 49 61	41 81	NE	<0.0097	<0.029	<0.0097	<0 00019	<0.00019	<0.0097	<0.00019	<0.0097	<0.00019	<0.00019	<0 0097	<0.019	<0.0097	<0.0097	<0.019	<0 00019	<0.0097	<0.00019	<0.0097

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs															
						Di-n-octyl phthalate	2,4-Dinitrophenol	1,4-Dioxane	Fluoranthene	Fluorene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	2-Nitrophenol	4-Nitrophenol	Pentachlorophenol	Phenanthrene	Phenol	Pyrene	Pyridine
Screening Values (mg/L)						0.14 [2]	0.014 [2]	0.0077 [1]	0.28 [1]	0.28 [1]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]			0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]	0.007 [3]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																	
MW-25	MW25-ROX-011416	1/14/2016	35 59 - 45 59	36.12	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0 0004	0.00017 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	0.049	<0 0002	<0.01
	MW25-ROX-041916	4/19/2016		35 67	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.00031	0.00015 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	0.031	<0 0002	<0.01
	MW25-ROX-071816	7/18/2016		35.19	NE	<0 0023 UJ	<0 03 UJ	<0.01 UJ	<0 0002 UJ	<0.0002 UJ	<0 01 UJ	<0 0002 UJ	<0.01 UJ	0.000067 J H J	0.000047 J H J	<0.01 UJ	<0.02 UJ	<0 01 UJ	<0.01 UJ	<0 02 UJ	<0.0002 UJ	0.02 H J	<0.0002 UJ	<0 01 UJ
	MW25-ROX-100616	10/6/2016		34 27	NE	0.00064 J	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.00021	0 000049 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	0.0095 J	<0 0002	<0.01
	MW25-ROX-011117	1/11/2017		34 00	NE	0.00046 J	<0.029	<0.0097	<0 00019	<0.00019	<0.0097	<0.00019	<0.0097	0.00019	<0.00019	<0 0097	<0.019	<0.0097	<0.0097	<0.019	<0 00019	<0.0097	<0.00019	<0.0097
	MW25-ROX-041117	4/11/2017		34 31	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	0.00024	0 000033 J	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	0.0042 J	<0.00019	<0.0095
	MW25-ROX-071017	7/10/2017		32.75	NE	<0 0096 UJ	<0.029 UJ	<0.0096 UJ	<0 00019	<0.00019	<0 0096 UJ	<0.00019	<0.0096 UJ	0.000063 J	0 000032 J	<0.0096 UJ	<0.019 UJ	<0.0096 UJ	<0.0096 UJ	<0.019 UJ	<0 00019	<0 0096 UJ	<0.00019	<0.0096 UJ
	MW25-ROX-100517	10/5/2017		33 52	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	0.000039 J	0 000026 J	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW25-ROX-010918	1/9/2018		35 80	NE	<0.01	<0.029 UJ	<0 01	<0.0002	<0.0002	<0.01	0 000067 J	<0 01	<0.0002	<0.0002	<0.01	<0.02 UJ	<0.01	<0.0095 UJ	<0.019 UJ	<0.0002	<0.01	<0 0002	<0.01
	MW25-ROX-040918	4/9/2018		36.49	NE	<0.01	<0.031	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0.01 UJ	0.000028 J	0 000033 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW25-ROX-071018	7/10/2018		36.71	NE	<0.01	<0.031	<0 01	<0 00021	<0.00021	<0.01	<0.00021	<0 01	<0.00021	<0.00021	<0.01	<0.021	<0.01	<0 01	<0.021	<0 00021	<0.01	<0.00021	<0.01
	MW25-ROX-100818	10/8/2018	35 59 - 45 59	36.73	NE	<0.0097	<0.029	<0.0097	<0 00019	<0.00019	<0.0097	<0.00019	<0.0097	<0.00019	<0.00019	<0 0097	<0.019	<0.0097	<0.0097	<0.019	<0 00019	<0.0097	<0.00019	<0.0097
MW-26	MW26-ROX-010716	1/7/2016	38.15 - 48.15	39 55	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW26-ROX-040616	4/6/2016		38.44	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW26-ROX-071216	7/12/2016		37.74	NE	0.00058 J J	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW26-ROX-101016	10/10/2016		37.13	NE	0.00051 J J	<0.03	<0.01 UJ	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.0001 J	0.00016 J	<0.01	<0.02 UJ	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW26-ROX-010617	1/6/2017		36.74	NE	0.00042 J	<0.028	<0.0093	<0 00019	<0.00019	<0.0093	<0.00019	<0.0093	<0.00019	<0.00019	<0 0093	<0.019	<0.0093	<0.0093	<0.019	<0 00019	<0.0093	<0.00019	<0.0093
	MW26-ROX-041417	4/14/2017		36 91	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW-26-ROX-07072017	7/7/2017		35 61	NE	<0.0097	<0.029	<0.0097	<0 00019	<0.00019	<0.0097	<0.00019	<0.0097	<0.00019	0 000028 J	<0 0097	<0.019	<0.0097	<0.0097	<0.019	<0 00019	<0.0097	<0.00019	<0.0097
	MW26-ROX-100517	10/5/2017		36.10	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	0.000021 J	0.00003 J	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW26-ROX-010818	1/8/2018		38.41	NE	<0.0095	<0.029	<0.0095	0 000023 J	<0.00019	<0.0095	<0.00019	<0.0095	0.000024 J	0 000031 J	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095 UJ
	MW26-ROX-040518	4/5/2018		39 22	NE	<0.0098	<0.03	<0.0098 UJ	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	<0.0002	<0.0002	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098 UJ
	MW26-ROX-070618	7/6/2018		39.73	NE	<0 011	<0.032	<0.011	<0 00022	<0.00022	<0 011	<0.00022	<0.011	<0.00022	0.000026 J J	<0.011	<0.022	<0.011	<0.011	<0.022	<0 00022	<0 011	<0.00022	<0.011
	MW26-ROX-100918	10/9/2018	38.15 - 48.15	39 53	NE	<0 0095 UJ	<0.024	<0.0095	<0.000096	<0 000096	<0.0095	<0.000096	<0.0095 UJ	0.00003 J	0 000044 J	<0 0095	<0.0095	<0.0095	<0.024	<0.024 UJ	0.000048 J	<0.0095	<0.000096	<0.0095
MW-27	MW27-ROX-011316	1/13/2016	39.79 - 49.79	40 68	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW27-ROX-041116	4/11/2016		39.73	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.000034 J	0 000051 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW-27-ROX-071316	7/13/2016		38 94	NE	<0 00054 U	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.00002 J	0 000028 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	MW27-ROX-101216	10/12/2016		38 50	NE	<0.0098	<0.029	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	<0.0002	<0.0002	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098
	MW27-ROX-011117	1/11/2017		38 05	NE	<0.0093	<0.028	<0.0093	<0 00019	<0.00019	<0.0093	<0.00019	<0.0093	<0.00019	<0.00019	<0 0093	<0.019	<0.0093	<0.0093	<0.019	<0 00019	<0.0093	<0.00019	<0.0093
	MW27-ROX-041417	4/14/2017		38.72	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	0.000025 J	0.000032 J J	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW27-ROX-071017	7/10/2017		37 23	NE	<0 0099 UJ	<0.03	<0.0099	<0.0002	<0.0002	<0.0099	<0.0002	<0.0099	0.000029 J	0 000036 J	<0 0099	<0.02	<0.0099	<0.0099	<0.02	<0.0002	<0.0099	<0 0002	<0.0099
	MW27-ROX-100917	10/9/2017		37.17	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	<0.00019	0 000025 J	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096
	MW27-ROX-011018	1/10/2018		38 98	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	<0.00019	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW27-ROX-040618	4/6/2018		40 34	NE	<0.0098	<0.03	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	<0.0002	<0.0002	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098
	MW27-ROX-070918	7/9/2018		41.16	NE	<0 011	<0.032	<0.011	<0 00022	0 000025 J	<0 011	<0.00022	<0.011	0.000058 J	0 000081 J	<0.011	<0.022	<0.011	<0.011	<0.022	<0 00022	<0 011	<0.00022	<0.011
	MW27-ROX-100918	10/9/2018	39.79 - 49.79	41 06	NE	<0 0095 UJ	<0.024	<0.0095	<0.000096	0 000027 J	<0.0095	<0.000096	<0.0095 UJ	0.000025 J	0 000043 J	<0 0095	<0.0095	<0.0095	<0.024	<0.024 UJ	0.000058 J	<0.0095	<0.000096	<0.0095
MW-28	MW28-ROX-011416	1/14/2016	33 61 - 43 61	39 98	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	0.013	<0 0002	<0.01
	MW28-ROX-041216	4/12/2016		39 20	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.000048 J	0 000055 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW28-ROX-071416	7/14/2016		38.49	NE	<0 00084 U	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW28-ROX-101316	10/13/2016		37 86	NE	<0.0098	<0.029	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	0.000057 J	0 000034 J	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098
	MW28-ROX-011217	1/12/2017		37.14	NE	0 00049 J B	<0.028	<0.0093	<0 00019	<0.00019	<0.0093	<0.00019	<0.0093	<0.00019	<0.00019	<0 0093	<0.019	<0.0093	<0.0093	<0.019	<0 00019	0.0028 J	<0.00019	<0.0093
	MW28-ROX-041717	4/17/2017		38 05	NE	<0.0099	<0.03	<0.0099	<0.0002	<0.0002	<0.0099	<0.0002	<0.0099	0.00016 J	0 000092 J	<0 0099	<0.02	<0.0099	<0.0099	<0.02	<0.0002	<0.0099	<0 0002	<0.0099
	MW28-ROX-071217	7/12/2017		36.48	NE	0.00049 J	<0.03	<0.0099	<0.0004	<0.0004	<0.0099	<0.0004	<0.0099	<0.0004	<0.0004	<0 0099	<0.02	<0.0099	<0.0099	<0.02	<0.0004	<0.0099	<0 0004	<0.0099
	MW28-ROX-100917	10/9/2017		36.44	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	0.000092 J	0 000053 J	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096
	MW28-ROX-011018	1/10/2018		38.18	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	0.000066 J	0.00003 J	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	MW28-ROX-040618	4/6/2018		39 25	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	MW28-ROX-070918	7/9/2018		40 08	NE	<0 011	<0.032	<0.011	<0 00021	<0.00021	<0 011	<0.00021	<0.011	<0.00021	<0.00021	<0.011	<0.021	<0.011	<0.011	<0.021	<0 00021	<0 011	<0.00021	<0.011
	MW28-ROX-101118	10/11/2018	33 61 - 43 61	40 25	NE	<0.0098	<0.029	<0.0098 UJ	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098 UJ	0.000039 J	<0.0002	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0 0098 UJ	<0 0002	<0.0098 UJ

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						Di-n-octyl phthalate	2,4-Dinitrophenol	1,4-Dioxane	Fluoranthene	Fluorene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	2-Nitrophenol	4-Nitrophenol	Pentachlorophenol	Phenanthrene	Phenol	Pyrene	Pyridine
Screening Values (mg/L)						0.14 [2]	0.014 [2]	0.0077 [1]	0.28 [1]	0.28 [1]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]			0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]	0.007 [3]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																	
P-54	P54-ROX-011216	1/12/2016	38 00 - 63 00	40 22	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	P54-ROX-041216	4/12/2016		39.42	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	P54-ROX-071216	7/12/2016		38.44	NE	0.00083 J J	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.000038 J	0.000049 J J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	P54-ROX-101216	10/12/2016		37 85	NE	0.00086 J	<0.029	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	0.000038 J	0 000043 J	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098
	P54-ROX-010917	1/9/2017		37 80	NE	<0 00053 U	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	P54-ROX-041717	4/17/2017		38 30	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	P54-ROX-071017	7/10/2017		36 35	NE	<0.0099	<0.03	<0.0099	0 000041 J	<0.0002	<0.0099	<0.0002	<0.0099	0.000044 J	0 000055 J	<0 0099	<0.02	<0.0099	<0.0099	<0.02	<0.0002	<0.0099	0.000031 J	<0.0099
	P54-ROX-100617	10/6/2017		36.79	NE	<0.01	<0.031	<0 01	<0 00021	<0.00021	<0.01	<0.00021	<0 01	0.000046 J	0 000053 J	<0.01	<0.021	<0.01	<0 01	<0.021	<0 00021	<0.01	<0.00021	<0.01
	P54-ROX-011118	1/11/2018		39.10	NE	<0.0096	<0.029	<0.0096 UJ	0 000034 J	<0.00019	<0.0096	<0.0096 U	<0.0096 UJ	0.00002 J	<0.00019	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	0.000026 J	<0.0096 UJ
	P54-ROX-040618	4/6/2018		40 05	NE	<0.01	<0.03	<0 01	0 000032 J	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	0.000033 J	<0.01
	P54-ROX-070618	7/6/2018		40 51	NE	<0 011	<0.033	<0.011	<0 00022	<0.00022	<0 011	<0.00022	<0.011	0.000041 J J	0.00004 J J	<0.011	<0.022	<0.011	<0.011	<0.022	<0 00022	<0 011	<0.00022	<0.011
	P54-ROX-100518	10/5/2018	38 00 - 63 00	40.46	NE	<0.0098	<0.03	<0.0098	0 000022 J	<0.0002	<0.0098	<0.0002	<0.0098	0.000028 J	0 000032 J	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098
P-56	P56-ROX-011116	1/11/2016	40 82 - 65 82	44.78	NE	<0.01	<0.03	<0 01	<0.0002	0.00044	<0.01	<0.0002	<0 01	0.021	0 019	<0.01	0.0028 J	<0.01	<0 01	<0.02	0 0014	<0.01	<0 0002	<0.01
	P56-ROX-041416	4/14/2016		43.73	NE	<0.01	<0.03	<0 01	<0.0002	0.00014 J	<0.01	<0.0002	<0 01	0.02	0 021	<0.01	<0.02	<0.01	<0 01	<0.02	0 0011	<0.01	<0 0002	<0.01
	P56-ROX-071216	7/12/2016		42 87	NE	0.00093 J J	<0.03	<0 01	<0.0002	0.00019 J	<0.01	<0.0002	<0 01	0.011	0 011	<0.01	<0.02	<0.01	<0 01	<0.02	0.00053	<0.01	<0 0002	<0 01 UJ
	P56-ROX-101716	10/17/2016		42 35	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0 0069	0.0029	<0.01	<0.02	<0.01	<0 01	<0.02	0.00079	<0.01	<0 0002	<0.01
	P56-ROX-011217	1/12/2017		42 01	NE	<0 00078 U	<0.029	<0.0097	<0 00019	<0.00019	<0.0097	<0.00019	<0.0097	0.023	0 025	<0 0097	0.0024 J	<0.0097	<0.0097	<0.019	0 0012	<0.0097	0.000029 J	<0.0097
	P56-ROX-040617	4/6/2017		42.46	NE	<0.01 UJ	<0.03	<0 01	<0.0002	0 000095 J	<0.01	<0.0002	<0 01	0 0037	0 001	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	P56-ROX-071217	7/12/2017		41.11	NE	<0.01	<0.031	<0 01	<0 00041	<0.00041	<0.01	<0.00041	<0 01	0.014	0 014	<0.01	0.029	<0.01	<0 01	<0.021	0.00074	<0.01	<0.00041	<0.01
	P56-ROX-101117	10/11/2017		41 08	NE	<0.0098	<0.029	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	<0.0002	0.0037	<0 0098	0.0011 J	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098
	P56-ROX-011018	1/10/2018		43 63	NE	<0.0096	<0.029	<0.0096	<0 00019	0.00025	<0.0096	<0.00019	<0.0096	0.022	0 022	<0 0096	<0.019	<0.0096	<0.0096	<0.019	0.00081	<0.0096	0.000021 J	<0.0096
	P56-ROX-041118	4/11/2018		44.40	NE	<0.0098	<0.029	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	0.01	0.0014	<0 0098	<0.02	<0.0098	<0.0098	<0.02	0.00038	<0.0098	<0 0002	<0.0098
	P56-ROX-071118	7/11/2018		45 25	NE	<0 011	<0.033	<0.011	<0 00022	0.00019 J	<0 011	<0.00022	<0.011	0.02	0 016	<0.011	<0.022	<0.011	<0.011 UJ	<0.022	0.00059	<0 011	<0.00022	<0.011 UJ
	P56-ROX-101518	10/15/2018	40 82 - 65 82	45 37	NE	<0.0098	<0.029	<0.0098	<0.0002	0.00019 J	<0.0098	<0.0002	<0.0098	0.024	0 017	<0 0098	<0.02	<0.0098	<0.0098	<0.02	0.00057	<0.0098	<0 0002	<0.0098
P-57	P57-ROX-011216	1/12/2016	44.19 - 54.19	45 61	NE	<0.01	<0.03	<0 01	<0 001	0.00089 J	0.0037 J	<0 001	<0 01	0.038	0 057	<0.01	<0.02	<0.01	<0 01	<0.02	0 00071 J	0 21	<0.001	<0.01
	P57-ROX-041816	4/18/2016		44 80	NE	<0.01 UJ	<0 03 UJ	<0.01 UJ	<0 0002 UJ	0.00044 H J	0 0012 J H J	<0 0002 UJ	<0.01 UJ	0.019 H J	0 027 H J	<0.01 UJ	0.0012 J H J	<0 01 UJ	<0.01 UJ	<0 02 UJ	0 00037 H J	0.42 H J	<0.0002 UJ	<0 01 UJ
	P57-ROX-071316	7/13/2016		44 02	NE	<0 00069 U	<0.03	<0 01	<0 001	0.00053 J	<0.01	<0 001	<0 01	0.026	0 036	<0.01	<0.02	<0.01	<0 01	<0.02	0 00053 J	0.73	<0.001	<0 01 UJ
	P57-ROX-101816	10/18/2016		43.17	NE	<0.01	<0.03	<0 01	<0.0002	0.00064	0.0013 J	<0.0002	<0 01	0.027	0 037	<0.01	<0.02	<0.01	<0.01 UJ	<0.02	0.00064	1.1	<0 0002	<0.01
	P57-ROX-011617	1/16/2017		42 82	NE	<0.0098	<0.029	<0.0098	<0.0002	0.00045	<0.0098	<0.0002	<0.0098	0.023	0.03	<0 0098	<0.02	<0.0098	<0.0098	<0.02	0.00041	2.1	<0 0002	<0.0098
	P57-ROX-040717	4/7/2017		43 05	NE	<0 0097 UJ	<0.029 UJ	<0.0097 UJ	<0 001	0 00038 J J	0.001 J H J	<0 001	<0.0097 UJ	0.019	0 025	<0.0097 UJ	<0.019 UJ	<0.0097 UJ	<0.0097 UJ	<0.019 UJ	0.0002 J	0.95 H J	<0.001	<0.0097 UJ
	P57-ROX-071317	7/13/2017		41 95	NE	<0.0099	<0 03 UJ	<0.0099	<0.0002	0.00054	<0.0099	<0.0002	<0.0099	0.023	0.03	<0 0099	<0.02	<0.0099	<0.0099	<0 02 UJ	0.00038	0 63	0.000066 J	<0.0099
	P57-ROX-101617	10/16/2017		42 64	NE	<0.0095	<0.028 UJ	<0.0095	<0 00019	0.00047	0.0013 J	<0.00019	<0.0095	0.023	0 032	<0 0095	<0.019	<0.0095	<0.0095	<0.019 UJ	0.00049	0.093	0.000091 J	<0.0095
	P57-ROX-011818	1/18/2018		44 86	NE	<0.0095	<0.029	<0.0095	<0 00019	0.00049	<0.0095	<0.00019	<0.0095	0.024	0.032 J	<0 0095	<0.019	<0.0095 UJ	<0.0095	<0.019	0.00035	0.12	<0.00019	<0.0095 UJ
	P57-ROX-011818-DUP	1/18/2018		44 86	NE	<0.0095	<0.029	<0.0095	<0 00019	0.00076	0.0018 J	<0.00019	<0.0095	0.03	0.041 J	<0 0095	<0.019	<0.0095 UJ	<0.0095	<0.019	0 0005	0.14	<0.00019	<0.0095 UJ
	P57-ROX-041018	4/10/2018		45.45	NE	<0.01	<0.03	<0 01	<0.0002	0.00032	<0 01 UJ	<0.0002	<0 01	0.031	0 039	<0.01	<0.02	<0.01	<0 01	<0.02	0.00041	0 06	<0 0002	<0 01 UJ
	P57-ROX-071118	7/11/2018		45.76	NE	<0 011	<0.032	<0.011	<0 00021	0.00048 J	<0 011	<0.00021	<0.011	0.032	0 042	<0.011	<0.021	<0.011	<0.011 UJ	<0.021	0.00037	0.039	<0.00021	<0.011 UJ
	P57-ROX-071118-DUP	7/11/2018		45.76	NE	<0 011	<0.032	<0.011	<0 00022	<0 00022 UJ	<0 011	<0.00022	<0.011	0.032	0 043	<0.011	<0.022	<0.011	<0.011 UJ	<0.022	0.00039	0.057	<0.00022	<0.011 UJ
	P57-ROX-101618	10/16/2018	44.19 - 54.19	45 86	NE	<0.0097	<0.029	<0.0097	<0 00019	0.00033	<0.0097	<0.00019	<0.0097	0.021 J	0 027	<0 0097	<0.019	<0.0097	<0.0097 UJ	<0.019	0.00036	0.023	<0.00019	<0.0097
	P57-ROX-101618-DUP	10/16/2018		45 86	NE	<0.0097	<0.029	<0.0097	<0 00019	0.00043	<0.0097	<0.00019	<0.0097	0.027 J	0 034	<0 0097	<0.019	<0.0097	<0.0097 UJ	<0.019	0.00059	0.035	<0.00019	<0.0097
P-58	P58-ROX-011316	1/13/2016	40 21 - 65 21	43.18	NE	<0.01	<0.03	<0 01	0 000063 J	0.0012	0.0025 J	<0.0002	<0 01	0.062	0 083	<0.01	0 015 J	<0.01	<0 01	<0.02	0.00087	0.068	0 00017 J	<0.01
	P58-ROX-041816	4/18/2016		42 68	NE	<0.01 UJ	<0 03 UJ	<0.01 UJ	<0 0002 UJ	0 0012 H J	0.002 J H J	<0 0002 UJ	<0.01 UJ	0.061 H J	0 077 H J	<0.01 UJ	0.0035 J H J	<0 01 UJ	<0.01 UJ	<0 02 UJ	0.001 H J	0.45 H J	0.00024 H J	<0 01 UJ
	P58-ROX-071516	7/15/2016		42 05	NE	<0 00098 U	<0.03	<0 01	<0.0002	0.00063	0.0013 J	<0.0002	<0 01	0.024	0 033	<0.01	<0.02	<0.01	<0 01	0.002 J	0.00032	0 21	<0 0002	<0 01 UJ
	P58-ROX-101816	10/18/2016		41 05	NE	<0.0098	<0.029	<0.0098	<0 00098	0.00094 J	0.0014 J	<0.00098	<0.0098	0.042	0 052	<0 0098	0.0034 J	<0.0098	<0.0098 UJ	<0.02	0 00087 J	0.6	0 00018 J	<0.0098
	P58-ROX-011617	1/16/2017		40.73	NE	0.00072 J	<0.029	<0.0095	<0 00095	0.00098	0.0015 J	<0.00095	<0.0095	0.038	0 045	<0 0095	0.0041 J	<0.0095	<0.0095	<0.019	0.0008 J	0 33	0 00024 J	<0.0095
	P58-ROX-041117	4/11/2017		40.74	NE	<0.0095	<0.028	<0.0095	<0 00095	0.0012	<0.0095	<0.00095	<0.0095	0.051	0 053	<0 0095	<0.019	<0.0095	<0.0095	<0.019	0 0011	0.15	0 00027 J	<0.0095
	P58-ROX-071317	7/13/2017		39 88	NE	<0.01 UJ	<0 03 UJ	<0.01 UJ	<0.00039 UJ	0.00088 H J	<0 01 UJ	<0.00039 UJ	<0.01 UJ	0.037 H J	0 038 H J	<0.01 UJ	<0.02 UJ	<0 01 UJ	<0.01 UJ	<0 02 UJ	0 00097 H J	0.46	0.00064 H J	<0 01 UJ
	P58-ROX-041118	4/11/2018		43.19	NE	<0.01	<0.03	<0 01	<0.0002	0.0016	<0.01	<0.0002	<0 01	0.073	0 079	<0.01	<0.02	<0.01	<0 01	<0.02	0.0019 J	0 33	<0.0002 UJ	<0.01
	P58-ROX-041118-DUP	4/11/2018		43.19	NE	<0.0097	<0.029	<0.0097	<0 00019	0.0017	<0.0097	<0.00097	<0.0097	0.061	0 064	<0 0097	<0.019	<0.0097	<0.0097	<0.019	0.0014 J	0 25	<0.00019 UJ	<0.0097
	P58-ROX-101618	10/16/2018	40 21 - 65 21	43 66	NE	<0.0097	<0.029	<0.0097	<0 00019	0.0011	<0.0097	<0.00019	<0.0097	0.029	0 021	<0 0097	0 001 J	<0.0097	<0.0097 UJ	<0.019	0 0011	0.093	0.00069	<0.0097

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs															
						Di-n-octyl phthalate	2,4-Dinitrophenol	1,4-Dioxane	Fluoranthene	Fluorene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	2-Nitrophenol	4-Nitrophenol	Pentachlorophenol	Phenanthrene	Phenol	Pyrene	Pyridine
Screening Values (mg/L)						0.14 [2]	0.014 [2]	0.0077 [1]	0.28 [1]	0.28 [1]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]			0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]	0.007 [3]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																	
P-59	P59-ROX-011216	1/12/2016	47 91 - 72 91	46.10	NE	0.00049 J	<0.03	<0 01	0.00017 J	0.00055 J	0.018	<0 001	<0 01	0.017	0 026	0 012	0.0068 J	<0.01	<0 01	<0.02	0 00089 J	<0.01	0 00019 J	0 0047 J
	P59-ROX-041816	4/18/2016		44 28	NE	<0.01 UJ	<0 03 UJ	<0.01 UJ	0.00022 J	0.00024 J	0.011 J	0.000044 J J	<0.01 UJ	0.011 J	0.017 J	0.0021 J J	0.0033 J J	<0 01 UJ	<0.01 UJ	<0 02 UJ	0 000093 J J	0 044 J	0 00016 J J	<0 01 UJ
	P59-ROX-071316	7/13/2016		44 01	NE	<0 00079 U	<0.03	<0 01	<0 001	<0.001	<0.01	<0 001	<0 01	0.018	0 021	<0.01	<0.02	<0.01	<0 01	<0.02	<0.001	<0.01	<0.001	<0 01 UJ
	P59-ROX-101816	10/18/2016		43 39	NE	<0.0098	<0.029	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	0.022	0 037	<0 0098	<0.02	<0.0098	<0.0098 UJ	<0.02	<0.0002	0.094	<0 0002	<0.0098
	P59-ROX-011617	1/16/2017		42 83	NE	0.00077 J	<0.03	<0.0099	<0 00099	0.00041 J	0.016	<0.00099	<0.0099	0.019	0 027	<0 0099	<0.02	<0.0099	<0.0099	<0.02	0.001	0.075	0 00014 J	<0.0099
	P59-ROX-040717	4/7/2017		43 31	NE	<0 0097 UJ	<0.029 UJ	<0.0097 UJ	0.00012 J	0.00023 J	0 016 H J	<0.00095	<0.0097 UJ	0.018	0 028	<0.0097 UJ	0.0034 J H J	<0.0097 UJ	<0.0097 UJ	<0.019 UJ	0 00043 J	0 047 H J	<0.00095	<0.0097 UJ
	P59-ROX-071317	7/13/2017		42.16	NE	<0.01	<0 03 UJ	<0 01	0.00016 J	<0.0002	0.018	<0.0002	<0 01	0.021	0 034	<0.01	<0.02	<0.01	<0 01	<0 02 UJ	0.00054	0.066	<0 0002	<0.01
	P59-ROX-101317	10/13/2017		41 87	NE	<0.0097	<0.029	<0.0097	<0 00019	<0 00039 UJ	0.0057 J	<0.00019	<0.0097	0.022	0.019 J	<0 0097	<0.019	<0.0097	<0.0097	<0.019	<0 00019	<0.0097	<0.00019	<0.0097
	P59-ROX-101317-DUP	10/13/2017		41 87	NE	<0.0098	<0.029	<0.0098	<0.0002	<0.0002	0.0081 J	<0.00039 UJ	<0.0098	0.024	0.027 J	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098
	P59-ROX-011118	1/11/2018		44.44	NE	<0.0096	<0.029	<0.0096 UJ	<0 00096	<0.00096	0.0063 J	<0 00036 U	<0.0096 UJ	0.024	0 035	<0 0096	<0.019	<0.0096	<0.0096	<0.019	0 0016	<0.0096	<0.00096	<0.0096 UJ
	P59-ROX-041218	4/12/2018		45.13	NE	<0.01	<0.03	<0 01	0.00005 J	0.00017 J	0.0048 J J	<0.0002	<0 01	0.02	0 036	<0.01	<0.02	<0.01	<0 01	<0.02	0.00056	0.015	0 0001 J	<0.01
	P59-ROX-071118	7/11/2018		46.16	NE	<0 011	<0.033	<0.011	0.00021 J	0.00063	0.0066 J	<0.00022	<0.011	0.013	0 023	<0.011	0.0038 J	<0.011	<0.011 UJ	<0.022	0.001	<0 011	0.00027	<0.011 UJ
	P59-ROX-101618	10/16/2018	47 91 - 72 91	45 99	NE	0 002 J	<0.029	<0.0097	0 00031	0 001	0.0092 J	<0.00019	<0.0097	0.021	0.03	<0 0097	0.0038 J	<0.0097	<0.0097 UJ	<0.019	0 0013	0.012	0.00065	<0.0097
P-66	P-66-ROX-010816	1/8/2016	34.72 - 59.72	34 64	NE	<0.01	<0.03	<0 01	0 000037 J	0.0012	<0.01	0 000049 J	<0 01	0.084 E J	0.01	<0.01	<0.02	<0.01	<0 01	<0.02	0.00055	<0.01	0.000043 J	<0.01
	P66-ROX-041516	4/15/2016		34 33	NE	<0.01	<0.03	<0 01	0 000042 J	0.00049	<0.01	<0.0002	<0 01	0.027	0.0099	<0.01	<0.02	<0.01	<0 01	<0.02	0.00035	<0.01	0.000054 J	<0.01
	P66-ROX-071116	7/11/2016		33 58	NE	<0.01	<0.03	<0 01	<0 001	0.00091 J	<0.01	<0 001	<0 01	0.062	0 013	<0.01	<0.02	<0.01	<0 01	<0.02	0 00054 J	<0.01	<0.001	<0 01 UJ
	P66-ROX-101416	10/14/2016		32 61	NE	<0 0095 UJ	<0.029 UJ	<0.0095 UJ	<0 00095	0 001 *	0 0028 J H J	<0.00095	<0.0095 UJ	0.056	0 028	<0.0095 UJ	<0.019 UJ	<0.0095 UJ	<0.0095 UJ	<0.019 UJ	<0 00095	<0 0095 UJ	0.00011 J *	<0.0095 UJ
	P66-ROX-011117	1/11/2017		32.41	NE	<0.0097	<0.029	<0.0097	<0 00097	<0.00097	0.006 J	<0.00097	<0.0097	0.011	<0.00097	<0 0097	<0.019	<0.0097	<0.0097	<0.019	<0 00097	<0.0097	0 00015 J	<0.0097
	P66-ROX-041317	4/13/2017		32.19	NE	<0.0098	<0.03	<0.0098	<0.0002	0.00053	0.001 J	<0.0002	<0.0098	0.022	0.0058	<0 0098	<0.02	<0.0098	<0.0098	<0.02	0.0001 J	<0.0098	0.000058 J	<0.0098
	P66-ROX-071217	7/12/2017		31 38	NE	<0.01	<0.03	<0 01	<0.0004	<0.0004	0.0019 J	<0.0004	<0 01	0.051 H J	0.03	<0.01	<0.02	<0.01	<0.01 UJ	<0.02	<0.0004	<0.01	0 00022 J J	<0.01
	P66-ROX-101017	10/10/2017		32 27	NE	<0.0097	<0.029	<0.0097	<0 00019	0.00055	0.0024 J	<0.00019	<0.0097	0.063	0 035	<0 0097	<0.019	<0.0097	<0.0097	<0.019	<0 00019	<0.0097	<0.00019	<0.0097
	P66-ROX-011118	1/11/2018		34 09	NE	<0.0096	<0.029	<0.0096 UJ	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096 UJ	0.072	0 035	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096 UJ
	P66-ROX-041018	4/10/2018		34 93	NE	<0.0099	<0.03	<0.0099	<0.0002	0 001	<0 0099 UJ	<0.0002	<0.0099	0.1	0 037	<0 0099	<0.02	<0.0099	<0.0099	<0.02	0.00065	<0 0099 UJ	<0 0002	<0.0099 UJ
	P66-ROX-071118	7/11/2018		35.10	NE	<0.0097	<0.029	<0.0097	<0 00097	0 0011 J	<0.0097	<0.00097	<0.0097	0.07	0 045	<0 0097	<0.019	<0.0097	<0.0097 UJ	<0.019	0 00033 J	<0.0097	<0.00097	<0.0097 UJ
	P66-ROX-071118-DUP	7/11/2018		35.10	NE	<0.0099	<0.03	<0.0099	<0 00099	0 0011 J	<0.0099	<0.00099	<0.0099	0.074	0 053	<0 0099	<0.02	<0.0099	<0.0099 UJ	<0.02	0 00047 J	<0.0099	<0.00099	<0.0099 UJ
	P66-ROX-101518	10/15/2018	34.72 - 59.72	35 31	NE	<0 049	<0.15	<0.049	<0 00019	<0.00019	<0 049	<0.00019	<0.049	0.046	0 023	<0.049	<0.097	<0.049	<0.049	<0.097	<0 00019	<0 049	<0.00019	<0.049
	P66-ROX-101518-DUP	10/15/2018		35 31	NE	<0 049	<0.15	<0.049	<0.0002	<0.0002	<0 049	<0.0002	<0.049	0.042	0 025	<0.049	<0.099	<0.049	<0.049	<0.099	<0.0002	<0 049	<0 0002	<0.049
P-74	P74-ROX-011116	1/11/2016	44.43 - 69.43	40 67	NE	0 00063 J B	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	P74-ROX-041516	4/15/2016		40.40	NE	<0.01	<0.03	<0 01	0 000022 J	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	0 00002 J	<0.01
	P74-ROX-071216	7/12/2016		39 56	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0 0011	0.0011	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	P74-ROX-101416	10/14/2016		39.44	NE	0.00047 J H J	<0.029 UJ	<0.0095 UJ	<0 00019	0.000086 J *	<0 0095 UJ	<0.00019	<0.0095 UJ	0 0017	0.0018	<0.0095 UJ	<0.019 UJ	<0.0095 UJ	<0.0095 UJ	<0.019 UJ	0 000034 J * J	<0 0095 UJ	<0.00019	<0.0095 UJ
	P74-ROX-011217	1/12/2017		38 64	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	0.000037 J	<0.01
	P74-ROX-040717	4/7/2017		38 92	NE	<0.01 UJ	<0.031 UJ	<0.01 UJ	<0 00022	<0.00022	<0 01 UJ	<0.00022	<0.01 UJ	<0.00022	<0.00022	<0.01 UJ	<0.021 UJ	<0 01 UJ	<0.01 UJ	<0.021 UJ	<0 00022	<0.01 UJ	<0.00022	<0 01 UJ
	P74-ROX-071217	7/12/2017		38 08	NE	<0.0099	<0.03	<0.0099	<0.0002	0 000065 J	<0.0099	<0.0002	<0.0099	0.00059	0 00042	<0 0099	<0.02	<0.0099	<0.0099 UJ	<0.02	<0.0002	<0.0099	<0 0002	<0.0099
	P74-ROX-101617	10/16/2017		38 57	NE	<0.0096	<0.029 UJ	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	0 0012	0.0016	<0 0096	<0.019	<0.0096	<0.0096	<0.019 UJ	<0 00019	<0.0096	<0.00019	<0.0096
	P74-ROX-01108	1/10/2018		40 25	NE	<0.0095	<0.029	<0.0095	<0 00019	0 000085 J	<0.0095	<0.00019	<0.0095	0.002	0.0026	<0 0095	<0.019	<0.0095	<0.0095	<0.019	0.000065 J	0.035	<0.00019	<0.0095
	P74-ROX-041018	4/10/2018	43 83 - 68 83	40 69	NE	<0.0099	<0.03	<0.0099	<0.0002	<0.0002	<0 0099 UJ	<0.0002	<0.0099	<0.0002	<0.0002	<0 0099	<0.02	<0.0099	<0.0099	<0.02	<0.0002	<0 0099 UJ	<0 0002	<0.0099 UJ
	P74-ROX-041018-DUP	4/10/2018		40 69	NE	<0.0099	<0.03	<0.0099	<0.0002	<0.0002	<0 0099 UJ	<0.0002	<0.0099	<0.0002	<0.0002	<0 0099	<0.02	<0.0099	<0.0099	<0.02	<0.0002	<0 0099 UJ	<0 0002	<0.0099 UJ
	P74-ROX-071118	7/11/2018		42 22	NE	<0.0097	<0.029	<0.0097	<0 00019	<0.00019	<0.0097	<0.00019	<0.0097	<0.00019	<0.00019	<0 0097	<0.019	<0.0097	<0.0097 UJ	<0.019	<0 00019	<0.0097	<0.00019	<0.0097 UJ
	P74-ROX-101618	10/16/2018	43 83 - 68 83	42.18	NE	<0.0097	<0.029	<0.0097	<0 00019	0 000071 J	<0.0097	<0.00019	<0.0097	0 0013	0.0014	<0 0097	<0.019	<0.0097	<0.0097 UJ	<0.019	0 00004 J	0.0035 J	0 00002 J	<0.0097

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs															
						Di-n-octyl phthalate	2,4-Dinitrophenol	1,4-Dioxane	Fluoranthene	Fluorene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	2-Nitrophenol	4-Nitrophenol	Pentachlorophenol	Phenanthrene	Phenol	Pyrene	Pyridine
Screening Values (mg/L)						0.14 [2]	0.014 [2]	0.0077 [1]	0.28 [1]	0.28 [1]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]			0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]	0.007 [3]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																	
P-93A	P-93A-ROX-011216	1/12/2016	43 07 - 53 07	43.73	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.0047 J	0.0018 J	<0.01	0 002 J	<0.01	<0 01	<0.02	0 00011 J	0 24	<0 0002	<0.01
	P-93A-ROX-011216-DUP	1/12/2016		43.73	NE	<0.01	<0.03	<0 01	<0.0002	0.00018 J	<0.01	<0.0002	<0 01	0.0064 J	0.0031 J	<0.01	0 003 J	<0.01	<0 01	<0.02	0 00013 J	0.19	<0 0002	<0.01
	P93A-ROX-041916	4/19/2016		43 08	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.00051	0.00016 J	<0.01	<0.02	<0.01	<0 01	<0.02	0.000039 J	0.0061 J	<0 0002	<0.01
	P93A-ROX-041916-DUP	4/19/2016		43 08	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.00062	0 00025	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	0.0056 J	<0 0002	<0.01
	P93A-ROX-071316	7/13/2016		42 20	NE	<0.0012 U	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.00022	0.0001 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	0.0051 J	<0 0002	<0 01 UJ
	P93A-ROX-071316-DUP	7/13/2016		42 20	NE	<0.01	<0.03	<0 01	<0.0002	0.00007 J	<0.01	<0.0002	<0 01	0.00025	0.00012 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	0.0078 J	<0 0002	<0 01 UJ
	P93A-ROX-101816	10/18/2016		41 35	NE	0.00093 J J	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.00014 J	0 000068 J	<0.01	<0.02	0.00067 J	<0.01 UJ	<0.02	<0.0002	0.042	<0 0002	<0.01
	P93A-ROX-101816-DUP	10/18/2016		41 35	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.00018 J	0 000093 J	<0.01	<0.02	0 0017 J	<0.01 UJ	<0.02	<0.0002	0.051	<0 0002	<0.01
	P93A-ROX-011217	1/12/2017		41 04	NE	0.0008 J B	<0.029	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	0.00013 J	0 000095 J	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098
	P93A-ROX-011217-DUP	1/12/2017		41 04	NE	0.0006 J B	<0.032	<0.011	<0 00021	<0.00021	<0 011	<0.00021	<0.011	0.00015 J	0.0001 J	<0.011	<0.021	<0.011	<0.011	<0.021	<0 00021	<0 011	<0.00021	<0.011
	P93A-ROX-040717	4/7/2017		41 26	NE	<0 0095 UJ	<0.029 UJ	<0.0095 UJ	0 000045 J	<0.00019	<0 0095 UJ	0.0002	<0.0095 UJ	<0.00019	<0.00019	<0.0095 UJ	<0.019 UJ	<0.0095 UJ	<0.0095 UJ	<0.019 UJ	<0 00019	0 0077 J H J	0.000035 J	<0.0095 UJ
	P93A-ROX-040717-DUP	4/7/2017		41 26	NE	<0.011 UJ	<0.032 UJ	<0.011 UJ	<0 00021	<0.00021	<0.011 UJ	0 000046 J	<0 011 UJ	<0.00021	<0.00021	<0 011 UJ	<0.021 UJ	<0.011 UJ	<0.011 UJ	<0.021 UJ	<0 00021	0.01 J H J	<0.00021	<0.011 UJ
	P93A-ROX-071317	7/13/2017		40.11	NE	<0 019	<0.056 UJ	<0.019	<0 00037	<0.00037	<0 019	<0.00037	<0.019	0.00016 J	0.00018 J	<0.019	<0.037	<0.019	<0.019	<0.037 UJ	<0 00037	<0 019	<0.00037	<0.019
	P93A-ROX-101117	10/11/2017		40 87	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019 UJ	<0.0095	<0.00019	<0.00019	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019 UJ	<0.0095
	P93A-ROX-011118	1/11/2018		42.71	NE	<0.0096	<0.029	<0.0096 UJ	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096 UJ	0.00002 J	0 000025 J	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	0.012	<0.00019	<0.0096 UJ
	P93A-ROX-011118-DUP	1/11/2018		42.71	NE	<0.0096	<0.029	<0.0096 UJ	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096 UJ	0.000027 J	0 000023 J	<0 0096	<0.019	0 0019 J	0.0023 J	<0.019	<0 00019	0.0035 J	<0.00019	<0.0096 UJ
	P93A-ROX-041118	4/11/2018		43.48	NE	<0.0099	<0.03	<0.0099	<0.0002	<0.0002	<0.0099	<0.0002	<0.0099	0.00092	0 00047	<0 0099	<0.02	<0.0099	<0.0099	<0.02	0.000049 J	0 07	<0 0002	<0.0099
	P93A-ROX-052218	5/22/2018		43.48	NE																			
	P93A-ROX-071218	7/12/2018		44 03	NE	<0.0098	<0.029	<0.0098	<0.0002	0 000029 J	<0.0098	<0.0002	<0.0098	0.00033	0.00006 J	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	0.047	<0 0002	<0.0098
	P93A-ROX-101618	10/16/2018	43 07 - 53 07	44 05	NE	0 002 J	<0.029	<0.0097	0 000039 J	0 000095 J	<0.0097	<0.00019	<0.0097	0 0026	0 00075	<0 0097	<0.019	<0.0097	<0.0097 UJ	<0.019	0.000086 J	0.088	<0.00019	<0.0097
P-93B	P93B-ROX-011316	1/13/2016	74 60 - 76 60	44 96	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	0.071	<0 0002	<0.01
	P93B-ROX-041916	4/19/2016		44 54	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	0 21	<0 0002	<0.01
	P93B-ROX-071516	7/15/2016		43 65	NE	<0.0011 U	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	0.41	<0 0002	<0 01 UJ
	P93B-ROX-101816	10/18/2016		42.73	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0.01 UJ	<0.02	<0.0002	0.085	<0 0002	<0.01
	P93B-ROX-011017	1/10/2017		42.41	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	0 35	<0 0002	<0.01
	P93B-ROX-011017-DUP	1/10/2017		42.41	NE	<0.0098	<0.029	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	<0.0002	<0.0002	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	0.17	<0 0002	<0.0098
	P93B-ROX-040617	4/6/2017		42 59	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	<0.00019	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	0.14	<0.00019	<0.0095
	P93B-ROX-07117	7/11/2017		41 59	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	<0.00019	<0 0095	<0.019	<0.0095	<0.0095 UJ	<0.019	<0 00019	0.16	<0.00019	<0.0095 UJ
	P93B-ROX-07117-DUP	7/11/2017		41 59	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	<0.00019	<0.00019	<0 0096	<0.019	<0.0096	<0.0096 UJ	<0.019	<0 00019	0 22	<0.00019	<0.0096 UJ
	P93B-ROX-101117	10/11/2017		42 21	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	<0.00019	<0.00019	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	0 098 J	<0.00019	<0.0096
	P93B-ROX-101117-DUP	10/11/2017		42 21	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	<0.00019	<0 0095	0.0013 J	<0.0095	<0.0095	<0.019	<0 00019	0.28 J	<0.00019	<0.0095
	P93B-ROX-011518	1/15/2018		44.42	NE	<0.0095	<0.028	<0.0095 UJ	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095 UJ	<0.000074 U	<0 000053 U	<0 0095	0.0013 J	<0.0095	<0.0095	<0.019	<0 00019	0.058	<0.00019	<0.0095 UJ
	P93B-ROX-041218	4/12/2018	74 88 - 76 88	44.75	NE	<0.0099	<0.03	<0.0099	<0.0002	<0.0002	<0 0099 UJ	0 000041 J	<0.0099	0.000028 J	<0.0002	<0 0099	<0.02	<0.0099	<0.0099	<0.02	<0.0002	0 36	<0 0002	<0.0099
	P93B-ROX-041218-DUP	4/12/2018		44.75	NE	<0.0098	<0.029	<0.0098	<0.0002	<0.0002	<0 0098 UJ	<0.0002	<0.0098	0.000045 J	<0.0002	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	0 35	<0 0002	<0.0098
	P93B-ROX-071218	7/12/2018		45 36	NE	<0.0097	<0.029	<0.0097	<0 00019	<0.00019	0.019	<0.00019	<0.0097	0 0002	0 00032	0 0019 J	0 004 J	<0.0097	<0.0097	<0.019	<0 00019	0 35	<0.00019	<0.0097
	P93B-ROX-071218-DUP	7/12/2018		45 36	NE	<0.0097	<0.029	<0.0097	<0 00097	<0.00019	<0.0097	<0.00097	<0.0097	<0.00019	<0.00019	0 0019 J	0.0041 J	<0.0097	<0.0097	<0.019	<0 00097	0 33	<0.00097	<0.0097
	P93B-ROX-101518	10/15/2018	74 88 - 76 88	45 64	NE	<0.0097	<0.029	<0.0097	<0 00019	<0.00019	<0.0097	<0.00019	<0.0097	<0.00019	<0.00019	0 0021 J	0.0058 J	<0.0097	<0.0097	<0.019	<0 00019	0 22 *	<0.00019	<0.0097
	P93B-ROX-101518-DUP	10/15/2018		45 64	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	<0.00019	<0.00019	0 0023 J	0.0061 J	<0.0096	<0.0096	<0.019	<0 00019	0 25 *	<0.00019	<0.0096
P-93C	P-93C-ROX-010816	1/8/2016	92.47 - 97.47	44 68	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	P93C-ROX-041816	4/18/2016		44 06	NE	<0.01 UJ	<0 03 UJ	<0.01 UJ	0 000023 J J	<0.0002 UJ	<0 01 UJ	<0 0002 UJ	<0.01 UJ	0.000089 J J	0.00013 J J	<0.01 UJ	<0.02 UJ	<0 01 UJ	<0.01 UJ	<0 02 UJ	<0.0002 UJ	<0.01 UJ	<0.0002 UJ	<0 01 UJ
	P93C-ROX-071216	7/12/2016		43 37	NE	0.00053 J J	<0.03	<0 01	<0.0002	<0.0002	<0.01	0 000044 J	<0 01	0.000055 J	0 000053 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	P93C-ROX-101816	10/18/2016		42.49	NE	0.00046 J	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	0.000048 J	0 000063 J	<0 0095	<0.019	<0.0095	<0.0095 UJ	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	P93C-ROX-011117	1/11/2017		42 20	NE	0.00062 J	<0.029	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	<0.0002	<0.0002	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0.0098	<0 0002	<0.0098
	P93C-ROX-040517	4/5/2017		42.19	NE	<0.0095	<0.028	<0.0095	<0 00019	<0.00019	<0.0095	0 000051 J	<0.0095	0.000033 J	0 000037 J	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	P93C-ROX-071217	7/12/2017		41 30	NE	<0.0098	<0.03	<0.0098	<0 00039	<0.00039	<0.0098	<0.00039	<0.0098	0.000083 J	<0.00039	<0 0098	<0.02	<0.0098	<0.0098 UJ	<0.02	<0 00039	<0.0098	<0.00039	<0.0098
	P93C-ROX-101117	10/11/2017		42 04	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	<0.00019	<0.00019	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096
	P93C-ROX-011118	1/11/2018		43 95	NE	<0.0095	<0.029	<0.0095 UJ	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095 UJ	0.000033 J	0 000034 J	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095 UJ
	P93C-ROX-041118	4/11/2018	92 88 - 97 88	44 69	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.000054 U	<0 01	0.000048 J	<0.0002	<0 01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	P93C-ROX-071218	7/12/2018		45 22	NE	<0.01	<0.031	<0 01	<0 00021	<0.00021	<0.01	0 000062 J	<0 01	<0.00021	<0.00021	<0.01	<0.021	<0.01	<0 01	<0.021	<0 00021	<0.01	<0.00021	<0.01
	P93C-ROX-101518	10/15/2018	92 88 - 97 88	45 31	NE	<0.0098	<0.029	<0.0098	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098	<0.0002	<0.0002	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	0.013	<0 0002	<0.0098

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						Di-n-octyl phthalate	2,4-Dinitrophenol	1,4-Dioxane	Fluoranthene	Fluorene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	2-Nitrophenol	4-Nitrophenol	Pentachlorophenol	Phenanthrene	Phenol	Pyrene	Pyridine
Screening Values (mg/L)						0.14 [2]	0.014 [2]	0.0077 [1]	0.28 [1]	0.28 [1]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]			0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]	0.007 [3]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																		
P-93D	P93D-ROX-011316	1/13/2016	125.75 - 127.75	45.10	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	0.063	<0 0002	<0.01
	P93D-ROX-041916	4/19/2016		44 61	NE	0.00057 J	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.000032 J	0 000036 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	0.047	<0 0002	<0.01
	P93D-ROX-071516	7/15/2016		43 83	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0 01 UJ
	P93D-ROX-101716	10/17/2016		42.78	NE	<0 0095 UJ	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	<0.00019	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	P93D-ROX-011017	1/10/2017		42 59	NE	<0.0005 U	<0.029	<0.0097	<0 00019	<0.00019	<0.0097	<0.00019	<0.0097	<0.00019	<0.00019	<0 0097	<0.019	<0.0097	<0.0097	<0.019	<0 00019	<0.0097	<0.00019	<0.0097
	P93D-ROX-040617	4/6/2017		42 80	NE	<0.0095	<0.028	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	<0.00019	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	P93D-ROX-07117	7/11/2017		41 64	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	<0.00019	<0.00019	<0 0096	<0.019	<0.0096	<0.0096 UJ	<0.019	<0 00019	<0.0096	<0.00019	<0.0096 UJ
	P93D-ROX-101117	10/11/2017		42.42	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019 UJ	<0.0096	<0.00019	<0.00019	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096
	P93D-ROX-011718	1/17/2018		44 80	NE	<0 0095 UJ	<0.029 UJ	<0.0095 UJ	<0.00019 UJ	<0 00019 UJ	<0 0095 UJ	<0.00019 UJ	<0.0095 UJ	<0.00019 UJ	<0 00019 UJ	<0.0095 UJ	<0.019 UJ	<0.0095 UJ	<0.0095 UJ	<0.019 UJ	<0.00019 UJ	<0 0095 UJ	<0.00019 UJ	<0.0095 UJ
	P93D-ROX-041218	4/12/2018		45 95	NE	<0.01	<0.03	<0 01	0 000051 J	<0.0002	<0 01 UJ	0.00015 J	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	0.000076 J	<0.01
	P93D-ROX-071218	7/12/2018		45 57	NE	<0 011	<0.032	<0.011	<0 00021	<0.00021	<0 011	<0.0011	<0.011	<0.00021	<0.00021	<0.011	<0.021	<0.011	<0.011	<0.021	<0 00021	<0 011	<0 0011	<0.011
	P93D-ROX-101518	10/15/2018	125.75 - 127.75	45.70	NE	0.00057 J	<0.029	<0.0097	0 000035 J	<0.00019	<0.0097	0 000073 J	<0.0097	<0.00019	<0.00019	<0 0097	<0.019	<0.0097	<0.0097	<0.019	<0 00019	<0.0097	0.000035 J	<0.0097
P-114R	P114R-ROX-010716	1/7/2016	23 01 - 33 01	25 62	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0.000081 J	0 000095 J	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	P114R-ROX-040816	4/8/2016		25 65	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	P114R-ROX-070816	7/8/2016		24 95	NE	<0.05	<0.15	<0 05	<0.0002	<0.0002	<0.05	<0.0002	<0 05	<0.0002	<0.0002	<0.05	<0.1	<0.05	<0 05	<0.1	<0.0002	<0.05	<0 0002	<0 05 UJ
	P114R-ROX-100716	10/7/2016		23 89	NE	<0.0095	<0.029	<0.0095	<0 00019	<0.00019	<0.0095	<0.00019	<0.0095	<0.00019	<0.00019	<0 0095	<0.019	<0.0095	<0.0095	<0.019	<0 00019	<0.0095	<0.00019	<0.0095
	P114R-ROX-010617	1/6/2017		24 81	NE	<0 00063 U	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	<0.01	<0 0002	<0.01
	P114R-ROX-041317	4/13/2017		25 05	NE	<0.01	<0.03	<0 01	<0.0002	0 0001 J	<0.01	<0.0002	<0 01	<0.0002	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	0 00011 J	<0.01	<0 0002	<0.01
	P114R-ROX-071117	7/11/2017		22.45	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	0.000095 J	0.00014 J	<0 0096	<0.019	<0.0096	<0.0096 UJ	<0.019	0 00015 J	<0.0096	<0.00019	<0.0096 UJ
	P114R-ROX-101017	10/10/2017		24.45	NE	<0.0096	<0.029	<0.0096	<0 00019	<0.00019	<0.0096	<0.00019	<0.0096	<0.00019	<0.00019	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096
	P114R-ROX-010918	1/9/2018		26 37	NE	<0.0095	<0.029 UJ	<0.0095	<0 00095	0.00028 J	<0.0095	<0.00095	<0.0095	0.000095 J	0.0001 J	<0 0095	<0.019	<0.0095	<0.0095 UJ	<0.019 UJ	<0 00095	<0.0095	<0.00095	<0.0095
	P114R-ROX-040618	4/6/2018		26.76	NE	<0.0099	<0.03	<0.0099	<0.0002	<0.0002	<0.0099	<0.0002	<0.0099	<0.0002	<0.0002	<0 0099	<0.02	<0.0099	<0.0099	<0.02	<0.0002	<0.0099	<0 0002	<0.0099
	P114R-ROX-070918	7/9/2018		26 38	NE	<0.0097	<0.029	<0.0097	<0 00019	<0.00019	<0.0097	<0.00019	<0.0097	<0.00019	<0.00019	<0 0097	<0.019	<0.0097	<0.0097	<0.019	0 00017 J	<0.0097	<0.00019	<0.0097
	P114R-ROX-101118	10/11/2018	23 01 - 33 01	26 27	NE	<0.0098	<0.03	<0.0098 UJ	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098 UJ	<0.0002	<0.0002	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0 0098 UJ	<0 0002	<0.0098 UJ
	P114R-ROX-101118-DUP	10/11/2018		26 27	NE	<0.0098	<0.029	<0.0098 UJ	<0.0002	<0.0002	<0.0098	<0.0002	<0.0098 UJ	<0.0002	<0.0002	<0 0098	<0.02	<0.0098	<0.0098	<0.02	<0.0002	<0 0098 UJ	<0.00039	<0.0098 UJ
ROST-3-MW	ROST3MW-ROX-011416	1/14/2016	37 81 - 47 81	40 30	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0 0017	0.0014	<0.01	<0.02	<0.01	<0 01	<0.02	0.000096 J	<0.01	<0 0002	<0.01
	ROST3MW-ROX-041216	4/12/2016		39 69	NE	<0.01	<0.03	<0 01	<0.0002	<0.0002	<0.01	<0.0002	<0 01	0 002	0.00013 J	<0.01	<0.02	<0.01	<0 01	<0.02	0.000081 J	<0.01	<0 0002	<0.01
	ROST3MW-ROX-071416	7/14/2016		38.70	NE	<0 00097 U	<0.03	<0 01	<0.0002	0 000043 J	<0.01	<0.0002	<0 01	0 0013	0 00077	<0.01	<0.02	<0.01	<0 01	<0.02	0 00011 J	<0.01	<0 0002	<0.01
	ROST3MW-ROX-101316	10/13/2016		38.19	NE	<0.0098	<0.029	<0.0098	<0.0002	0.00011 J	<0.0098	<0.0002	<0.0098	0 0033	0.0034	<0 0098	<0.02	<0.0098	<0.0098	<0.02	0 00019 J	<0.0098	<0 0002	<0.0098
	ROST3MW-ROX-011117	1/11/2017		37 50	NE	<0.0093	<0.028	<0.0093	<0 00019	<0.00019	<0.0093	<0.00019	<0.0093	0 0038	<0.00019	<0 0093	<0.019	<0.0093	<0.0093	<0.019	<0 00019	<0.0093	<0.00019	<0.0093
	ROST3MW-ROX-041417	4/14/2017		38.16	NE	<0 00064 U	<0.029	<0.0095	<0 00019	0 000065 J	<0.0095	<0.00019	<0.0095	0 0025	<0.00019	<0 0095	<0.019	<0.0095	<0.0095	<0.019	0.000085 J	<0.0095	<0.00019	<0.0095
	ROST3MW-ROX-071117	7/11/2017		36 61	NE	<0.01	<0.03	<0 01	<0.0002	0 000085 J	<0.01	<0.0002	<0 01	0 0029	0.0014	<0.01	<0.02	<0.01	<0.01 UJ	<0.02	0 00018 J	<0.01	0 00003 J	<0 01 UJ
	ROST3MW-ROX-101217	10/12/2017		38 05	NE	<0.0096	<0.029	<0.0096	<0 00019	0 000062 J	<0.0096	<0.00019	<0.0096	0 0015	<0.00019	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	<0.0096	<0.00019	<0.0096
	ROST3MW-ROX-112017-R	11/20/2017		38 05	NE																			
	ROST3MW-ROX-011518	1/15/2018		40 00	NE	<0.0095	<0.029	0.0018 J J	0 000035 J	0 000061 J	<0.0095	<0.00019	<0.0095 UJ	0.0011 B	<0 000042 U	<0 0095	<0.019	<0.0095	<0.0095	<0.019	0.000058 J	<0.0095	0.000025 J	<0.0095 UJ
	ROST3MW-ROX-022618	2/26/2018		40 00	NE																			
	ROST3MW-ROX-040618	4/6/2018		39 98	NE	<0.0098	<0.029	<0.0098	<0.0002	0 000087 J	<0.0098	<0.0002	<0.0098	<0.0002	<0.0002	<0 0098	<0.02	<0.0098	<0.0098	<0.02	0.000067 J	<0.0098	<0 0002	<0.0098
	ROST3MW-ROX-070518	7/5/2018		40.74	NE	<0.01	<0.031	<0 01	<0 00021	<0.00021	<0.01	<0.00021	<0 01	0.00043 B	<0.00021	<0.01	<0.021	<0.01	<0 01	<0.021	0.000054 J	<0.01	<0.00021	<0.01
	ROST3MW-ROX-100918	10/9/2018	37 81 - 47 81	40.72	NE	<0 0095 UJ	<0.024	<0.0095	<0.000095	0.00016 J	<0.0095	<0.000095	<0.0095 UJ	0.00032	0.000091 J J	<0 0095	<0.0095	<0.0095	<0.024	<0.024 UJ	0 00026 J	<0.0095	0 00002 J	<0.0095
ROST-4-PZ(C)	ROST4PZC-ROX-011516	1/15/2016	34 95 - 44 95	40 54	NE	<0.01	<0.03	<0 01	<0 002	<0.002	<0.01	<0 002	<0 01	0.02	0.02	<0.01	0 001 J	<0.01	<0 01	<0.02	<0.002	<0.01	<0.002	<0.01
	ROST4PZC-ROX-041316	4/13/2016		39 61	NE	<0.01	<0.03	<0 01	0 000026 J	0.00026	<0.01	<0.0002	<0 01	0.02	0 016	<0.01	<0.02	<0.01	<0 01	<0.02	0.00021	<0.01	0.000028 J	<0.01
	ROST4PZC-ROX-071516	7/15/2016		38 93	NE	<0 00081 U	<0.03	<0 01	<0.0002	0.00019 J	<0.01	<0.0002	<0 01	0 0035	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	0 00013 J	<0.01	<0 0002	<0 01 UJ
	ROST4PZC-ROX-101316	10/13/2016		38.45	NE	<0.0096	<0.029	<0.0096	<0 00019	0.00059	<0.0096	<0.00019	<0.0096	0.057	0 063	<0 0096	<0.019	<0.0096	<0.0096	<0.019	0.00098	<0.0096	0.000023 J	<0.0096
	ROST4PZC-ROX-011217	1/12/2017		37 88	NE	0 00057 J B	<0.028	<0.0094	0.00002 J	0.00093	<0.0094	<0.00019	<0.0094	0.048	0 057	<0 0094	<0.019	<0.0094	<0.0094	<0.019	0 0022	<0.0094	0.000048 J	<0.0094
	ROST4PZC-ROX-041717	4/17/2017		38 24	NE	<0.0097	<0.029	<0.0097	0 000022 J	0.00066	<0.0097	<0.00019	<0.0097	0.026	0 016	<0 0097	<0.019	<0.0097	<0.0097	<0.019	0.00045	<0.0097	0.000043 J	<0.0097
	ROST4PZC-ROX-071217	7/12/2017		37 20	NE	<0.01	<0 03 UJ	<0 01	<0.0002	0.00013 J	<0.01	<0.0002	<0 01	0.00014 J	<0.0002	<0.01 UJ	0.0026 J J	<0 01 UJ	<0.01 UJ	<0 02 UJ	<0.0002	<0.01 UJ	<0 0002	<0.01
	ROST4PZC-ROX-101217	10/12/2017		36 88	NE	<0.0096	<0.029	<0.0096	<0 00019	0.0013	0.0021 J	<0.00096 UJ	<0.0096	0.058	0.07	<0 0096	<0.019	<0.0096	<0.0096	<0.019	0 0031	<0.0096	<0.00096 UJ	<0.0096
	ROST4PZC-ROX-011518	1/15/2018		39 04	NE	<0.0095	<0.028	<0.0095 UJ	0.00005 J	0.00071	<0.0095	<0.00019	<0.0095 UJ	0 026 B	0.0025 B	<0 0095	<0.019	<0.0095	<0.0095	<0.019	0 0021	<0.0095	0 00012 J	<0.0095 UJ
	ROST4PZC-ROX-040918	4/9/2018		40.13	NE	<0.01	<0.03	<0 01	<0.0002	0.0002	<0.01	<0.0002	<0.01 UJ	0 0043	<0.0002	<0.01	<0.02	<0.01	<0 01	<0.02	0.00068	<0.01	0 00006 J	<0 01 UJ
	ROST4PZC-ROX-070918	7/9/2018		40 87	NE	<0 011	<0.033	<0.011	<0 00022	0.00019 J	<0 011	<0.00022	<0.011	0.002	0.00011 J	<0.011	<0.022	<0.011	<0.011	<0.022	0.00062	<0 011	0.000034 J	<0.011
	ROST4PZC-ROX-101218	10/12/2018	34 95 - 44 95	40 91	NE	<0.0098	<0.029	<0.0098 UJ	<0.0002	0.00032	0.0012 J	<0.0002	<0.0098 UJ	0 0064	0 00058	<0 0098	<0.02	<0.0098	<0.0098	<0.02	0.00083	<0 0098 UJ	<0 0002	<0.0098 UJ

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs															
						Di-n-octyl phthalate	2,4-Dinitrophenol	1,4-Dioxane	Fluoranthene	Fluorene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	2-Nitrophenol	4-Nitrophenol	Pentachlorophenol	Phenanthrene	Phenol	Pyrene	Pyridine
Screening Values (mg/L)						0.14 [2]	0.014 [2]	0.0077 [1]	0.28 [1]	0.28 [1]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]			0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]	0.007 [3]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																	
ROST-4-PZ(E)	ROST-4-PZ(E)-ROX-101317	10/13/2017	34.75 - 44.75	35 98	NE	<0.0099	<0.03	<0.0099	0.00012 J	0.0014	0.004 J	<0.0002	<0.0099	0.033	0 036	<0 0099	0.0014 J	<0.0099	<0.0099	<0.02	0 0041	0.0065 J	0 0002	<0.0099
	ROST4PZE-ROX-011518	1/15/2018		38 07	NE	<0.0095	<0.029	<0.0095 UJ	0 000066 J	0.0012	0.003 J	<0.00019	<0.0095 UJ	0 046 B	0.045 B	<0 0095	<0.019	<0.0095	<0.0095	<0.019	0 0032	<0.0095	0.00019	<0.0095 UJ
	ROST4PZE-ROX-040918	4/9/2018		38 93	NE	<0.01	<0.03	<0 01	0.00011 J	<0.0002	<0.01	<0.0002	<0.01 UJ	0.024	0 019	<0.01	<0.02	<0.01	<0 01	<0.02	0 0021	<0.01	0.00045	<0 01 UJ
	ROST4PZE-ROX-071018	7/10/2018		39 52	NE	<0 011	<0.033	<0.011	0 00054	<0.00022	<0.011	0 000061 J	<0.011	0.011	0 014	<0.011	<0.022	<0.011	<0.011	<0.022	0 0042	<0 011	0 0008	<0.011
	ROST4PZE-ROX-101518	10/15/2018	34.75 - 44.75	39.76	NE	<0 049	<0.15	<0.049	<0.0002	<0.0002	<0 049	<0.0002	<0.049	0 0051	0 004	<0.049	<0.098	<0.049	<0.049	<0.098	0 0028	<0 049	<0 0002	<0.049
ROST-4-PZ(G)	ROST4PZG-ROX-101217	10/12/2017	34 28 - 44 28	36 58	NE	<0.0097	<0.029	<0.0097	<0 00019	<0.00019	<0.0097	<0.00019	<0.0097	0.00019	0.00012 J	<0 0097	<0.019	<0.0097	<0.0097	<0.019	<0 00019	<0.0097	<0.00019	<0.0097
	ROST4PZG-ROX-01118	1/11/2018		38 95	NE	<0.0095	<0.028	<0.0095 UJ	<0 00019	0 000038 J	<0.0095	<0.00019	<0.0095 UJ	0.00009 J	0.00011 J	<0 0095	<0.019	<0.0095	<0.0095	<0.019	0 00012 J	<0.0095	<0.00019	<0.0095 UJ
	ROST4PZG-ROX-040918	4/9/2018		40 07	NE	<0 0098 UJ	<0.029	<0.0098	0 000026 J	<0.0002	<0.0098	<0.0002	<0.0098 UJ	<0.0002	<0.0002	<0 0098	<0.02	<0.0098	<0.0098	<0.02	0.0001 J	<0.0098	0.000032 J	<0.0098 UJ
	ROST4PZG-ROX-070918	7/9/2018		40 81	NE	<0 011	<0.032	<0.011	<0 00021	<0.00021	<0 011	<0.00021	<0.011	<0.00021	<0.00021	<0.011	<0.021	<0.011	<0.011	<0.021	0.000087 J	<0 011	<0.00021	<0.011
	ROST4PZG-ROX-101218	10/12/2018	34 28 - 44 28	40 93	NE	<0.0097	<0.029	<0.0097 UJ	<0 00019	<0.00019	<0.0097	<0.00019	<0.0097 UJ	0.00012 J	0.00014 J	<0 0097	<0.019	<0.0097	<0.0097	<0.019	0 00013 J	<0 0097 UJ	<0.00019	<0.0097 UJ
T-12	T12-ROX-011216	1/12/2016	46 83 - 72 83	44.13	NE	<0.01	<0.03	<0 01	<0.0004	0.00033 J	<0.01	<0.0004	<0 01	0.021	0 031	<0.01	<0.02	<0.01	<0 01	<0.02	0.00088	0.064	<0 0004	<0.01
	T12-ROX-041516	4/15/2016		42 07	NE	<0.01	<0.03	<0 01	0 000027 J	0.0003	<0.01	<0.0002	<0 01	0.017	0 024	<0.01	<0.02	<0.01	<0 01	<0.02	0.00049	0.098	0.000034 J	<0.01
	T12-ROX-071216	7/12/2016		41 50	NE	0.00076 J J	<0.03	<0 01	<0.0002	0.00022	<0.01	<0.0002	<0 01	0 0072	0 002	<0.01	<0.02	<0.01	<0 01	<0.02	<0.0002	0.038	0.000048 J	<0 01 UJ
	T12-ROX-101716	10/17/2016		41.19	NE	<0.0098	<0.029	<0.0098	<0.0002	0.00028	<0.0098	<0.0002	<0.0098	0.017	0 021	<0 0098	<0.02	<0.0098	<0.0098	<0.02	0 0006	0.073	<0 0002	<0.0098
	T12-ROX-011217	1/12/2017		40.70	NE	0 00053 J B	<0.029	<0.0098	<0.0002	<0.0002	0.0018 J	<0.0002	<0.0098	0 0039	0 00028	<0 0098	0 001 J	<0.0098	<0.0098	<0.02	<0.0002	0.13	0 00007 J	<0.0098
	T12-ROX-040617	4/6/2017		41.18	NE	<0 0096 UJ	<0.029	<0.0096	<0 00019	<0.00019	0.0044 J	<0.00019	<0.0096	<0.00019	<0.00019	<0 0096	<0.019	<0.0096	<0.0096	<0.019	<0 00019	0.021	<0.00019	<0.0096
	T12-ROX-071317	7/13/2017		40.10	NE	<0.0095	<0.029 UJ	<0.0095	0 000041 J	0.00027	0.0014 J	<0.00019	<0.0095	0.018	0 026	<0 0095	<0.019	<0.0095	<0.0095	<0.019 UJ	0.00053	0.028	0.000072 J	<0.0095
	T12-ROX-101317	10/13/2017		39.48	NE	<0.0098	<0.029	<0.0098	<0.0002	0.00045	0.0017 J	<0.0002	<0.0098	0.03	0 033	<0 0098	<0.02	<0.0098	<0.0098	<0.02	0.00084	0.052	0.000061 J	<0.0098
	T12-ROX-011018	1/10/2018		42.14	NE	<0.0096	<0.029	<0.0096	0.00002 J	0.00029	<0.0096	<0.00019	<0.0096	0.021	0 033	<0 0096	<0.019	<0.0096	<0.0096	<0.019	0.00062	0 08	0.000038 J	<0.0096
	T12-ROX-041218	4/12/2018		43 03	NE	<0.0099	<0.03	<0.0099	<0.0002	0.00031	<0 0099 UJ	<0.0002	<0.0099	0.033	0 036	<0 0099	<0.02	<0.0099	<0.0099	<0.02	0 0008	0.037	<0 0002	<0.0099
	T12-ROX-071118	7/11/2018		44.12	NE	<0 011	<0.033	<0.011	<0 00022	0.00028	<0 011	<0.00022	<0.011	0.022	0 034	<0.011	<0.022	<0.011	<0.011 UJ	<0.022	0.00054	0.053	0.000033 J	<0.011 UJ
	T12-ROX-101618	10/16/2018	46 83 - 72 83	43 90	NE	0.0017 J	<0.029	<0.0097	0 000057 J	0.00046	<0.0097	<0.00019	<0.0097	0.022	0 031	<0 0097	<0.019	<0.0097	<0.0097 UJ	0 0018 J	0.00065	0.032	0.000054 J	<0.0097

Notes

1 Denotes screening critieria source from 35 I.A.C. 620, Subpart D.

2 Denotes screening critieria source from 35 I.A.C. 742 (TACO), Appendix B, Table E.

3 Denotes screening criteria source from IL EPA Toxicity Assessment Unit (Chemicals not in TACO, Tier 1 Tables).

Groundwater monitoring wells designated for sampling in the Interim Groundwater Monitoring Program, P-55R and P-68, contained LNAPL and, therefore, were not sampled.

The screened interval for certain monitoring wells was adjusted based on an evaluation of the results of annual bottom depth gauging conducted in 1Q18.

Indicates a historical exceedance of screening criteria.

Indicates a current exceedance of screening criteria.

Empty shaded cell without a value indicates previous quarter analyte result was rejected, the analyte was not analyzed, or the TIC was not identified.

Empty cell without a value indicates current quarter analyte result was rejected or the analyte was not analyzed.

LABORATORY QUALIFIERS

B = Target analyte was identified in the method blank, indicating possible lab contamination.

J = The analyte was detected below the reporting limit. Result is estimated.

E = The value exceeds calibration range.

H = Analyzed or extracted out of holding time criteria.

F1 = Indicates MS and/or MSD recovery is outside acceptance limit.

F2 = MS/MSD RPD exceeds control limits.

* = Indicates LCS and/or LCSD and/or LCS/LCSD RPD is outside contol limit, and/or internal standard recovery is outside contol limit.

p = The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

<#.## Indicates the analyte was not detected above the given reporting limit.

AECOM QUALIFIERS

J = The result is estimated.

UJ = Estimated non-detect.

U = Result is non-detect.

Figures

The following EVS Descriptions and Assumptions apply to **Figure 6**. C Tech Development Corporation's Environmental Visualization System PRO, Version 9.89 (EVS-PRO) was used to model the estimated distribution of benzene in the groundwater.

EVS Descriptions and Assumptions:

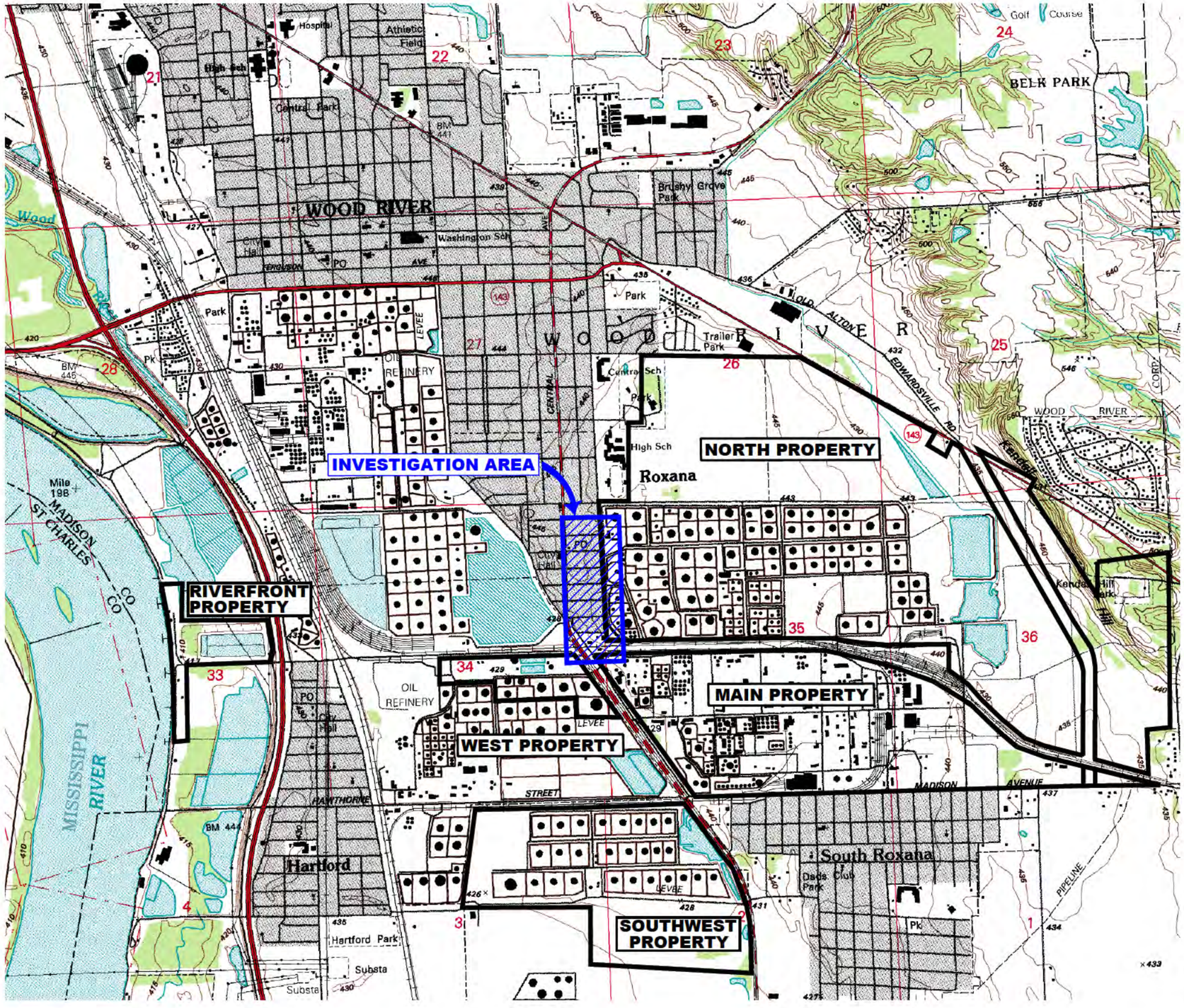
Plan View Model Output – The data input for the plan view model was not limited by depth and was modeled in two dimensions (2D). Regardless of sample depth, benzene concentrations were modeled on a flat horizontal plane.

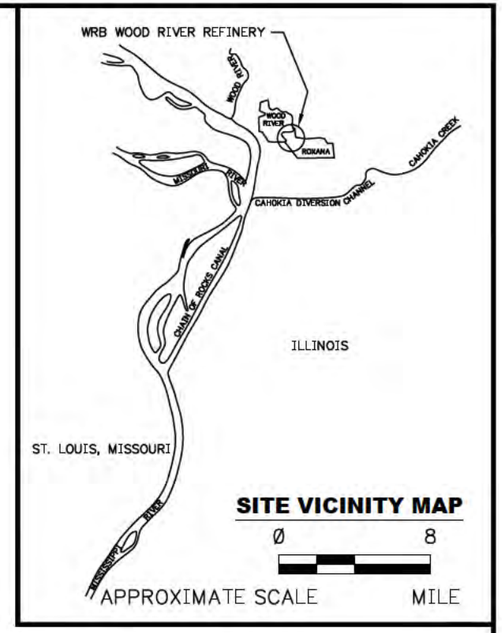
Inward Kriging / Boundary Cut-off – This method of Kriging limits the horizontal extent of data modeling to the extent of the data on the x/y plane in a convex hull.

More simplified, if each sampling location were represented by a tack pushed into the model's surface and a rubber band stretched around them, the model would be represented by the space inside the rubber band.

Duplicate Samples – In locations and depths where duplication samples were collected, the higher concentration was used.

Detection Limits – In cases where the lab reported a non-detect, half the value of the lab reporting limit was used in the model. This conservative method is based on the assumption that the sample is likely not free of benzene but the quantity contained is lower than detectable at the analyzed dilution.





LEGEND

WOOD RIVER REFINERY PROPERTY BOUNDARY

INVESTIGATION AREA

SOURCE: ELECTRONIC USGS DIGITAL RASTER GRAPHIC 7.5 MINUTE TOPOGRAPHIC MAP OF WOOD RIVER, IL–MO REVISED 1994.

Ø 2000

APPROXIMATE SCALE FEET

EQUILON ENTERPRISES LLC dba SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS	PROJECT NO. 60527968
AECOM	
DRN. BY: djd January 2019 DSGN. BY: djd CHKD. BY: bj	Investigation Area Location Map
	FIG. NO. 1

File: G:\STLOUIS\DCS\PROJECTS\ENVSHELL\60527968 ROXANA 2018\500 DELIVERABLES (DELIV)\QUARTERLY GW\4Q18\DRAFT\FIGURES\FIGURE 1 INVESTIGATION AREA LOCATION MAP.DWG Last edited: 01/04/19 ● 10:51 a.m. ● WCC-ST.LOUIS

File: G:\STLOUIS\DCS\PROJECTS\ENV\SHELL\60527968 ROXANA 2018\500 DELIVERABLES (DELIV)\QUARTERLY GW\4Q18\DRAFT\FIGURES\FIGURE 2 GROUNDWATER MONITORING WELL SAMPLING LOCATIONS.DWG Last edited: JAN. 04, 19 @ 10:54 a.m. by: wendy.pennington

LEGEND

- ROXANA INTERIM GROUNDWATER MONITORING WELL LOCATION
- GROUNDWATER MONITORING WELL LOCATION (NOT INCLUDED IN THE ROXANA INTERIM GROUNDWATER MONITORING PROGRAM)
- GROUNDWATER PIEZOMETER LOCATION
- GROUNDWATER PIEZOMETER LOCATION (NOT INCLUDED IN THE ROXANA INTERIM GROUNDWATER MONITORING PROGRAM)
- * ROXANA INTERIM GROUNDWATER MONITORING WELL SAMPLING LOCATION

FIRST ST
SECOND ST
THIRD ST
FOURTH ST
VILLAGE OF ROXANA
FIFTH ST
SIXTH ST
SEVENTH ST
EIGHTH ST
HIGHWAY 111 (S. CENTRAL AVE)
CHAFFER AVE
RAND AVENUE
1986 APPROXIMATE BENZENE RELEASE SITE
NORTH PROPERTY
WEST PROPERTY
MAIN PROPERTY
BP

T-1, PZ-1(101), PZ-1(85), MW-10*, MW-9*, MW-28*, MW-27*, P-55R*, ROST-4-PZ(A), ROST-4-PZ(B), ROST-4-PZ(C)*, ROST-4-PZ, P-60-11, ROST-3-MW*, ROST-4-PZ(D), P-60-S, P-60-12, ROST-4-PZ(E)*, ROST-4-PZ(F), P-60, A-28, T-24, ROST-4-PZ(G)*, MW-11*, P-68*, P-54*, P-60-13, MW-17, T-12*, MW-24*, MW-22*, P-69, A-27, P-70, MW-18, P-74*, MW-19, P-59*, P-61, MW-16*, GP-9-PZ, PZ-2(84), PZ-2(70.5), MW-12*, MW-20, P-56*, MW-2*, MW-1*, T-6, MW-26*, MW-21, P-57*, MW-4*, P-93A*, P-93B*, P-93C*, P-93D*, P-73, MW-3*, MW-25*, MW-23*, MW-5*, MW-7*, MW-8*, P-58*, P-66*, P-75, MW-13*, MW-6A*, MW-6B*, MW-6C*, MW-6D*, MW-14*, P-114R*

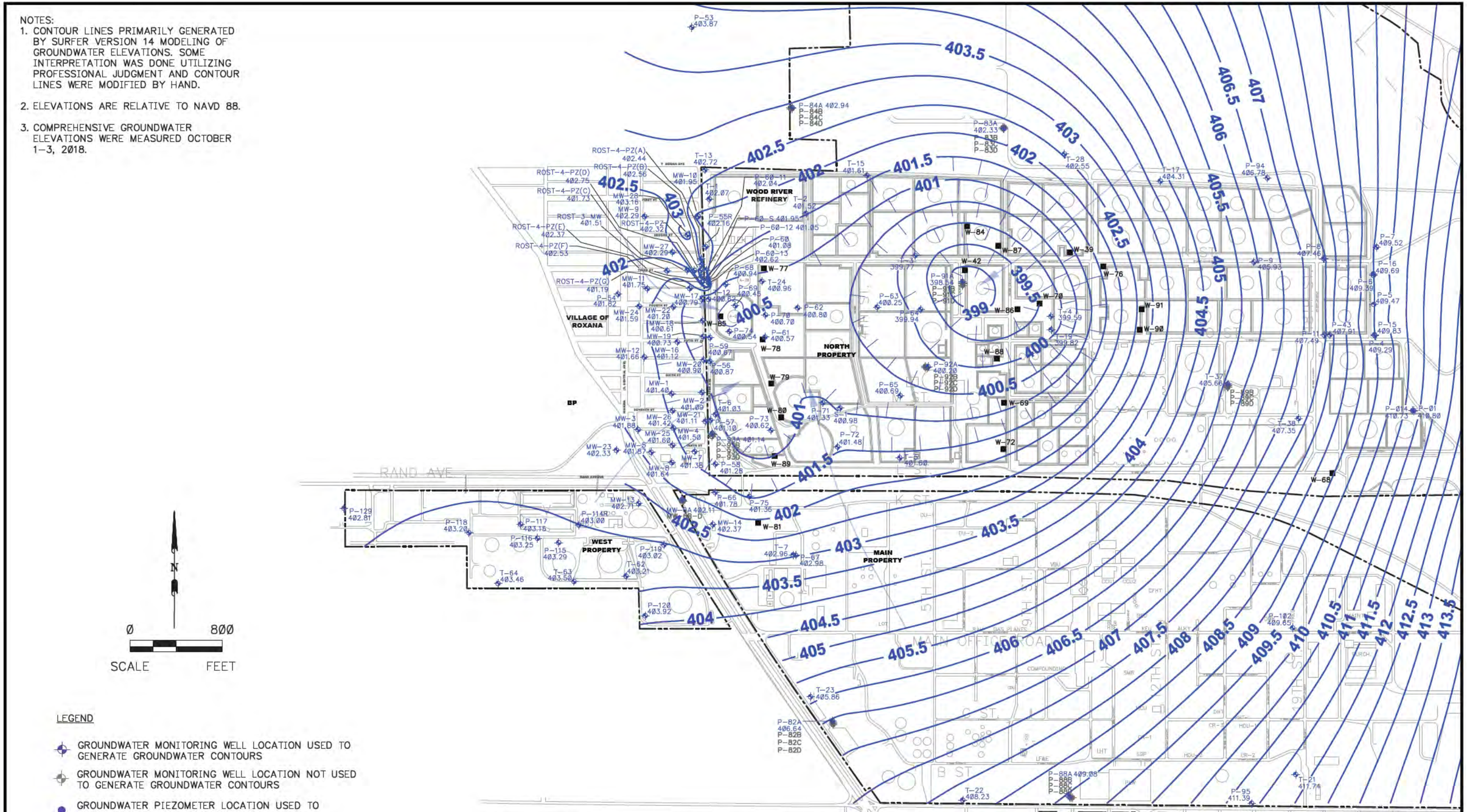
0 200
SCALE FEET

EQUILON ENTERPRISES LLC dba SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 60527968
AECOM		
DRN. BY:djd January 2019 DSGN. BY:mr CHKD. BY:mr/b3	Roxana Interim Groundwater Monitoring Well Locations	FIG. NO. 2

NOTES:
1. CONTOUR LINES PRIMARILY GENERATED BY SURFER VERSION 14 MODELING OF GROUNDWATER ELEVATIONS. SOME INTERPRETATION WAS DONE UTILIZING PROFESSIONAL JUDGMENT AND CONTOUR LINES WERE MODIFIED BY HAND.

2. ELEVATIONS ARE RELATIVE TO NAVD 88.

3. COMPREHENSIVE GROUNDWATER ELEVATIONS WERE MEASURED OCTOBER 1–3, 2018.



N

0 800

SCALE FEET

LEGEND

- GROUNDWATER MONITORING WELL LOCATION USED TO GENERATE GROUNDWATER CONTOURS
- GROUNDWATER MONITORING WELL LOCATION NOT USED TO GENERATE GROUNDWATER CONTOURS
- GROUNDWATER PIEZOMETER LOCATION USED TO GENERATE GROUNDWATER CONTOURS
- GROUNDWATER PIEZOMETER LOCATION NOT USED TO GENERATE GROUNDWATER CONTOURS
- WRR GROUNDWATER PRODUCTION WELL
- 407 — GROUNDWATER SURFACE CONTOUR NAVD 88 (CONTOUR INTERVAL 0.5 FT.)
- GROUNDWATER GRADIENT

EQUILON ENTERPRISES LLC dba SHELL OIL PRODUCTS US
INTERIM GROUNDWATER MONITORING PROGRAM
ROXANA, ILLINOIS

PROJECT NO. 60527968

AECOM

DRN. BY:djd January 2019
DSGN. BY:wmp
CHKD. BY:mr/b3

Groundwater Contours
4Q18

FIG. NO. 3a

File: G:\STLOUIS\DCS\PROJECTS\ENV\SHELL\60527968 ROXANA 2018\500 DELIVERABLES (DELIV)\QUARTERLY GW\4Q18\DRAFT\FIGURES\FIGURE 3A ROXANNA 4Q18 CONTOUR MAP (800 SCALE).DWG Last edited: JAN. 04, 19 @ 12:25 p.m. by: wendy.pennington

File: G:\STLOUIS\DCS\PROJECTS\ENV\SHELL\60527968 ROXANA 2018\500 DELIVERABLES (DELIV)\QUARTERLY GW\4Q18\DRAFT\FIGURES\FIGURE 3B ROXANA 4Q18 CONTOUR MAP.DWG Last edited: Jan. 10, 19 @ 10:17 AM by: alyssa.davis2

LEGEND

- GROUNDWATER MONITORING WELL LOCATION USED TO GENERATE GROUNDWATER CONTOURS
- GROUNDWATER MONITORING WELL LOCATION NOT USED TO GENERATE GROUNDWATER CONTOURS
- GROUNDWATER PIEZOMETER LOCATION USED TO GENERATE GROUNDWATER CONTOURS
- GROUNDWATER PIEZOMETER LOCATION NOT USED TO GENERATE GROUNDWATER CONTOURS
- WRR GROUNDWATER PRODUCTION WELL
- 402 GROUNDWATER SURFACE CONTOUR NAVD 88 (CONTOUR INTERVAL 0.5 FT)
- GROUNDWATER GRADIENT

NOTES:
1. CONTOUR LINES PRIMARILY GENERATED BY SURFER VERSION 14 MODELING OF GROUNDWATER ELEVATIONS. SOME INTERPRETATION WAS DONE UTILIZING PROFESSIONAL JUDGMENT AND CONTOUR LINES WERE MODIFIED BY HAND.
2. ELEVATIONS ARE RELATIVE TO NAVD 88.
3. COMPREHENSIVE GROUNDWATER ELEVATIONS WERE MEASURED OCTOBER 1–3, 2018.

FIRST ST
SECOND ST
THIRD ST
FOURTH ST
FIFTH ST
SIXTH ST
SEVENTH ST
EIGHTH ST
HIGHWAY 111 (S. CENTRAL AVE)
CHAFFER AVE
RAND AVENUE
VILLAGE OF ROXANA
NORTH PROPERTY
WOOD RIVER REFINERY
WEST PROPERTY
MAIN PROPERTY
PUBLIC WORKS YARD
BP
1986 APPROXIMATE BENZENE RELEASE SITE

T-1 402.07
PZ-1(101) PZ-1(85)
MW-9 402.29
MW-10 401.95
MW-28 403.16
ROST-4-PZ(A) 402.44
MW-27 402.29
ROST-4-PZ(B) 402.56
P-55R 402.16
ROST-4-PZ 402.32
ROST-4-PZ(D) 402.75
P-60-11 402.04
ROST-4-PZ(C) 401.73
W-77
P-60-S 401.95
P-60-12 401.05
P-60 401.08
ROST-3-MW 401.51
ROST-4-PZ(E) 402.37
A-28
MW-11 401.75
ROST-4-PZ(F) 402.53
P-68 400.94
T-24 400.96
P-54 401.82
ROST-4-PZ(G) 401.19
P-60-13 402.62
T-12 400.62
MW-17 400.79
P-69 400.45
P-70 400.70
MW-24 401.59
MW-22 401.20
A-27
W-85
MW-18 400.61
MW-19 400.73
P-74 400.54
P-61 400.57
W-78
P-59 400.67
GP-9-PZ
PZ-2(84) PZ-2(70.5)
MW-20 400.90
MW-12 401.66
P-56 400.87
W-79
MW-1 401.40
MW-2 401.09
T-6 401.03
MW-26 401.42
MW-21 401.11
P-57 401.10
MW-3 401.88
MW-4 401.50
P-73 400.62
P-93A 401.14
P-93B
P-93C
P-93D
MW-5 401.87
MW-25 401.60
MW-7 401.38
W-89
MW-23 402.33
MW-8 401.64
P-58 401.28
P-66 401.78
P-75 401.36
402.11 MW-6A
MW-6B
MW-6C
MW-6D
MW-13 402.71
MW-14 402.37
W-81
P-114R 403.00

402.5 402 403 401 401.5 400.5

0 200
SCALE FEET
N

EQUILON ENTERPRISES LLC dba SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS	PROJECT NO. 60527968
AECOM	
DRN. BY: asd January 2019 DSGN. BY: wmp CHKD. BY: mr/b3	Groundwater Contours 4Q18– West Fenceline FIG. NO. 3b

File: G:\STLOUIS\DCS\PROJECTS\ENV\SHELL\60527968 ROXANA 2018\500 DELIVERABLES (DELIV)\QUARTERLY GW\4Q18\DRAFT\FIGURES\FIGURE 4A THICKNESS OF LNAPL (WEST FENCLINE).DWG Last edited: Jan. 10, 19 @ 10:26 AM by: alyssa.davis2

LEGEND

- GROUNDWATER MONITORING WELL LOCATION GAUGED, LNAPL THICKNESS IN FEET
- GROUNDWATER MONITORING WELL LOCATION (NO LNAPL OBSERVED UNLESS OTHERWISE NOTED)
- GROUNDWATER PIEZOMETER LOCATION (NO LNAPL OBSERVED UNLESS OTHERWISE NOTED)
- OIL RECOVERY WELL
- WATER PRODUCTION WELL
- LNAPL THICKNESS (FEET)
- * INDICATES THAT THE LNAPL AND/OR WATER LEVEL IS ABOVE THE TOP OF WELL SCREEN

NOTE:
1. THIS MAP DEPICTS THE ESTIMATED EXTENT AND THICKNESS OF LNAPL BENEATH THE WEST FENCELINE AREA. REFER TO TABLE 1 FOR GROUNDWATER GAUGING INFORMATION.
2. LNAPL THICKNESS WAS MEASURED DURING THE COMPREHENSIVE GROUNDWATER MONITORING GAUGING EVENT ON OCTOBER 1-3, 2018.

TYDEMAN AVE
FIRST ST
SECOND ST
THIRD ST
FOURTH ST
FIFTH ST
SIXTH ST
SEVENTH ST
EIGHTH ST
VILLAGE OF ROXANA
HIGHWAY 111 (S. CENTRAL AVE)
CHAFFER AVE
NORTH PROPERTY
MAIN PROPERTY
WEST PROPERTY
WOOD RIVER REFINERY
PUBLIC WORKS YARD
1986 APPROXIMATE BENZENE RELEASE SITE
RAND AVENUE
BP

P-84A P-84B P-84C P-84D
T-13 T-1 T-2 T-3 T-4 T-5 T-6 T-7 T-12
PZ-1(101) PZ-1(85) MW-9 MW-10
ROST-4-PZ(A) ROST-4-PZ(B) ROST-4-PZ(C) ROST-4-PZ(D) ROST-4-PZ(E) ROST-4-PZ(F) ROST-4-PZ(G) ROST-4-PZ ROST-3-MW
MW-28 MW-27 MW-11 MW-17 MW-24 MW-22 MW-18 MW-19 MW-16 MW-12 PZ-2(84) PZ-2(70.5) MW-20 MW-2 MW-1 MW-26 MW-21 MW-3 MW-4 MW-25 MW-23 MW-5 MW-8 MW-7 MW-6 MW-13 MW-14
P-54 P-55R 0.69 P-60-11 P-60-12 P-60-13 P-60-S 0.03 P-60 0.02 P-68 0.09 P-69 W-85 P-74 P-62 0.99 P-70 0.02* P-61 0.04* P-59 P-56 P-57 P-73 P-71 S-1 0.12 P-72 0.01* P-93A P-93B P-93C P-93D P-58 P-66 P-75 P-117 P-114R P-116 P-115 P-119
0.10 0.01 0.01 0.01 0.10 0.10 0.01
R-77 W-77 T-24 0.29 A-33 A-28 A-27
R-78 W-78 R-79 W-79 R-80 W-80 R-89 W-89 R-81 W-81

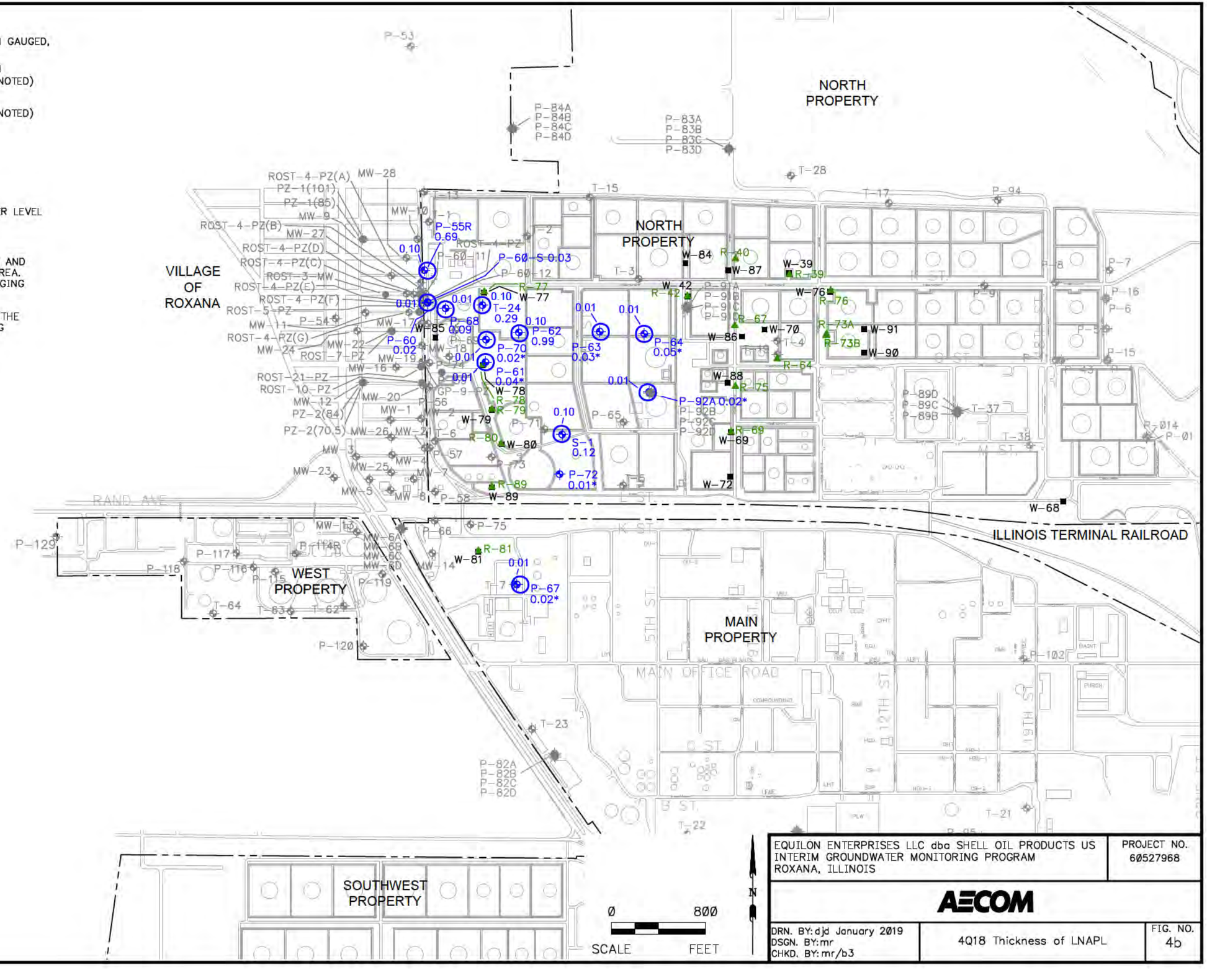
0 300 FEET SCALE N

EQUILON ENTERPRISES LLC dba SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 60527968
AECOM		
DRN. BY:djd January 2019 DSGN. BY:mr CHKD. BY:mr\b3	4Q18 Thickness of LNAPL – West Fenceline	FIG. NO. 4a

LEGEND

- GROUNDWATER MONITORING WELL LOCATION GAUGED, LNAPL THICKNESS IN FEET
- GROUNDWATER MONITORING WELL LOCATION (NO LNAPL OBSERVED UNLESS OTHERWISE NOTED)
- GROUNDWATER PIEZOMETER LOCATION (NO LNAPL OBSERVED UNLESS OTHERWISE NOTED)
- OIL RECOVERY WELL
- WATER PRODUCTION WELL
- LNAPL THICKNESS (FEET)
- * INDICATES THAT THE LNAPL AND/OR WATER LEVEL IS ABOVE THE TOP OF WELL SCREEN

NOTES:
1. THIS MAP DEPICTS THE ESTIMATED EXTENT AND THICKNESS OF LNAPL BENEATH THE WRR AREA. REFER TO TABLE 1 FOR GROUNDWATER GAUGING INFORMATION.
2. LNAPL THICKNESS WAS MEASURED DURING THE COMPREHENSIVE GROUNDWATER MONITORING GAUGING EVENT ON OCTOBER 1-3, 2018.



EQUILON ENTERPRISES LLC dba SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 60527968
AECOM		
DRN. BY: djd January 2019 DSGN. BY: mr CHKD. BY: mr/b3	4Q18 Thickness of LNAPL	FIG. NO. 4b

File: G:\STLOUIS\DCS\PROJECTS\ENV\SHELL\60527968 ROXANA 2018\300 DELIVERABLES (DEL)\QUARTERLY GW\4Q18\DRAFT\FIGURES\FIGURE 4B THICKNESS OF LNAPL (REFINERY).DWG Last edited: JAN. 04, 19 @ 10:57 a.m. by: wendy.pennington

File: G:\STLOUIS\DGS\PROJECTS\ENV\SHELL\60527968_ROXANA_2018\500_DELIVERABLES_(DELIV)\QUARTERLY_GW\4Q18\DRAFT\FIGURES\FIGURE_5_4Q18_GROUNDWATER_ANALYTICAL_RESULTS_SUMMARY.DWG Last edited: Jan. 4, 19 @ 11:00 AM by: wendy.pennington

LEGEND

- GROUNDWATER MONITORING WELL SAMPLING LOCATION
- GROUNDWATER MONITORING WELL LOCATION NOT SAMPLED
- GROUNDWATER PIEZOMETER LOCATION NOT SAMPLED

NOTES:

1. PER DIRECTION FROM IEPA, ANALYTICAL RESULTS ARE SCREENED AGAINST CRITERIA OUTLINED IN THE WRR RCRA PART B PERMIT.
2. GROUNDWATER SCREENING CRITERIA.

Analyte	Screening Criteria (mg/L)
Benzene	0.005
Ethylbenzene	0.7
Naphthalene	0.14
Toluene	1
1,3,5-Trimethylbenzene	0.07
Benzo(a)anthracene	0.00013
bis(2-Ethylhexyl)phthalate	0.006
2-Methylnaphthalene	0.028
Pentachlorophenol	0.001
Phenol	0.1

J = THE RESULT IS ESTIMATED.

* = LCS/LCSD RPD IS OUTSIDE EVALUATION CRITERIA.

F1 = MS/MSD RECOVERY IS OUTSIDE EVALUATION CRITERIA.

3. MULTIPLE RESULTS (e.g., 1100/1200) INDICATE DUPLICATE SAMPLES OR CONFIRMATION SAMPLES.
4. WELLS IDENTIFIED IN BLUE WITH NO DATA BOX INDICATE THE RESULTS DID NOT EXCEED SCREENING CRITERIA.
5. WELLS P-55R AND P-68 WERE NOT SAMPLED DURING 4Q18 DUE TO THE PRESENCE OF LNAPL.

Sample Location	MW-28
Sampled 10/11/18	Result (mg/L)
bis(2-Ethylhexyl)phthalate	0.01 F1 J

Sample Location	ROST-4-PZ(C)
Sampled 10/12/18	Result (mg/L)
Benzene	0.0085

Sample Location	MW-11
Sampled 10/11/18	Result (mg/L)
bis(2-Ethylhexyl)phthalate	0.0086 J

Sample Location	T-12
Sampled 10/16/18	Result (mg/L)
Benzene	2.2
2-Methylnaphthalene	0.031
Pentachlorophenol	0.0018 J

Sample Location	MW-22
Sampled 10/15/18	Result (mg/L)
Benzene	0.056
Ethylbenzene	1.5
Naphthalene	0.21
1,3,5-Trimethylbenzene	0.19

Sample Location	P-74
Sampled 10/16/18	Result (mg/L)
Benzene	0.3

Sample Location	P-59
Sampled 10/16/18	Result (mg/L)
Benzene	2.3
Ethylbenzene	1.1
Naphthalene	0.16
Toluene	1.2
1,3,5-Trimethylbenzene	0.12
Benzo(a)anthracene	0.00031
2-Methylnaphthalene	0.03

Sample Location	P-93A	P-93B	P-93C
Sampled 10/15/18, 10/16/18	Result (mg/L)	Result (mg/L)	Result (mg/L)
Benzene	30	1100 / 1200	1.9
Phenol		0.22 * / 0.25 *	

Sample Location	P-57
Sampled 10/16/18	Result (mg/L)
Benzene	34 / 34
2-Methylnaphthalene	0.027 / 0.034

Sample Location	MW-25
Sampled 10/8/18	Result (mg/L)
Benzene	0.0071

Sample Location	MW-7
Sampled 10/8/18	Result (mg/L)
Benzene	650

Sample Location	P-58
Sampled 10/16/18	Result (mg/L)
Benzene	190

Sample Location	MW-8
Sampled 10/8/18	Result (mg/L)
Benzene	550 / 560
bis(2-Ethylhexyl)phthalate	0.0062 J / <0.0098
Pentachlorophenol	0.0024 J / 0.0023 J

Sample Location	P-66
Sampled 10/15/18	Result (mg/L)
Benzene	0.052 / 0.057

MW-9, MW-10, MW-28, MW-27, MW-11, MW-17, MW-24, MW-22, MW-18, MW-19, MW-16, MW-12, MW-20, MW-1, MW-2, MW-26, MW-21, MW-4, MW-3, MW-23, MW-5, MW-25, MW-7, MW-8, MW-13, MW-6A, MW-6B, MW-6C, MW-6D, MW-14, P-114R, ROST-4-PZ(A), ROST-4-PZ(B), ROST-4-PZ(C), ROST-4-PZ(D), ROST-4-PZ(E), ROST-4-PZ(F), ROST-4-PZ(G), ROST-3-MW, P-55R, P-60-11, P-60-S, P-60-12, P-60, P-60-13, T-12, P-54, P-69, P-70, A-27, P-74, P-61, P-59, P-56, T-6, P-57, P-93A, P-93B, P-93C, P-93D, P-73, P-58, P-66, P-75

SECOND ST, THIRD ST, FOURTH ST, FIFTH ST, SIXTH ST, SEVENTH ST, EIGHTH ST, RAND AVENUE

HIGHWAY 111 (S. CENTRAL AVE), CHAFFER AVE

NORTH PROPERTY, WOOD RIVER REFINERY, VILLAGE OF ROXANA, WEST PROPERTY, MAIN PROPERTY, BP

1986 APPROXIMATE BENZENE RELEASE SITE

0 200 SCALE FEET N

EQUILON ENTERPRISES LLC dba SHELL OIL PRODUCTS US
INTERIM GROUNDWATER MONITORING PROGRAM
ROXANA, ILLINOIS

PROJECT NO. 60527968

AECOM

DRN. BY: asd January 2019
DSGN. BY: mr
CHKD. BY: mr/b3

4Q18 Groundwater Monitoring Well Analytical Exceedances

FIG. NO. 5

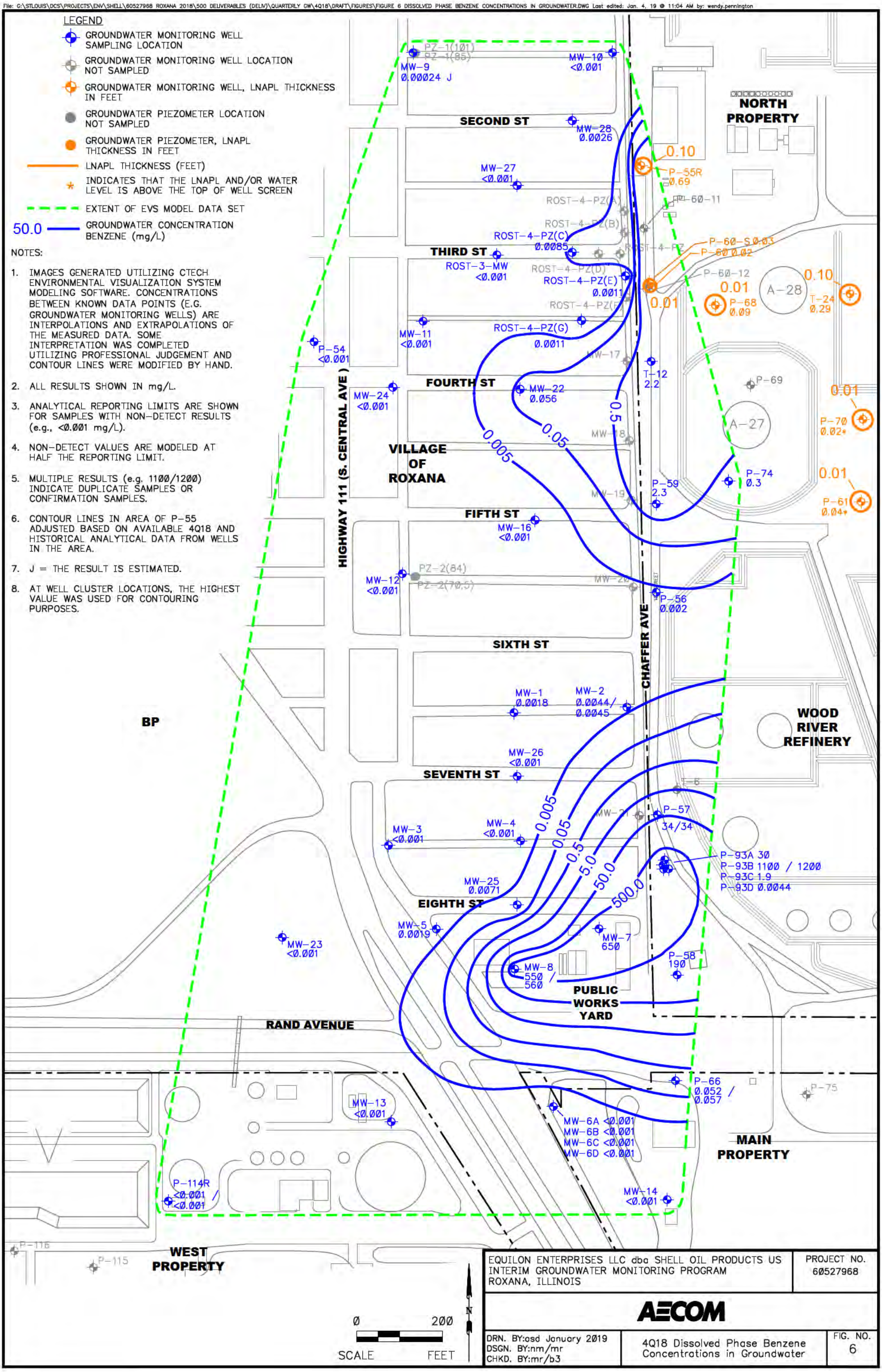
File: G:\STLOUIS\DCS\PROJECTS\ENV\SHELL\60527968 ROXANA 2018\500 DELIVERABLES (DELV)\QUARTERLY GW\4Q18\DRAFT\FIGURES\FIGURE 6 DISSOLVED PHASE BENZENE CONCENTRATIONS IN GROUNDWATER.DWG Last edited: Jan. 4, 19 @ 11:04 AM by: wendy.pennington

LEGEND

- GROUNDWATER MONITORING WELL SAMPLING LOCATION
- GROUNDWATER MONITORING WELL LOCATION NOT SAMPLED
- GROUNDWATER MONITORING WELL, LNAPL THICKNESS IN FEET
- GROUNDWATER PIEZOMETER LOCATION NOT SAMPLED
- GROUNDWATER PIEZOMETER, LNAPL THICKNESS IN FEET
- LNAPL THICKNESS (FEET)
- * INDICATES THAT THE LNAPL AND/OR WATER LEVEL IS ABOVE THE TOP OF WELL SCREEN
- EXTENT OF EVS MODEL DATA SET
- 50.0 GROUNDWATER CONCENTRATION BENZENE (mg/L)

NOTES:

1. IMAGES GENERATED UTILIZING CTECH ENVIRONMENTAL VISUALIZATION SYSTEM MODELING SOFTWARE. CONCENTRATIONS BETWEEN KNOWN DATA POINTS (E.G. GROUNDWATER MONITORING WELLS) ARE INTERPOLATIONS AND EXTRAPOLATIONS OF THE MEASURED DATA. SOME INTERPRETATION WAS COMPLETED UTILIZING PROFESSIONAL JUDGEMENT AND CONTOUR LINES WERE MODIFIED BY HAND.
2. ALL RESULTS SHOWN IN mg/L.
3. ANALYTICAL REPORTING LIMITS ARE SHOWN FOR SAMPLES WITH NON-DETECT RESULTS (e.g., <0.001 mg/L).
4. NON-DETECT VALUES ARE MODELED AT HALF THE REPORTING LIMIT.
5. MULTIPLE RESULTS (e.g. 1100/1200) INDICATE DUPLICATE SAMPLES OR CONFIRMATION SAMPLES.
6. CONTOUR LINES IN AREA OF P-55 ADJUSTED BASED ON AVAILABLE 4Q18 AND HISTORICAL ANALYTICAL DATA FROM WELLS IN THE AREA.
7. J = THE RESULT IS ESTIMATED.
8. AT WELL CLUSTER LOCATIONS, THE HIGHEST VALUE WAS USED FOR CONTOURING PURPOSES.



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INTERIM GROUNDWATER MONITORING PROGRAM
ROXANA, ILLINOIS

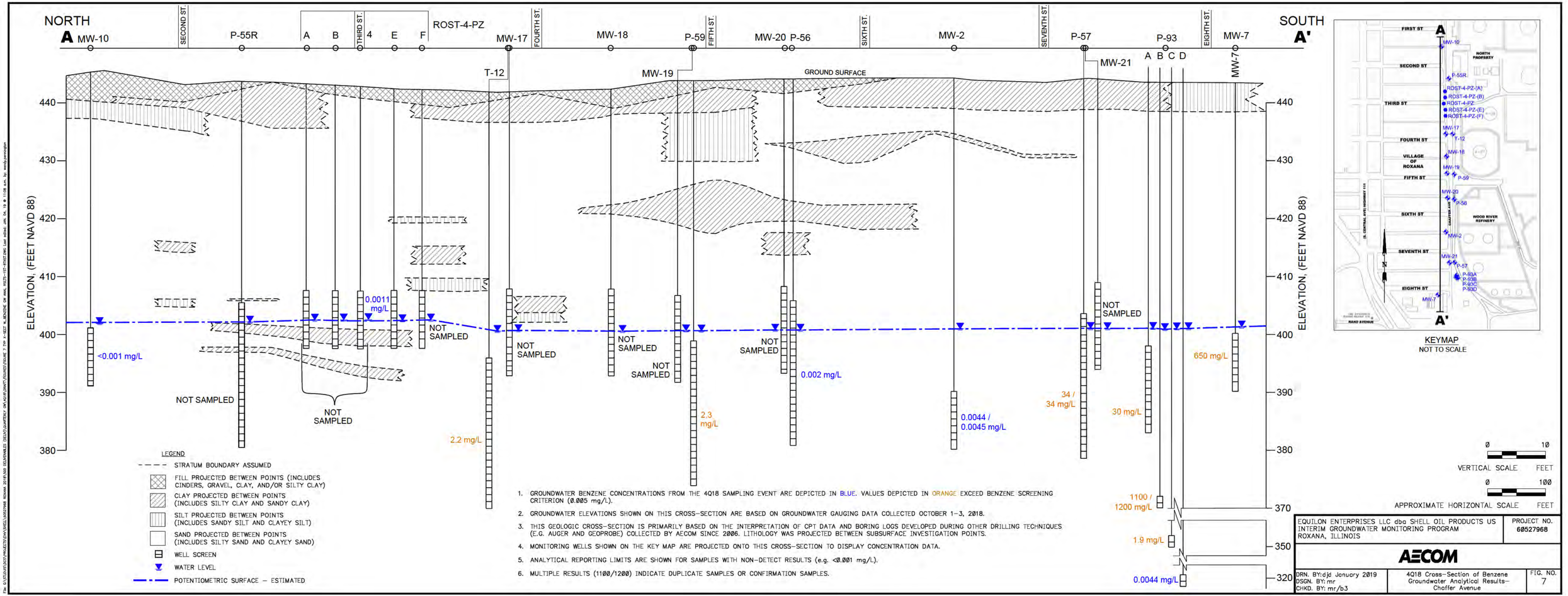
PROJECT NO. 60527968

AECOM

DRN. BY:osd January 2019
DSGN. BY:nm/mr
CHKD. BY:mr/b3

4Q18 Dissolved Phase Benzene Concentrations in Groundwater

FIG. NO. 6



1. GROUNDWATER BENZENE CONCENTRATIONS FROM THE 4Q18 SAMPLING EVENT ARE DEPICTED IN BLUE. VALUES DEPICTED IN ORANGE EXCEED BENZENE SCREENING CRITERION (0.005 mg/L).
2. GROUNDWATER ELEVATIONS SHOWN ON THIS CROSS-SECTION ARE BASED ON GROUNDWATER GAUGING DATA COLLECTED OCTOBER 1–3, 2018.
3. THIS GEOLOGIC CROSS-SECTION IS PRIMARILY BASED ON THE INTERPRETATION OF CPT DATA AND BORING LOGS DEVELOPED DURING OTHER DRILLING TECHNIQUES (E.G. AUGER AND GEOPROBE) COLLECTED BY AECOM SINCE 2006. LITHOLOGY WAS PROJECTED BETWEEN SUBSURFACE INVESTIGATION POINTS.
4. MONITORING WELLS SHOWN ON THE KEY MAP ARE PROJECTED ONTO THIS CROSS-SECTION TO DISPLAY CONCENTRATION DATA.
5. ANALYTICAL REPORTING LIMITS ARE SHOWN FOR SAMPLES WITH NON-DETECT RESULTS (e.g. <0.001 mg/L).
6. MULTIPLE RESULTS (1100/1200) INDICATE DUPLICATE SAMPLES OR CONFIRMATION SAMPLES.

KEYMAP
NOT TO SCALE

0 10
VERTICAL SCALE FEET

0 100
APPROXIMATE HORIZONTAL SCALE FEET

EQUILON ENTERPRISES LLC dba SHELL OIL PRODUCTS US
INTERIM GROUNDWATER MONITORING PROGRAM
ROXANA, ILLINOIS

PROJECT NO. 60527968

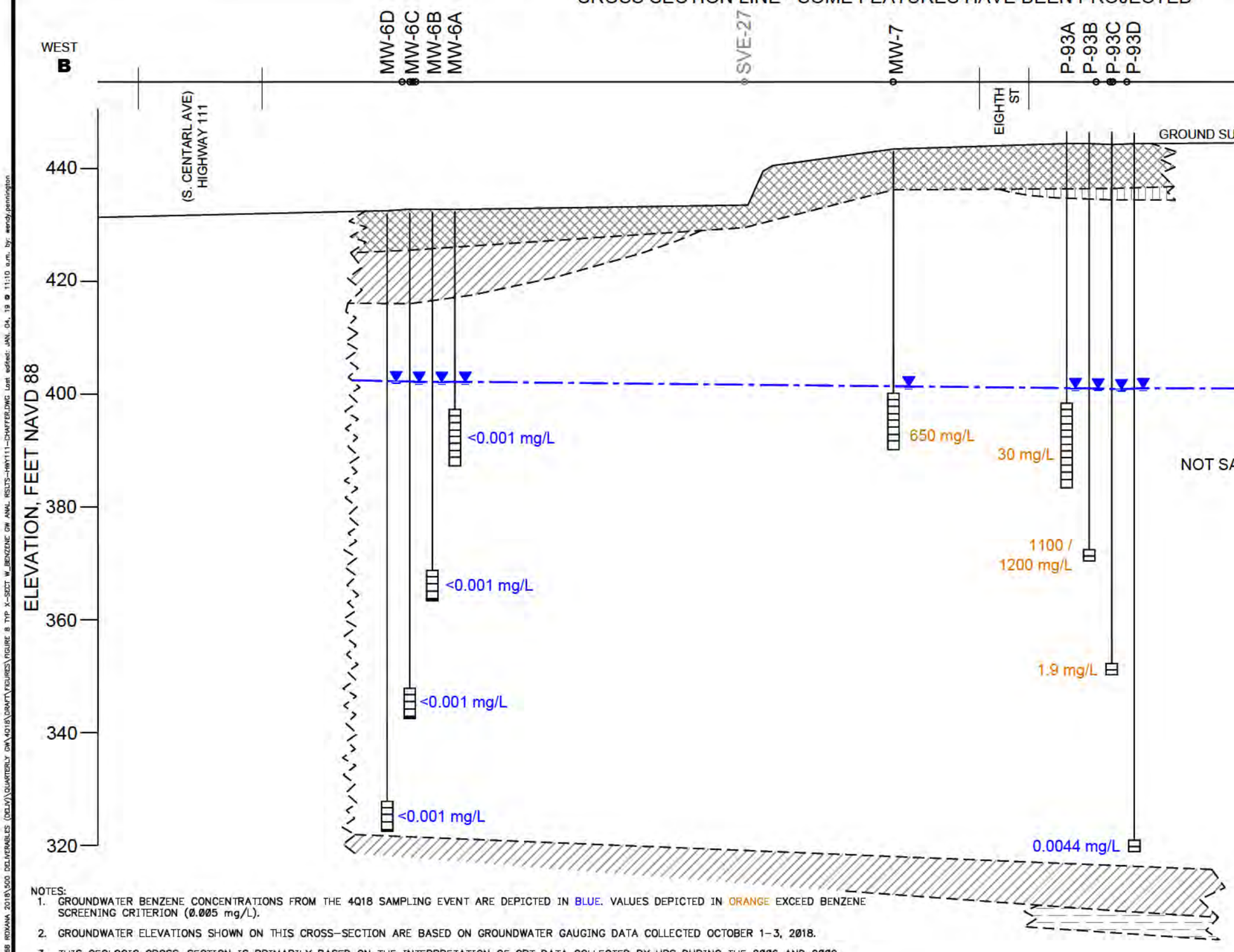
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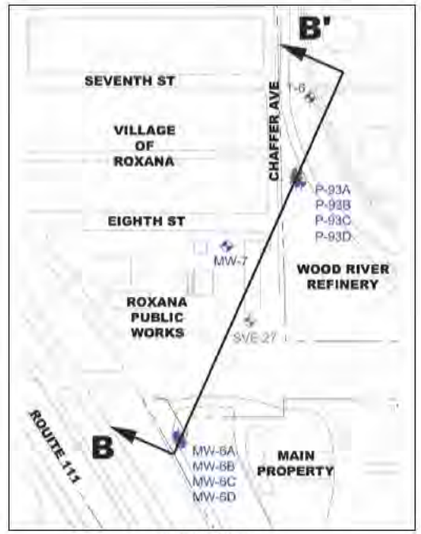
DRN. BY: djd January 2019
DSGN. BY: mr
CHKD. BY: mr/bJ

4Q18 Cross-Section of Benzene Groundwater Analytical Results– Chaffer Avenue

FIG. NO. 7

CROSS SECTION LINE - SOME FEATURES HAVE BEEN PROJECTED





KEYMAP
NOT TO SCALE

LEGEND

- STRATUM BOUNDARY ASSUMED
- FILL PROJECTED BETWEEN POINTS
- CLAY PROJECTED BETWEEN POINTS (INCLUDES SILTY CLAY AND SANDY CLAY)
- SAND PROJECTED BETWEEN POINTS (INCLUDES SILTY SAND AND CLAYEY SAND)
- SILT PROJECTED BETWEEN POINTS
- SHALE
- WELL SCREEN
- WATER LEVEL
- POTENTIOMETRIC SURFACE – ESTIMATED

VERTICAL SCALE: Ø to 20 FEET

HORIZONTAL SCALE: Ø to 100 FEET

NOTES:

1. GROUNDWATER BENZENE CONCENTRATIONS FROM THE 4Q18 SAMPLING EVENT ARE DEPICTED IN BLUE. VALUES DEPICTED IN ORANGE EXCEED BENZENE SCREENING CRITERION (0.005 mg/L).
2. GROUNDWATER ELEVATIONS SHOWN ON THIS CROSS-SECTION ARE BASED ON GROUNDWATER GAUGING DATA COLLECTED OCTOBER 1-3, 2018.
3. THIS GEOLOGIC CROSS-SECTION IS PRIMARILY BASED ON THE INTERPRETATION OF CPT DATA COLLECTED BY URS DURING THE 2006 AND 2009 INVESTIGATION ACTIVITIES. BORING LOGS DEVELOPED DURING OTHER DRILLING TECHNIQUES (E.G. AUGER AND GEOPROBE) WERE USED TO SUPPLEMENT CPT DATA.
4. THE DEPTH AND THICKNESS OF INDIVIDUAL STRATA DEPICTED MAY BE BASED ON CPT LOGS GENERATED AT NEARBY LOCATIONS. THEREFORE, WELL SCREENS MAY APPEAR TO BE PARTIALLY WITHIN CLAY LAYERS OR SHALLOWER/DEEPER WITHIN A PERMEABLE STRATUM THAN ACTUAL CONDITIONS DUE TO MAP PROJECTIONS.
5. LITHOLOGICAL INFORMATION FROM SVE-27 WAS OBTAINED FROM BORING LOG TO SUPPLEMENT SITE GEOLOGY ONLY.
6. HISTORIC BORING LOG IS NOT AVAILABLE FOR T-6.
7. ANALYTICAL REPORTING LIMITS ARE SHOWN FOR SAMPLES WITH NON-DETECT RESULTS (e.g. <0.001 mg/L).
8. MULTIPLE RESULTS (1100/1200) INDICATE DUPLICATE SAMPLES OR CONFIRMATION SAMPLES.

EQUILON ENTERPRISES LLC dba SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 60527968
AECOM		
DRN. BY: djd January 2019 DSGN. BY: mr CHKD. BY: mr/b3	4Q18 Cross-Section of Benzene Groundwater Analytical Results-Roxana Public Works Yard	FIG. NO. 8

File: G:\STLOUIS\DGS\PROJECTS\ENV\SHELL\60527968 ROXANA 2018\500 DELIVERABLES (DELIV)\QUARTERLY GW\4Q18\DRAFT\FIGURES\FIGURE 8 TYP X-SECT W_BENZENE GW ANNL RSLTS-HWY111-CHAFFER.DWG Last edited: JAN. 04, 19 @ 11:10 a.m. by: wendy.pennington

Appendix A
Low Flow Groundwater Sampling Data Sheets

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW | PROJECT NUMBER: 60527968 - 01.03.004 | FIELD PERSONNEL: B. Howell M. Kamick

DATE: 10/10/18 | WEATHER: Cloudy 78°F

MONITORING WELL ID: MW-1 | SAMPLE ID: MW1-ROX-101018

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: No change 53.40 ~~52.80~~ BH ft btoc
Total Well Depth (btoc): 59.13 ft	
Depth to Water (btoc): 41.17 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc
Depth to LNAPL/DNAPL (btoc): NE ft	
Depth to Top of Screen (btoc): 48.80 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): ft btoc
Screen Length: 10 ft	
Water Column Height (not including NAPL): 17.96 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: ft btoc

Volume of Flow Through Cell: 320* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.1 ppm

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	0856	41.19	Clear	None	19.2	1.15	1.054 mS/cm uS/cm	6.47	136.4	4.1
300	0857	41.19			19.3	0.93	1.055 mS/cm uS/cm	6.50	134.1	4.0
600	0858	41.19			19.3	0.82	1.056 mS/cm uS/cm	6.52	132.5	3.4
900	0859	41.19			19.3	0.76	1.057 mS/cm uS/cm	6.55	130.1	3.3
1200	0900	41.19			19.4	0.71	1.059 mS/cm uS/cm	6.56	128.4	3.9
1500	0901	41.19	↓	↓	19.4	0.69	1.060 mS/cm uS/cm	6.57	126.4	2.9
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
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							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

STABLE: (over 3 readings) Monitor Temp. +/-0.2 mg/L or +/-10% +/-5% or +/-2 uS/cm +/-0.2 mg/L Monitor Turb +/-20 mV

Readings (<50)

Start Time: 0856 | Elapsed Time (min): 5 | Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 0901 | Average Purge Rate (mL/min): 300 | Date Calibrated: 10/10/18

SAMPLING DATA

Sample Date: 10/10/18 | Sample Time: 0905 | Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow | Sample Flow Rate (mL/min): 300 | QA/QCSamples: NA

VOA Vials, No Headspace ☒ Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1500 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: T. Jones M. Karnick

DATE: 10 12 18 WEATHER: Raining 45°F

MONITORING WELL ID: MW-2 SAMPLE ID: MW2-ROX-101218

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: 51.87 ft btoc	Volume of Flow Through Cell: 320* mL	
Total Well Depth (btoc): 60.20 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL	
Depth to Water (btoc): 42.71 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc	Ambient PID/FID Reading: 0.4 ppm	
Depth to LNAPL/DNAPL (btoc): NE ft			
Depth to Top of Screen (btoc): 49.87 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): ft btoc	Wellbore PID/FID Reading: 108.5 ppm	
Screen Length: 10 ft			
Water Column Height (not including NAPL): 17.49 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc		
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: ft btoc		

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/-0.2 mg/L or Monitor Temp.	+/-5% or +/-10%		+/-2 uS/cm	+/-0.2 mg/L	Monitor Turb +/-20 mV
Readings (<50)							

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1156	42.70	Clear	Moderate	18.7	0.80	1.332 mS/cm uS/cm	7.11	-81.3	11.1
300	1156	42.70	↓	↓	18.8	0.74	1.333 mS/cm uS/cm	7.11	-90.6	8.1
600	1157	42.70			18.8	0.70	1.339 mS/cm uS/cm	7.11	-100.5	7.4
900	1158	42.70			19.0	0.69	1.341 mS/cm uS/cm	7.12	-106.6	5.7
1200	1159	42.70	↓	↓	19.1	0.63	1.344 mS/cm uS/cm	7.12	-114.3	3.9
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
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							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

M. Karnick

Start Time: 1155 Elapsed Time (min): 4 Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 1159 Average Purge Rate (mL/min): 300 Date Calibrated: 101218

SAMPLING DATA

Sample Date: 10/12/18 Sample Time: 1205 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: DUP

VOA Vials, No Headspace ☒ Initials: MK

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: James Ragatz Meg Karrick

DATE: 10 05 18 WEATHER: Sunny 70°F

MONITORING WELL ID: MW-3 SAMPLE ID: MW3-Rox-100518

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: 39.67 ft btoc	Volume of Flow Through Cell : 320* mL
Total Well Depth (btoc): 45.00 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 28.18 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc	Ambient PID/FID Reading: 0.0 ppm
Depth to LNAPL/DNAPL (btoc): NE ft		
Depth to Top of Screen (btoc): 34.67 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): ft btoc	Wellbore PID/FID Reading: 0.1 ppm
Screen Length: 10 ft		
Water Column Height (not including NAPL): 16.82 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc	
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) +/-0.2 mg/L or Monitor Temp. +/-5% or +/-10% +/-2 uS/cm +/-0.2 mg/L Monitor Turb +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	0852	28.18	Clear	Moderate	19.0	0.60	1.547 (mS/cm) uS/cm	6.57	-7.8	0.7
300	0853	28.18	↓	↓	19.1	0.57	1.543 (mS/cm) uS/cm	6.59	-31.3	1.6
600	0854	28.18			19.1	0.56	1.540 (mS/cm) uS/cm	6.61	-37.5	1.1
900	0855	28.18			19.1	0.54	1.536 (mS/cm) uS/cm	6.62	-49.6	1.3
1200	0856	28.18			19.1	0.54	1.534 (mS/cm) uS/cm	6.63	-49.0	1.2
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

M.K.

Start Time: 0852 Elapsed Time (min): 4 Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 0856 Average Purge Rate (mL/min): 300 Date Calibrated: 10 05 18

SAMPLING DATA

Sample Date: 10 05 18 Sample Time: 0900 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: MS MSD

VOA Vials, No Headspace ☑ Initials: JR

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: M. Karick B. Howell

DATE: 10/08/18 WEATHER: Sunny 75°F

MONITORING WELL ID: MW-4 SAMPLE ID: MW4-ROX-100818

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: 50.06 ft btoc	Volume of Flow Through Cell : 320* mL
Total Well Depth (btoc): 55.39 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 39.64 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc	Ambient PID/FID Reading: 0.6 ppm
Depth to LNAPL/DNAPL (btoc): NE ft		
Depth to Top of Screen (btoc): 45.06 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): ft btoc	Wellbore PID/FID Reading: 0.0 ppm
Screen Length: 10 ft		
Water Column Height (not including NAPL): 16.00 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc	
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) +/-0.2 mg/L or Monitor Temp. +/-5% or +/-10% +/-2 uS/cm +/-0.2 mg/L Monitor Turb +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	0918	39.64	Clear	Slight	18.9	0.77	1.348 (mS/cm) uS/cm	6.56	118.1	5.5
300	0919	39.64	↓	↓	19.0	0.69	1.338 (mS/cm) uS/cm	6.60	108.4	7.1
600	0920	39.64			19.0	0.66	1.331 (mS/cm) uS/cm	6.62	102.1	7.3
900	0921	39.64			19.1	0.62	1.324 (mS/cm) uS/cm	6.63	93.0	8.4
1200	0922	39.64			19.1	0.60	1.316 (mS/cm) uS/cm	6.65	84.0	8.9
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
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							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

M. K.

Start Time: 0918 Elapsed Time (min): 4 Water Quality Meter ID & SN: YSI ProDSS - 17705

Stop Time: 0925 Average Purge Rate (mL/min): 300 Date Calibrated: 10 08 18

SAMPLING DATA

Sample Date: 10/08/18 Sample Time: 0925 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: NA

VOA Vials, No Headspace ☒ Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: Tony Jones Megan Karrick

DATE: 10 12 18 WEATHER: Cloudy 40°F

MONITORING WELL ID: MW-5 SAMPLE ID: MWS-ROX-101218

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: 38.97 ft btoc
Total Well Depth (btoc): 44.30 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc
Depth to Water (btoc): 27.95 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): ft btoc
Depth to LNAPL/DNAPL (btoc): NF ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc
Depth to Top of Screen (btoc): 33.97 ft	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: ft btoc
Screen Length: 10 ft	
Water Column Height (not including NAPL): 16.35 ft	

Volume of Flow Through Cell: 320* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) Monitor Temp. +/-0.2 mg/L or +/-10% Readings (<50) +/-5% or +/-2 uS/cm +/-0.2 mg/L Monitor Turb +/-20 mV

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	0903	27.95	Clear	Moderate	17.6	0.90	0.918 mS/cm uS/cm	6.25	146.2	0.6
300	0904	27.95			17.8	0.79	0.917 mS/cm uS/cm	6.29	145.0	0.3
600	0905	27.94			17.8	0.76	0.918 mS/cm uS/cm	6.33	145.2	0.1
900	0906	27.94			17.9	0.71	0.916 mS/cm uS/cm	6.36	144.1	0.2
1200	0907	27.94	↓	↓	18.0	0.69	0.915 mS/cm uS/cm	6.38	142.7	0.4
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
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							mS/cm uS/cm			
							mS/cm uS/cm			

M. Karrick

Start Time: 0903 Elapsed Time (min): 4 Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 0907 Average Purge Rate (mL/min): 300 Date Calibrated: 10 12 18

SAMPLING DATA

Sample Date: 10 12 18 Sample Time: 0910 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: NA

VOA Vials, No Headspace ☑ Initials: TJ

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: B.Howell M.Karrick

DATE: 10 04 18 WEATHER: Cloudy 70°F

MONITORING WELL ID: MW-6A SAMPLE ID: MW6A-ROX-100418

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: 39.83 ft btoc	Volume of Flow Through Cell : 320* mL	
Total Well Depth (btoc): 44.18 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL	
Depth to Water (btoc): 30.10 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc	Ambient PID/FID Reading: 0.0 ppm	
Depth to LNAPL/DNAPL (btoc): NF ft			
Depth to Top of Screen (btoc): 34.83 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): ft btoc	Wellbore PID/FID Reading: 0.0 ppm	
Screen Length: 10 ft			
Water Column Height (not including NAPL): 14.08 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc		
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: ft btoc		

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) +/-0.2 mg/L or Monitor Temp. +/-5% or +/-10% +/-2 uS/cm +/-0.2 mg/L Monitor Turb +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1008	30.10	Cloudy	None	20.2	0.71	1.063 (mS/cm) uS/cm	6.77	-68.2	152.0
300	1009	30.10	↓	↓	20.3	0.68	1.062 (mS/cm) uS/cm	6.78	-71.7	152.2
600	1010	30.10			20.4	0.64	1.059 (mS/cm) uS/cm	6.79	-77.7	129.9
900	1011	30.10			20.5	0.60	1.056 (mS/cm) uS/cm	6.80	-80.6	121.3
1200	1012	30.10	↓	↓	20.5	0.57	1.050 (mS/cm) uS/cm	6.80	-83.9	111.0
				M.Karrick			mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 1008 Elapsed Time (min): 4 Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 1012 Average Purge Rate (mL/min): 300 Date Calibrated: 10 04 18

SAMPLING DATA

Sample Date: 10 04 18 Sample Time: 1020 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: NA

VOA Vials, No Headspace ☑ Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: B. Howell M. Karrick

DATE: 10 04 18 WEATHER: Cloudy 70°F

MONITORING WELL ID: MW-6B SAMPLE ID: MW6B-ROX-100418

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: 66.55 ft btoc	Volume of Flow Through Cell : 320* mL
Total Well Depth (btoc): 69.38 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 30.13 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc	Ambient PID/FID Reading: 0.0 ppm
Depth to LNAPL/DNAPL (btoc): NE ft		
Depth to Top of Screen (btoc): 64.05 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): ft btoc	Wellbore PID/FID Reading: 0.0 ppm
Screen Length: 5 ft		
Water Column Height (not including NAPL): 39.25 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc	
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) +/-0.2 mg/L or Monitor Temp. +/-5% or +/-10% +/-2 uS/cm +/-0.2 mg/L Monitor Turb +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	0927	30.14	Clear	None	19.7	1.39	0.800 (mS/cm) uS/cm	7.08	-11.9	23.1
300	0928	30.14	↓	↓	19.7	1.00	0.804 (mS/cm) uS/cm	7.07	-26.8	13.6
600	0929	30.14			19.6	0.81	0.803 (mS/cm) uS/cm	7.06	-41.5	4.8
900	0930	30.14			19.6	0.74	0.805 (mS/cm) uS/cm	7.06	-46.7	1.3
1200	0931	30.14	↓	↓	19.7	0.68	0.806 (mS/cm) uS/cm	7.06	-50.7	0.0
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
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							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

M. Karrick

Start Time: 0927 Elapsed Time (min): 4 Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 0931 Average Purge Rate (mL/min): 300 Date Calibrated: 10 04 18

SAMPLING DATA

Sample Date: 10 04 18 Sample Time: 0935 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: NA

VOA Vials, No Headspace ☑ Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: B. Howell M. Karnick

DATE: 10/04/18 WEATHER: Cloudy 70°F

MONITORING WELL ID: MW-6C SAMPLE ID: MW6C-ROX-100418

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: 87.45 ft btoc	Volume of Flow Through Cell : 320* mL	
Total Well Depth (btoc): 90.28 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL	
Depth to Water (btoc): 29.93 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc	Ambient PID/FID Reading: 0.0 ppm	
Depth to LNAPL/DNAPL (btoc): NF ft			
Depth to Top of Screen (btoc): 84.95 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): ft btoc	Wellbore PID/FID Reading: 0.0 ppm	
Screen Length: 5 ft			
Water Column Height (not including NAPL): 60.35 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc		
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: ft btoc		

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) Monitor Temp. +/-10% +/-0.2 mg/L or +/-2 uS/cm +/-5% or +/-0.2 mg/L Monitor Turb +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	0852	29.93	Clear	Slight	19.7	0.76	0.790 (mS/cm) uS/cm	6.83	-30.8	6.1
300	0853	29.93	↓	↓	19.7	0.75	0.790 (mS/cm) uS/cm	6.88	-44.8	5.7
600	0854	29.93			19.7	0.75	0.790 (mS/cm) uS/cm	6.90	-51.8	5.9
900	0855	29.93			19.7	0.78	0.789 (mS/cm) uS/cm	6.92	-57.9	6.0
1200	0856	29.93			19.7	0.69	0.790 (mS/cm) uS/cm	6.94	-63.3	5.4
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 0852 Elapsed Time (min): 4 Water Quality Meter ID & SN: YSI ProDSS -3770S

Stop Time: 0856 Average Purge Rate (mL/min): 300 Date Calibrated: 10 04 18

SAMPLING DATA

Sample Date: 10 04 18 Sample Time: 0900 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: EB @ 0830

VOA Vials, No Headspace ☑ Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: B.Howell M.Karnick

DATE: 10/04/18 WEATHER: Cloudy 70°F

MONITORING WELL ID: MW-6D SAMPLE ID: MW6D-ROX-100418

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: 107.22 ft btoc	Volume of Flow Through Cell : 320* mL
Total Well Depth (btoc): 110.05 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 29.76 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc	Ambient PID/FID Reading: 0.0 ppm
Depth to LNAPL/DNAPL (btoc): NE ft		
Depth to Top of Screen (btoc): 104.72 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): ft btoc	Wellbore PID/FID Reading: 0.0 ppm
Screen Length: 5 ft		
Water Column Height (not including NAPL): 80.29 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc	
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) +/-0.2 mg/L or Monitor Temp. +/-5% or +/-10% +/-2 uS/cm +/-0.2 mg/L Monitor Turb +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1053	29.77	Cloudy	None	19.1	1.01	1.068 (mS/cm) uS/cm	7.06	-37.0	42.8
300	1054	29.77	↓	↓	19.1	0.86	1.076 (mS/cm) uS/cm	7.06	-50.8	36.8
600	1055	29.78			19.1	0.80	1.081 (mS/cm) uS/cm	7.06	-58.9	34.0
900	1056	29.78			19.1	0.74	1.086 (mS/cm) uS/cm	7.06	-65.3	30.0
1200	1057	29.78	↓	↓	19.1	0.69	1.092 (mS/cm) uS/cm	7.07	-74.4	26.8
				M.Karnick			mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 1053 Elapsed Time (min): 4 Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 1057 Average Purge Rate (mL/min): 300 Date Calibrated: 10 04 18

SAMPLING DATA

Sample Date: 10 04 18 Sample Time: 1105 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: NA

VOA Vials, No Headspace ☒ Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: B. Howell M. Karrick

DATE: 10/08/18 WEATHER: Sunny 80°F

MONITORING WELL ID: MW-7 SAMPLE ID: MW7-ROX-100818

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: 47.92 ft btoc	Volume of Flow Through Cell : 320* mL
Total Well Depth (btoc): 52.92 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 41.69 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc	Ambient PID/FID Reading: 0.5 ppm
Depth to LNAPL/DNAPL (btoc): NF ft		
Depth to Top of Screen (btoc): 42.92 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): ft btoc	Wellbore PID/FID Reading: 15000 ppm
Screen Length: 10 ft		
Water Column Height (not including NAPL): 11.23 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc	
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

Readings (<50)

STABLE: (over 3 readings) +/-0.2 mg/L or Monitor Temp. +/-5% or +/-10% Monitor Turb +/-2 uS/cm +/-0.2 mg/L +/-20 mV

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1302	41.73	Clear	Strong	20.6	1.19	1.889 mS/cm uS/cm	6.76	27.6	3.8
300	1303	41.73	↓	↓	20.5	0.71	1.864 mS/cm uS/cm	6.65	1.5	5.3
600	1304	41.73			20.5	0.67	1.844 mS/cm uS/cm	6.63	-0.3	6.4
900	1305	41.73			20.4	0.68	1.809 mS/cm uS/cm	6.64	-7.3	7.3
1200	1306	41.73			20.4	0.69	1.771 mS/cm uS/cm	6.65	-14.3	9.2
1500	1307	41.73			20.8	0.68	1.700 mS/cm uS/cm	6.68	-24.4	11.8
1800	1308	41.73	↓	↓	20.9	0.69	1.690 mS/cm uS/cm	6.69	-28.8	14.0
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

MK

Start Time: 1302 Elapsed Time (min): 6 Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 1308 Average Purge Rate (mL/min): 300 Date Calibrated: 10/08/18

SAMPLING DATA

Sample Date: 10/08/18 Sample Time: 1315 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: NA

VOA Vials, No Headspace ☑ Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: B. Howell M. Karrick

DATE: 10/08/18 WEATHER: Sunny 75'F

MONITORING WELL ID: MW-8 SAMPLE ID: MW8-ROX-100818

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: 38.60 ft btoc	Volume of Flow Through Cell : 320* mL	
Total Well Depth (btoc): 43.60 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL	
Depth to Water (btoc): 32.45 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc	Ambient PID/FID Reading: 0.0 ppm	
Depth to LNAPL/DNAPL (btoc): NE ft			
Depth to Top of Screen (btoc): 33.60 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): — ft btoc	Wellbore PID/FID Reading: 86.1 ppm	
Screen Length: 10 ft			
Water Column Height (not including NAPL): 11.15 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc		
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: — ft btoc		

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) +/-0.2 mg/L or Monitor Temp. +/-5% or +/-10% +/-2 uS/cm +/-0.2 mg/L Monitor Turb +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1203	32.49	Clear	Strong	20.4	0.71	1.508 mS/cm uS/cm	6.83	-22.9	30
300	1204	32.49			20.4	8.65	1.506 mS/cm uS/cm	6.79	-39.8	1.2
600	1205	32.49			20.4	8.64	1.503 mS/cm uS/cm	6.78	-50.7	1.8
900	1206	32.49			20.4	0.59	1.502 mS/cm uS/cm	6.78	-56.7	1.7
1200	1207	32.49			20.4	0.56	1.493 mS/cm uS/cm	6.78	-60.7	0.5
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 1203 Elapsed Time (min): 4 Water Quality Meter ID & SN: YSI ProDSS - 17705

Stop Time: 1207 Average Purge Rate (mL/min): 300 Date Calibrated: 10 08 18

SAMPLING DATA

Sample Date: 10 08 18 Sample Time: 1210 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: DUP

VOA Vials, No Headspace ☑ Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW | PROJECT NUMBER: 60527968 - 01.03.004 | FIELD PERSONNEL: B. Howell M. Kanick

DATE: 10/10/18 | WEATHER: Rainy 70F

MONITORING WELL ID: MW-9 | SAMPLE ID: MW9-ROX-101018

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: 51.45 ft btoc
Total Well Depth (btoc): 56.37 ft	
Depth to Water (btoc): 42.88 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc
Depth to LNAPL/DNAPL (btoc): NE ft	
Depth to Top of Screen (btoc): 46.45 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): — ft btoc
Screen Length: 10 ft	
Water Column Height (not including NAPL): 13.49 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: — ft btoc

Volume of Flow Through Cell: 320* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.2 ppm

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) Monitor Temp. +/-0.2 mg/L or +/-10% | +/-5% or +/-2 uS/cm | +/-0.2 mg/L | Monitor Turb +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1243	42.91	Clear	Slight	18.6	1.41	1.197 mS/cm uS/cm	6.92	36.9	7.5
300	1244	42.91	↓	↓	18.9	1.11	1.199 mS/cm uS/cm	6.83	32.2	5.3
600	1245	42.91			18.8	0.94	1.197 mS/cm uS/cm	6.80	28.1	3.5
900	1246	42.91			18.9	0.80	1.194 mS/cm uS/cm	6.79	25.1	3.1
1200	1247	42.91			18.9	0.76	1.194 mS/cm uS/cm	6.78	22.3	4.1
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
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							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 1243 | Elapsed Time (min): 4 | Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 1247 | Average Purge Rate (mL/min): 300 | Date Calibrated: 10/10/18

SAMPLING DATA

Sample Date: 10/10/18 | Sample Time: 1255 | Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow | Sample Flow Rate (mL/min): 300 | QA/QCSamples: NA

VOA Vials, No Headspace ☑ | Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW | PROJECT NUMBER: 60527968 - 01.03.004 | FIELD PERSONNEL: B. Howell M Karrick

DATE: 10 10 18 | WEATHER: Cloudy/Rainy 73°F

MONITORING WELL ID: MW-10 | SAMPLE ID: MW10-ROX-101018

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: 49.43 ft btoc
Total Well Depth (btoc): 54.76 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc
Depth to Water (btoc): 42.87 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): ft btoc
Depth to LNAPL/DNAPL (btoc): NE ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc
Depth to Top of Screen (btoc): 44.43 ft	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: — ft btoc
Screen Length: 10 ft	
Water Column Height (not including NAPL): 11.89 ft	

Volume of Flow Through Cell: 320* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.2 ppm

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) Monitor Temp. +/-0.2 mg/L or +/-10% | +/-5% or +/-2 uS/cm | +/-0.2 mg/L | Monitor Turb +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1148	42.89	Clear	Slight	19.0	1.03	1.756 (mS/cm) uS/cm	6.98	75.1	33.9
300	1149	42.89			19.2	0.93	1.765 mS/cm uS/cm	6.95	66.1	32.1
600	1150	42.89			19.3	0.81	1.775 mS/cm uS/cm	6.93	55.0	31.6
900	1151	42.89			19.4	0.76	1.781 mS/cm uS/cm	6.93	45.6	30.5
1200	1152	42.89			19.6	0.71	1.786 mS/cm uS/cm	6.92	35.3	29.9
1500	1153	42.89			19.7	0.68	1.790 mS/cm uS/cm	6.92	24.9	28.3
1800	1154	42.89	↓	↓	19.7	0.68	1.793 mS/cm uS/cm	6.92	17.4	28.2
				M. Karrick			mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 1148 | Elapsed Time (min): 6 | Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 1154 | Average Purge Rate (mL/min): 300 | Date Calibrated: 10/10/18

SAMPLING DATA

Sample Date: 10/10/18 | Sample Time: 1200 | Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow | Sample Flow Rate (mL/min): 300 | QA/QCSamples: NA

VOA Vials, No Headspace ☑ Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: B. Howell M. Kaup

DATE: 10/11/18 WEATHER: Sunny 53°F

MONITORING WELL ID: MW-11 SAMPLE ID: MW11-ROX-101118

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: 46.66 ft btoc
Total Well Depth (btoc): 51.99 ft	
Depth to Water (btoc): 40.65 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc
Depth to LNAPL/DNAPL (btoc): NE ft	
Depth to Top of Screen (btoc): 41.66 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): ft btoc
Screen Length: 10 ft	
Water Column Height (not including NAPL): 11.34 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: — ft btoc

Volume of Flow Through Cell: 320* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) +/-0.2 mg/L or Monitor Temp. +/-5% or +/-10% +/-2 uS/cm +/-0.2 mg/L Monitor Turb +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1206	40.66	slightly cloudy	Moderate	16.6	1.20	1.445 mS/cm uS/cm	6.98	-41.7	28.5
300	1207	40.66			16.8	0.97	1.450 mS/cm uS/cm	6.88	-46.9	21.8
600	1208	40.66			17.0	0.91	1.449 mS/cm uS/cm	6.85	-49.8	17.9
900	1209	40.66			17.1	0.87	1.448 mS/cm uS/cm	6.84	-52.8	15.5
1200	1210	40.66			17.2	0.84	1.446 mS/cm uS/cm	6.81	-53.4	12.1
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
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							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 1206 Elapsed Time (min): 4 Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 1210 Average Purge Rate (mL/min): 300 Date Calibrated: 10/11/18

SAMPLING DATA

Sample Date: 10/11/18 Sample Time: 1215 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: NA

VOA Vials, No Headspace ☑ Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW | PROJECT NUMBER: 60527968 - 01.03.004 | FIELD PERSONNEL: B. Howell M Kanuth

DATE: 10 10 18 | WEATHER: Cloudy/Rainy 73°F

MONITORING WELL ID: MW-12 | SAMPLE ID: MW12-ROX-101018

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: 46.92 ft btoc
Total Well Depth (btoc): 52.25 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc
Depth to Water (btoc): 40.84 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): ft btoc
Depth to LNAPL/DNAPL (btoc): NE ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc
Depth to Top of Screen (btoc): 41.92 ft	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: ft btoc
Screen Length: 10 ft	Volume of Flow Through Cell: 320* mL
Water Column Height (not including NAPL): ft	Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
	Ambient PID/FID Reading: 0.0 ppm
	Wellbore PID/FID Reading: 0.4 ppm

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) Monitor Temp. +/-0.2 mg/L or +/-10% | +/-5% or +/-2 uS/cm | +/-0.2 mg/L | Monitor Turb +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1030	40.88	Clear	None	19.4	0.94	1.023 (mS/cm) uS/cm	6.96	102.7	10.5
300	1031	40.88	↓	↓	19.3	0.88	1.026 (mS/cm) uS/cm	6.93	101.8	8.6
600	1032	40.88			19.4	0.80	1.023 (mS/cm) uS/cm	6.91	100.9	8.0
900	1033	40.88			19.4	0.75	1.022 (mS/cm) uS/cm	6.90	100.1	7.2
1200	1034	40.88			19.4	0.72	1.022 (mS/cm) uS/cm	6.89	99.3	6.5
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
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Start Time: 1030 | Elapsed Time (min): 4 | Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 1034 | Average Purge Rate (mL/min): 300 | Date Calibrated: 10/10/18

SAMPLING DATA

Sample Date: 10 1018 | Sample Time: 1040 | Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow | Sample Flow Rate (mL/min): 300 | QA/QCSamples: EB @ 1000

VOA Vials, No Headspace: ☑ | Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW | PROJECT NUMBER: 60527968 - 01.03.004 | FIELD PERSONNEL: B. Howell M. Kamel

DATE: 10 11 18 | WEATHER: Sunny 50°F

MONITORING WELL ID: MW-13 | SAMPLE ID: MW13-ROX-101118

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: ft btoc
Total Well Depth (btoc): 35.05 ft	
Depth to Water (btoc): 27.66 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 31.36 ft btoc
Depth to LNAPL/DNAPL (btoc): NF ft	
Depth to Top of Screen (btoc): 25.57 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): — ft btoc
Screen Length: 10 ft	
Water Column Height (not including NAPL): 7.39 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: — ft btoc

Volume of Flow Through Cell: 320* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) +/-0.2 mg/L or Monitor Temp. +/-5% or +/-10% +/-2 uS/cm +/-0.2 mg/L Monitor Turb +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1031	27.66	Cloudy	Slight	19.6	0.64	1.396 mS/cm uS/cm	6.59	-2.3	30.9
300	1032	27.66	↓	↓	19.8	0.62	1.390 mS/cm uS/cm	6.59	-14.7	22.9
600	1033	27.66			19.7	0.62	1.391 mS/cm uS/cm	6.60	-19.9	18.7
900	1034	27.66			19.6	0.61	1.393 mS/cm uS/cm	6.60	-24.0	19.1
1200	1035	27.66			19.6	0.61	1.389 mS/cm uS/cm	6.60	-33.3	15.4
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
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Start Time: 1031 | Elapsed Time (min): 4 | Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 1035 | Average Purge Rate (mL/min): 300 | Date Calibrated: 10 11 18

SAMPLING DATA

Sample Date: 10/11/18 | Sample Time: 1040 | Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow | Sample Flow Rate (mL/min): 300 | QA/QCSamples: NA

VOA Vials, No Headspace ☑ | Initials: MK

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: B. Howell M. Kanuch

DATE: 10 15 18 WEATHER: Cloudy 45°F

MONITORING WELL ID: MW-14 SAMPLE ID: MW14-ROX-101518

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: 38.42 ft btoc	Volume of Flow Through Cell: 320* mL	
Total Well Depth (btoc): 44.00 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc	Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL	
Depth to Water (btoc): 32.33 ft		Ambient PID/FID Reading: 0.3 ppm	
Depth to LNAPL/DNAPL (btoc): NF ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): — ft btoc	Wellbore PID/FID Reading: 17 ppm	
Depth to Top of Screen (btoc): 33.42 ft			
Screen Length: 10 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc		
Water Column Height (not including NAPL): 11.68 ft	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: — ft btoc		

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) +/-0.2 mg/L or Monitor Temp. +/-5% or +/-10% Monitor Turb +/-2 uS/cm +/-0.2 mg/L +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1219	32.33	Clear	Strong	17.1	1.06	1.132 (mS/cm) uS/cm	7.15	103.3	4.5
300	1220	32.33			17.2	0.98	1.131 mS/cm uS/cm	7.09	102.8	4.6
600	1221	32.33			17.6	0.90	1.137 mS/cm uS/cm	7.02	101.1	4.7
900	1222	32.34			17.5	0.86	1.134 mS/cm uS/cm	6.99	100.9	4
1200	1223	32.34			17.6	0.82	1.138 mS/cm uS/cm	6.95	100.3	4.8
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
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							mS/cm uS/cm			

M. Kanuch

Start Time: 1219 Elapsed Time (min): 4 Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 1223 Average Purge Rate (mL/min): 300 Date Calibrated: 10 15 18

SAMPLING DATA

Sample Date: 10 15 18 Sample Time: 1230 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: EB @ 1200

VOA Vials, No Headspace ☑ Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: J. Ragatz M. Karnoff

DATE: 10 05 18 WEATHER: Sunny 72°F

MONITORING WELL ID: MW-16 SAMPLE ID: MW16-ROX-100518

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: ft btoc	Volume of Flow Through Cell: 320* mL
Total Well Depth (btoc): 47.75 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 42.24 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 45.00 ft btoc	Ambient PID/FID Reading: 0.0 ppm
Depth to LNAPL/DNAPL (btoc): NE ft		
Depth to Top of Screen (btoc): 37.06 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): ft btoc	Wellbore PID/FID Reading: 0.0 ppm
Screen Length: 10 ft		
Water Column Height (not including NAPL): 5.51 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc	
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) Monitor Temp. +/-0.2 mg/L or +/-10% +/-5° or +/-2 uS/cm Monitor Turb +/-0.2 mg/L +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	0946	42.26	Clear	Moderate	19.3	0.98	1.162 mS/cm uS/cm	6.83	29.8	16.6
300	0947	42.26	↓	↓	19.3	0.81	1.163 mS/cm uS/cm	6.78	-1.3	15.8
600	0948	42.26			19.3	0.71	1.166 mS/cm uS/cm	6.75	-24.9	14.9
900	0949	42.26			19.3	0.66	1.168 mS/cm uS/cm	6.75	-34.6	14.7
1200	0950	42.26			19.3	0.60	1.170 mS/cm uS/cm	6.75	-46.8	10.9
1500	0951	42.26	↓	↓	19.5	0.58	1.171 mS/cm uS/cm	6.76	-50.3	10.1
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
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MK

Start Time: 0946 Elapsed Time (min): 5 Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 0951 Average Purge Rate (mL/min): 300 Date Calibrated: 10 05 18

SAMPLING DATA

Sample Date: 10 05 18 Sample Time: 0955 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: NA

VOA Vials, No Headspace ☑ Initials: JR

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1500 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: B. Howell M. Kurrle

DATE: 10 15 18 WEATHER: Cloudy 40°F

MONITORING WELL ID: MW-22 SAMPLE ID: MW22-ROX-101518

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: ft btoc
Total Well Depth (btoc): 48.48 ft	
Depth to Water (btoc): 41.11 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 44.79 ft btoc
Depth to LNAPL/DNAPL (btoc): NE ft	
Depth to Top of Screen (btoc): 37.88 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): ft btoc
Screen Length: 10 ft	
Water Column Height (not including NAPL): 7.37 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: ft btoc

Volume of Flow Through Cell: 320* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.2 ppm

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) Monitor Temp. +/-0.2 mg/L or +/-10% +/-5% or +/-2 uS/cm Monitor Turb +/-0.2 mg/L +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1020	41.17	Clear	Strong	16.8	1.45	1.011 (mS/cm) uS/cm	6.74	114.5	3.1
300	1021	41.17			17.9	1.16	1.027 (mS/cm) uS/cm	6.78	112.6	2.4
600	1022	41.17			18.4	1.06	1.032 (mS/cm) uS/cm	6.78	111.7	2
900	1023	41.17			18.5	0.93	1.037 (mS/cm) uS/cm	6.71	110.7	1.5
1200	1024	41.17			18.6	0.86	1.044 (mS/cm) uS/cm	6.72	110.2	1.1
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
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MK

Start Time: 1020 Elapsed Time (min): 4 Water Quality Meter ID & SN: YSI ProDSS - 3T705

Stop Time: 1024 Average Purge Rate (mL/min): 300 Date Calibrated: 10 15 18

SAMPLING DATA

Sample Date: 10 15 18 Sample Time: 1030 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: NA

VOA Vials, No Headspace ☑ Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW | PROJECT NUMBER: 60527968 - 01.03.004 | FIELD PERSONNEL: B. Howell M. Karrick

DATE: 10/09/18 | WEATHER: Sunny, 78°F

MONITORING WELL ID: MW-23 | SAMPLE ID: MW23-ROX-100918

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: 34.02 ft btoc
Total Well Depth (btoc): 39.27 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc
Depth to Water (btoc): 29.00 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): ft btoc
Depth to LNAPL/DNAPL (btoc): NE ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc
Depth to Top of Screen (btoc): 29.02 ft	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: ft btoc
Screen Length: 10 ft	
Water Column Height (not including NAPL): 10.27 ft	

Volume of Flow Through Cell: 320* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) +/-0.2 mg/L or Monitor Temp. +/-5% or +/-10% +/-2 uS/cm +/-0.2 mg/L Monitor Turb +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1123	29.04	Cloudy	Slight	19.3	0.72	0.963 mS/cm uS/cm	6.66	14.3	47.9
300	1124	29.04			19.2	0.66	0.962 mS/cm uS/cm	6.66	-3.8	51.2
600	1125	29.04			19.2	0.64	0.960 mS/cm uS/cm	6.65	-14.9	51.3
900	1126	29.04			19.0	0.60	0.959 mS/cm uS/cm	6.66	-28.4	44.0
1200	1127	29.04			19.1	0.59	0.958 mS/cm uS/cm	6.66	-38.0	39.9
1500	1128	29.04	↓	↓	19.1	0.57	0.958 mS/cm uS/cm	6.66	-47.0	37.0
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
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Start Time: 1123 | Elapsed Time (min): 5 | Water Quality Meter ID & SN: YSI ProDSS - 17705

Stop Time: 1128 | Average Purge Rate (mL/min): 300 | Date Calibrated: 10 09 18

SAMPLING DATA

Sample Date: 10 09 18 | Sample Time: 1135 | Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow | Sample Flow Rate (mL/min): 300 | QA/QCSamples: NA

VOA Vials, No Headspace ☑ Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1500 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: J.Ragatz M.Karnick

DATE: 10/05/18 WEATHER: Sunny 75°F

MONITORING WELL ID: MW-24 SAMPLE ID: MW24-ROX-100518

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: ft btoc	Volume of Flow Through Cell: 320* mL
Total Well Depth (btoc): 49.86 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 41.81 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 43.84 ft btoc	Ambient PID/FID Reading: 0.0 ppm
Depth to LNAPL/DNAPL (btoc): NE ft		
Depth to Top of Screen (btoc): 38.89 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): ft btoc	Wellbore PID/FID Reading: 0.3 ppm
Screen Length: 10 ft		
Water Column Height (not including NAPL): 8.05 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc	
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: ft btoc	

PURGE DATA

STABLE: +/-0.2 mg/L or +/-5% or Monitor Turb

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump (over 3 readings) Monitor Temp. +/-10% +/-2 uS/cm +/-0.2 mg/L +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1026	41.81	Cloudy	None	19.9	1.60	2.003 mS/cm uS/cm	6.70	85.8	52.8
300	1027	41.81			19.7	1.00	2.014 mS/cm uS/cm	6.65	84.3	51.9
600	1028	41.81			19.6	0.85	2.018 mS/cm uS/cm	6.63	83.1	54.2
900	1029	41.81			19.6	0.78	2.019 mS/cm uS/cm	6.63	81.6	52.6
1200	1030	41.81			19.6	0.78	2.020 mS/cm uS/cm	6.61	79.3	51.6
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
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							mS/cm uS/cm			

M.Karnick

Start Time: 1026 Elapsed Time (min): 4 Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 1030 Average Purge Rate (mL/min): 300 Date Calibrated: 10/5/18

SAMPLING DATA

Sample Date: 10/05/18 Sample Time: 1035 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: NA

VOA Vials, No Headspace ☑ Initials: JR

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW | PROJECT NUMBER: 60527968 - 01.03.004 | FIELD PERSONNEL: B.Howell M.Kamick

DATE: 10 08 18 | WEATHER: Sunny 75°F

MONITORING WELL ID: MW-25 | SAMPLE ID: MW25-ROX-100818

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: ___ ft btoc	Volume of Flow Through Cell: 320* mL
Total Well Depth (btoc): 345.84 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 36.73 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 41.29 ft btoc	Ambient PID/FID Reading: 0.0 ppm
Depth to LNAPL/DNAPL (btoc): NE ft		
Depth to Top of Screen (btoc): 35.59 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): ___ ft btoc	Wellbore PID/FID Reading: 2.8 ppm
Screen Length: 10 ft		
Water Column Height (not including NAPL): 9.11 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ___ ft btoc	
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: ___ ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) Monitor Temp. +/-0.2 mg/L or +/-10% +/-5% or +/-2 uS/cm Monitor Turb +/-0.2 mg/L +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1026	36.76	Clear	Strong	18.2	0.77	0.542 mS/cm uS/cm	7.36	-74.2	4.6
300	1027	36.76	↓	↓	18.2	0.65	0.545 mS/cm uS/cm	7.33	-80.2	4.9
600	1028	36.76			18.2	0.62	0.546 mS/cm uS/cm	7.30	-87.6	4.8
900	1029	36.76			18.3	0.58	0.551 mS/cm uS/cm	7.29	-99.1	4.3
1200	1030	36.76	↓	↓	18.2	0.57	0.553 mS/cm uS/cm	7.27	-107.0	4.1
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

M. Kamick

Start Time: 1026 | Elapsed Time (min): 4' | Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 1030 | Average Purge Rate (mL/min): 300 | Date Calibrated: 10/08/18

SAMPLING DATA

Sample Date: 10 08 18 | Sample Time: 1035 | Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow | Sample Flow Rate (mL/min): 300 | QA/QCSamples: NA

VOA Vials, No Headspace: ☑ Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW | PROJECT NUMBER: 60527968 - 01.03.004 | FIELD PERSONNEL: B. Howell M. Kamck

DATE: 10/09/18 | WEATHER: Sunny 88°F

MONITORING WELL ID: MW-26 | SAMPLE ID: MW26-ROX-100918

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: — ft btoc
Total Well Depth (btoc): 48.40 ft	
Depth to Water (btoc): 39.53 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 43.97 ft btoc
Depth to LNAPL/DNAPL (btoc): NE ft	
Depth to Top of Screen (btoc): 38.15 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): — ft btoc
Screen Length: 10 ft	
Water Column Height (not including NAPL): 8.87 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: — ft btoc

Volume of Flow Through Cell: 320* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) Monitor Temp. +/-0.2 mg/L or +/-10% +/-5% or +/-2 uS/cm +/-0.2 mg/L Monitor Turb +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1341	39.57	Clear	Moderate	20.7	0.83	1.433 (mS/cm) uS/cm	6.90	67.7	4.7
300	1342	39.57	↓	↓	20.8	0.79	1.432 (mS/cm) uS/cm	6.86	65.9	4.2
600	1343	39.58			20.9	0.77	1.431 (mS/cm) uS/cm	6.84	64.8	4.6
900	1344	39.58			21.0	0.75	1.431 (mS/cm) uS/cm	6.83	63.7	4.2
1200	1345	39.58			21.0	0.73	1.431 (mS/cm) uS/cm	6.81	62.3	3.8
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

M. Kamck

Start Time: 1341 | Elapsed Time (min): 4 | Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 1345 | Average Purge Rate (mL/min): 300 | Date Calibrated: 10 09 18

SAMPLING DATA

Sample Date: 10 09 18 | Sample Time: 1350 | Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow | Sample Flow Rate (mL/min): 300 | QA/QCSamples: MS/MSD

VOA Vials, No Headspace ☑ Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: B. Howell M. Kamck

DATE: 10/09/18 WEATHER: Sunny 85°F

MONITORING WELL ID: MW-27 SAMPLE ID: MW27-ROX-100918

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: ft btoc	Volume of Flow Through Cell: 320* mL
Total Well Depth (btoc): 50.04 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 41.06 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 45.55 ft btoc	Ambient PID/FID Reading: 0.0 ppm
Depth to LNAPL/DNAPL (btoc): NE ft		
Depth to Top of Screen (btoc): 39.79 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): ft btoc	Wellbore PID/FID Reading: 0.0 ppm
Screen Length: 10 ft		
Water Column Height (not including NAPL): 8.98 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc	
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

Readings (<50)

STABLE: (over 3 readings) +/-0.2 mg/L or Monitor Temp. +/-5% or +/-10% +/-2 uS/cm +/-0.2 mg/L Monitor Turb +/-20 mV

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1251	41.19	Cloudy	None	19.8	1.99	1.019 mS/cm uS/cm	6.81	42.3	46.5
300	1252	41.19			19.8	1.97	1.019 mS/cm uS/cm	6.80	41.0	42.1
600	1253	41.19			19.9	1.97	1.018 mS/cm uS/cm	6.80	40.2	40.1
900	1254	41.19			19.9	1.95	1.020 mS/cm uS/cm	6.80	39.3	34.0
1200	1255	41.19			19.7	1.92	1.022 mS/cm uS/cm	6.80	38.3	32.2
1500	1256	41.19			19.7	1.89	1.021 mS/cm uS/cm	6.80	37.4	29.1
1800	1257	41.19			19.7	1.89	1.022 mS/cm uS/cm	6.80	36.8	29.3
2100	1258	41.19			19.6	1.84	1.021 mS/cm uS/cm	6.79	35.7	30.9
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 1251 Elapsed Time (min): 7 Water Quality Meter ID & SN: YSI ProDSS - 377077

Stop Time: 1258 Average Purge Rate (mL/min): 300 Date Calibrated: 10 09 18

SAMPLING DATA

Sample Date: 10/09/18 Sample Time: 1305 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: NA

VOA Vials, No Headspace ☑ Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 2100 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: B. Howell M. Karrick

DATE: 10/11/18 WEATHER: Sunny 53°F

MONITORING WELL ID: MW-28 SAMPLE ID: MW28-ROX-101118

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: ft btoc
Total Well Depth (btoc): 43.86 ft	
Depth to Water (btoc): 40.25 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc
Depth to LNAPL/DNAPL (btoc): NE ft	
Depth to Top of Screen (btoc): 33.61 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): ft btoc
Screen Length: 10 ft	
Water Column Height (not including NAPL): 3.61 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: 41.86 ft btoc

Volume of Flow Through Cell: 320* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) +/-0.2 mg/L or Monitor Temp. +/-5% or +/-10% Monitor Turb +/-2 uS/cm +/-0.2 mg/L +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1309	40.31	Slightly Cloudy	Moderate	19.1	1.14	1.613 mS/cm uS/cm	6.83	-26.9	25.7
300	1310	40.31			19.1	1.01	1.613 mS/cm uS/cm	6.78	-26.8	20.5
600	1311	40.31			19.0	0.97	1.614 mS/cm uS/cm	6.76	-28.8	21.9
900	1312	40.31			19.1	0.91	1.615 mS/cm uS/cm	6.74	-28.1	20.7
1200	1313	40.31			19.2	0.87	1.616 mS/cm uS/cm	6.73	-29.9	14.4
1500	1314	40.31			19.2	0.84	1.618 mS/cm uS/cm	6.72	-28.7	11.3
1800	1315	40.31			19.3	0.83	1.619 mS/cm uS/cm	6.71	-27.8	8.1
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

M. Karrick

Start Time: 1309 Elapsed Time (min): 6 Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 1315 Average Purge Rate (mL/min): 300 Date Calibrated: 10 11 18

SAMPLING DATA

Sample Date: 10 11 18 Sample Time: 1320 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: MS/MSD

VOA Vials, No Headspace ☑ Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: J. Ragatz M. Karrick

DATE: 10 05 18 WEATHER: Sunny 85° f

MONITORING WELL ID: P-54 SAMPLE ID: P54-ROX-100518

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: ft btoc	Volume of Flow Through Cell: 320* mL
Total Well Depth (btoc): 63.00 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 40.46 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc	Ambient PID/FID Reading: 0.0 ppm
Depth to LNAPL/DNAPL (btoc): NE ft		
Depth to Top of Screen (btoc): 38.00 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): 45.46 ft btoc	Wellbore PID/FID Reading: 0.3 ppm
Screen Length: 25 ft		
Water Column Height (not including NAPL): 22.54 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc	
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) +/-0.2 mg/L or Monitor Temp. +/-5% or +/-10% Monitor Turb +/-2 uS/cm +/-0.2 mg/L +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1132	40.46	Clear	None	19.5	2.41	1.260 mS/cm uS/cm	7.11	103.6	14.1
300	1133	40.46	↓	↓	19.2	1.72	1.263 mS/cm uS/cm	6.86	102.1	13.5
600	1134	40.46			19.3	1.59	1.262 mS/cm uS/cm	6.80	101.0	13.5
900	1135	40.46			19.3	1.59	1.256 mS/cm uS/cm	6.76	99.7	14.1
1200	1136	40.46			19.4	1.63	1.253 mS/cm uS/cm	6.76	98.2	12.5
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 1132 Elapsed Time (min): 4 Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 1136 Average Purge Rate (mL/min): 300 Date Calibrated: 100518

SAMPLING DATA

Sample Date: 10 05 18 Sample Time: 1140 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: NA

VOA Vials, No Headspace ☑ Initials: JR

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: J. Peters T. Jones

DATE: 10/16/18 WEATHER: Sunny 45°

MONITORING WELL ID: P-55R SAMPLE ID: —

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: N/A — ft btoc	Volume of Flow Through Cell : 320* mL
Total Well Depth (btoc): 50.68 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 42.18 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: N/A — ft btoc	Ambient PID/FID Reading: 0.0 ppm
Depth to LNAPL/DNAPL (btoc): 41.49 ft		
Depth to Top of Screen (btoc): 40.43 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): N/A — ft btoc	Wellbore PID/FID Reading: 152.6 ppm
Screen Length: 10 ft		
Water Column Height (not including NAPL): 8.5 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc	
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: — ft btoc	

PURGE DATA

STABLE: +/-0.2 mg/L or +/-5% or Monitor Turb

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump (over 3 readings) Monitor Temp. +/-10% +/-2 uS/cm +/-0.2 mg/L +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
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							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: N/A Elapsed Time (min): N/A Water Quality Meter ID & SN: YSI ProDSS - 17A0161

Stop Time: N/A Average Purge Rate (mL/min): N/A Date Calibrated: 10/16/18

SAMPLING DATA

Sample Date: 10/16/18 Sample Time: N/A Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): N/A QA/QCSamples: N/A

VOA Vials, No Headspace ☐ Initials: N/A

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

* No SAMPLE COLLECTED DUE TO THE PRESENCE OF LNAPL

Total Purge Volume: N/A mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: J. PETERS, T. JONES

DATE: 10/15/18 WEATHER: CLOUDY 41°

MONITORING WELL ID: P56 SAMPLE ID: P56-WRL-101518 P56-ROX-101518

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: — ft btoc
Total Well Depth (btoc): 65.82 ft	
Depth to Water (btoc): 45.37 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc
Depth to LNAPL/DNAPL (btoc): ft	
Depth to Top of Screen (btoc): 40.82 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): 50.37 ft btoc
Screen Length: 25 ft	
Water Column Height (not including NAPL): 20.45 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: — ft btoc

Volume of Flow Through Cell: 320* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) Monitor Temp. +/-0.2 mg/L or +/-10% Readings (<50) +/-5% or +/-2 uS/cm Monitor Turb +/-0.2 mg/L +/-20 mV

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1250	45.37	CLEAR	STRONG	19.4	0.81	1.177 mS/cm uS/cm	7.22	-60.0	11.6
300	1251	45.38	↓	↓	19.8	0.66	1.188 mS/cm uS/cm	7.21	-66.7	14.1
600	1252	45.38			20.1	0.43	1.198 mS/cm uS/cm	7.20	-77.6	11.7
900	1253	45.38			20.1	0.35	1.197 mS/cm uS/cm	7.19	-83.4	10.7
1200	1254	45.38			20.2	0.29	1.198 mS/cm uS/cm	7.19	-88.6	11.0
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 1250 Elapsed Time (min): 4 Water Quality Meter ID & SN: YSI ProDSS - 047061

Stop Time: 1254 Average Purge Rate (mL/min): 300 Date Calibrated: 10/15/18

SAMPLING DATA

Sample Date: 10/15/18 Sample Time: 1305 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: N/A

VOA Vials, No Headspace ☑ Initials: JP

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW | PROJECT NUMBER: 60527968 - 01.03.004 | FIELD PERSONNEL: M. Karnick B. Howell

DATE: 10 16 18 | WEATHER: Sunny 40°F

MONITORING WELL ID: P-57 | SAMPLE ID: P57-ROX-101618

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: — ft btoc
Total Well Depth (btoc): 54.19 ft	
Depth to Water (btoc): 46.93 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 50.06 ft btoc
Depth to LNAPL/DNAPL (btoc): NS ft	
Depth to Top of Screen (btoc): 44.19 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): — ft btoc
Screen Length: 10 ft	
Water Column Height (not including NAPL): 8.26 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: — ft btoc

Volume of Flow Through Cell: 320* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.7 ppm

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) Monitor Temp. +/-0.2 mg/L or +/-10% | +/-5% or +/-2 uS/cm | +/-0.2 mg/L | Monitor Turb +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1038	46.31	Clear	Strong	20.8	1.04	1.294 (mS/cm) uS/cm	6.47	65.6	3.8
300	1039	46.33			20.9	0.91	1.298 (mS/cm) uS/cm	6.50	64.2	3.6
600	1040	46.39			21.3	0.83	1.302 (mS/cm) uS/cm	6.53	62.7	3.7
900	1041	46.43			21.6	0.79	1.302 (mS/cm) uS/cm	6.54	61.6	3.7
1200	1042	46.49			21.7	0.75	1.307 (mS/cm) uS/cm	6.57	60.3	3.8
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

M. Karnick

Start Time: 1038 | Elapsed Time (min): 4 | Water Quality Meter ID & SN: YSI ProDSS - 37[illegible]05

Stop Time: 1042 | Average Purge Rate (mL/min): 300 | Date Calibrated: 10 16 18

SAMPLING DATA

Sample Date: 10 16 18 | Sample Time: 1050 | Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow | Sample Flow Rate (mL/min): 300 | QA/QCSamples: DUP

VOA Vials, No Headspace ☑ Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: B. Howell M. Karicko

DATE: 10/16/18 WEATHER: Sunny 42°F

MONITORING WELL ID: P-58 SAMPLE ID: P58-ROX-101618

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: — ft btoc	Volume of Flow Through Cell: 320* mL
Total Well Depth (btoc): 66.21 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 43.71 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc	Ambient PID/FID Reading: 0.0 ppm
Depth to LNAPL/DNAPL (btoc): NF ft		
Depth to Top of Screen (btoc): 40.21 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): 48.71 ft btoc	Wellbore PID/FID Reading: 0.2 ppm
Screen Length: 25 ft		
Water Column Height (not including NAPL): 21.50 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc	
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: — ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) Monitor Temp. +/-0.2 mg/L or +/-10% +/-5% or +/-2 uS/cm Monitor Turb +/-0.2 mg/L +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1217	43.79	Clear	Strong	23.8	1.12	2.696 mS/cm uS/cm	7.33	4.5	44.0
300	1218				24.0	0.73	2.682 mS/cm uS/cm	7.19	-2.4	45.7
600	1219				24.7	0.63	2.678 mS/cm uS/cm	7.10	-8.9	41.7
900	1220	43.79			24.6	0.60	2.686 mS/cm uS/cm	7.13	-13.9	43.8
1200	1221				24.6	0.57	2.639 mS/cm uS/cm	7.06	-19.5	41.6
1500	1222				25.0	0.53	2.616 mS/cm uS/cm	6.98	-27.4	48.3
1800	1223				25.4	0.51	2.627 mS/cm uS/cm	6.98	-32.9	49.1
2100	1224	43.79			25.8	0.49	2.600 mS/cm uS/cm	7.00	-39.4	40.6
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

M.K

Start Time: 1217 Elapsed Time (min): 7 Water Quality Meter ID & SN: YSI ProDSS -37705

Stop Time: 1224 Average Purge Rate (mL/min): 300 Date Calibrated: 10 16 18

SAMPLING DATA

Sample Date: 10 16 18 Sample Time: 1230 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: NA

VOA Vials, No Headspace ☑ Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 2100 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW | PROJECT NUMBER: 60527968 - 01.03.004 | FIELD PERSONNEL: J. PETERS, T. JONES

DATE: 10/16/18 | WEATHER: MOSTLY SUNNY 41°

MONITORING WELL ID: P-59 | SAMPLE ID: P59-WRR-101618, P59-ROX-101618

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: — ft btoc	Volume of Flow Through Cell: 320* mL
Total Well Depth (btoc): 72.91 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 45.99 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc	Ambient PID/FID Reading: 0.0 ppm
Depth to LNAPL/DNAPL (btoc): NE ft		
Depth to Top of Screen (btoc): 47.91 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): 52.91 ft btoc	Wellbore PID/FID Reading: 155.6 ppm
Screen Length: 25 ft		
Water Column Height (not including NAPL): 26.92 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc	
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: — ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) Monitor Temp. +/-0.2 mg/L or +/-10% | +/-5% or +/-2 uS/cm | Monitor Turb +/-0.2 mg/L | +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1045	45.99	CLEAR		23.5	0.72	1.625 (mS/cm) uS/cm	6.63	-53.1	40.1
300	1046	45.99			24.7	0.60	1.658 (mS/cm) uS/cm	6.63	-64.9	41.5
600	1047	45.99			25.0	0.45	1.648 (mS/cm) uS/cm	6.62	-68.5	37.9
900	1048				27.7	0.37	1.649 (mS/cm) uS/cm	6.60	-76.7	37.2
1200	1049		TUBING CAME OFF				mS/cm uS/cm			
							mS/cm uS/cm			
0	1056	45.99	CLEAR	STRONG	25.2	0.43	1.649 (mS/cm) uS/cm	6.62	-76.6	27.6
300	1057	45.99	↓	↓	25.1	0.37	1.649 (mS/cm) uS/cm	6.61	-79.0	32.0
600	1058	45.99			25.5	0.30	1.648 (mS/cm) uS/cm	6.61	-82.0	42.0
900	1059	45.99			26.4	0.25	1.648 (mS/cm) uS/cm	6.60	-86.1	48.6
1200	1100	45.99			27.1	0.20	1.648 (mS/cm) uS/cm	6.61	-90.1	49.2
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 1056 | Elapsed Time (min): 4 | Water Quality Meter ID & SN: YSI ProDSS - 04Z0661

Stop Time: 1100 | Average Purge Rate (mL/min): 300 | Date Calibrated: 10/16/18

SAMPLING DATA

Sample Date: 10/16/18 | Sample Time: 1110 | Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow | Sample Flow Rate (mL/min): 300 | QA/QCSamples: N/A

VOA Vials, No Headspace ☑ Initials: JP

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: B. Howell, M. Karrick

DATE: 10/15/18 WEATHER: Partly Sunny 45°F

MONITORING WELL ID: P-66 SAMPLE ID: P66-ROX-101518

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: — ft btoc	Volume of Flow Through Cell: 320* mL
Total Well Depth (btoc): 59.72 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 35.31 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc	Ambient PID/FID Reading: 0.0 ppm
Depth to LNAPL/DNAPL (btoc): NE ft		
Depth to Top of Screen (btoc): 34.72 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): 40.31 ft btoc	Wellbore PID/FID Reading: 0.8 at ppm
Screen Length: 25 ft		
Water Column Height (not including NAPL): 24.41 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc	
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: — ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) +/-0.2 mg/L or Monitor Temp. +/-5% or +/-10% +/-2 uS/cm +/-0.2 mg/L Monitor Turb +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1312	35.33	Clear	Strong	18.2	1.12	1.442 mS/cm uS/cm	6.88	92.4	2.6
300	1313	35.33	↓	↓	18.5	0.96	1.459 mS/cm uS/cm	6.80	92.1	3.0
600	1314	35.33			18.3	0.88	1.492 mS/cm uS/cm	6.80	91.6	3.1
900	1315	35.33			18.1	0.85	1.500 mS/cm uS/cm	6.80	91.1	3.3
1200	1316	35.33			18.3	0.81	1.501 mS/cm uS/cm	6.79	90.4	3.8
				M. Karrick			mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 1312 Elapsed Time (min): 4 Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 1316 Average Purge Rate (mL/min): 300 Date Calibrated: 10/15/18

SAMPLING DATA

Sample Date: 10/15/18 Sample Time: 1320 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: DUP

VOA Vials, No Headspace ☑ Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: B. Howell McKamick

DATE: 10 16 18 WEATHER: Sunny 45°F

MONITORING WELL ID: P-68 SAMPLE ID: ———

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: NA — ft btoc
Total Well Depth (btoc): 68.76 ft	
Depth to Water (btoc): 44.16 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: NA — ft btoc
Depth to LNAPL/DNAPL (btoc): 44.04 ft	
Depth to Top of Screen (btoc): 45.26 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): NA — ft btoc
Screen Length: 25 ft	
Water Column Height (not including NAPL): 24.603 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: — ft btoc

Volume of Flow Through Cell: 320* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Ambient PID/FID Reading: 0.6 ppm
Wellbore PID/FID Reading: 2260.2 ppm

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) +/-0.2 mg/L or Monitor Temp. +/-5% or +/-10% +/-2 uS/cm +/-0.2 mg/L Monitor Turb +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: N/A Elapsed Time (min): N/A Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: N/A Average Purge Rate (mL/min): N/A Date Calibrated: 10/16/18

SAMPLING DATA

Sample Date: 10/16/18 Sample Time: N/A Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): N/A QA/QCSamples: N/A

VOA Vials, No Headspace ☐ Initials: N/A

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

*No SAMPLE collected due to the presence of LNAPL

Total Purge Volume: N/A mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: B. Howell M. Karrick

DATE: 10 16 18 WEATHER: Sunny 35°F

MONITORING WELL ID: P-74 SAMPLE ID: P74-ROX-101618

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: ft btoc
Total Well Depth (btoc): 68.83 ft	
Depth to Water (btoc): 42.12 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc
Depth to LNAPL/DNAPL (btoc): NF ft	
Depth to Top of Screen (btoc): 44.43 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): 49.43 ft btoc
Screen Length: 25 ft	
Water Column Height (not including NAPL): 26.71 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: ft btoc

Volume of Flow Through Cell: 320* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.3 ppm

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) +/-0.2 mg/L or Monitor Temp. +/-5% or +/-10% +/-2 uS/cm +/-0.2 mg/L Monitor Turb +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	0935	42.28	Clear	Strong	18.1	1.42	0.324 mS/cm uS/cm	5.91	79.7	3.0
300	0936	42.27	↓	↓	17.9	1.20	0.323 mS/cm uS/cm	6.03	77.5	2.5
600	0937	42.27			17.9	1.12	0.322 mS/cm uS/cm	6.09	76.2	2.7
900	0938	42.27			18.0	1.03	0.322 mS/cm uS/cm	6.16	71.1	2.9
1200	0939	42.27			18.1	0.98	0.322 mS/cm uS/cm	6.18	68.2	3.3
1500	0940	42.27			18.2	0.87	0.323 mS/cm uS/cm	6.27	63.5	3.1
1800	0941	42.27			18.1	0.86	0.323 mS/cm uS/cm	6.29	62.0	3.3
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

M. Karrick

Start Time: 0935 Elapsed Time (min): 6 Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 0941 Average Purge Rate (mL/min): 300 Date Calibrated: 10 16 18

SAMPLING DATA

Sample Date: 10 16 18 Sample Time: 0945 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: NA

VOA Vials, No Headspace ☑ Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW **PROJECT NUMBER:** 60527968 - 01.03.004 **FIELD PERSONNEL:** J. PETERS, T. JONES

DATE: 10/16/18 **WEATHER:** PARTLY CLOUDY 45°

MONITORING WELL ID: P-93A **SAMPLE ID:** P93A-NRR-101618 P93A-ROX-101618

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: ft btoc
Total Well Depth (btoc): 53.07 ft	
Depth to Water (btoc): 44.05 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 48.56 ft btoc
Depth to LNAPL/DNAPL (btoc): NE ft	
Depth to Top of Screen (btoc): 43.07 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): — ft btoc
Screen Length: 10 ft	
Water Column Height (not including NAPL): 9.02 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: — ft btoc

Volume of Flow Through Cell: 320* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) +/-0.2 mg/L or Monitor Temp. +/-5% or +/-10% +/-2 uS/cm +/-0.2 mg/L Monitor Turb +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1230	44.05	CLEAR	SLIGHT	21.8	1.23	1.164 (mS/cm) uS/cm	6.91	-134.1	2.7
300	1231	44.27	↓	↓	22.3	0.72	1.164 (mS/cm) uS/cm	6.85	-133.6	2.7
600	1232	44.27			22.5	0.46	1.159 (mS/cm) uS/cm	6.83	-134.5	2.5
900	1233	44.30			22.8	0.36	1.159 (mS/cm) uS/cm	6.82	-136.0	2.5
1200	1234	44.32			22.9	0.30	1.158 (mS/cm) uS/cm	6.83	-137.9	2.6
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 1230 Elapsed Time (min): 4 Water Quality Meter ID & SN: YSI ProDSS - 042061

Stop Time: 1234 Average Purge Rate (mL/min): 300 Date Calibrated: 10/16/18

SAMPLING DATA

Sample Date: 10/16/18 Sample Time: 1245 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: EB

VOA Vials, No Headspace ☑ Initials: JP

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: J. PETERS, T. JONES

DATE: 10/15/18 WEATHER: CLOUDY 39°

MONITORING WELL ID: P-93B SAMPLE ID: P93B-WRR-101518 P93B-ROX-101518

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: — ft btoc	Volume of Flow Through Cell: 320* mL
Total Well Depth (btoc): 76.88 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 45.64 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc	Ambient PID/FID Reading: 0.0 ppm
Depth to LNAPL/DNAPL (btoc): ft		
Depth to Top of Screen (btoc): 74.60 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): — ft btoc	Wellbore PID/FID Reading: 0.0 ppm
Screen Length: 2 ft		
Water Column Height (not including NAPL): 31.24 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc	
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: 74.88 ft btoc	

PURGE DATA

Pump Type: Dedicated Well Wizard

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
STABLE: (over 3 readings)					Monitor Temp.	+/-0.2 mg/L or +/-10%	+/-5% or +/-2 uS/cm	+/-0.2 mg/L	+/-20 mV	Monitor Turb Readings (<50)
0	1030	45.64	CLEAR	MODERATE	18.3	0.97	1.529 mS/cm uS/cm	6.61	-50.0	68.7
300	1031	45.64			18.4	0.88	1.536 mS/cm uS/cm	6.61	-52.0	6.8
600	1032	45.64			18.4	0.82	1.541 mS/cm uS/cm	6.60	-53.3	3.3
900	1033	45.64			18.4	0.85	1.546 mS/cm uS/cm	6.60	-55.8	3.6
1200	1034	45.64			18.5	0.68	1.555 mS/cm uS/cm	6.59	-58.8	4.5
1500	1035	45.64			18.5	0.48	1.560 mS/cm uS/cm	6.59	-61.0	11.6
1800	1036	45.64			18.4	0.45	1.560 mS/cm uS/cm	6.59	-61.7	18.5
2100	1037	45.64			18.5	0.45	1.561 mS/cm uS/cm	6.59	-62.8	24.0
2400	1038	45.64			18.5	0.44	1.561 mS/cm uS/cm	6.59	-63.6	28.2
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 1030 Elapsed Time (min): 8 Water Quality Meter ID & SN: YSI ProDSS - 042061

Stop Time: 1038 Average Purge Rate (mL/min): 300 Date Calibrated: 10/15/18

SAMPLING DATA

Sample Date: 10/15/18 Sample Time: 1045 Lab Analysis: VOC, SVOC, PAH

Sample Method: Bladder Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: DUP

VOA Vials, No Headspace ☑ Initials: JP

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 2400 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: J. PETERS, T. JONES

DATE: 10/15/18 WEATHER: CLOUDY 39°

MONITORING WELL ID: P-93C SAMPLE ID: P93C-WRR-101518 P93C-ROX-101518

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: — ft btoc	Volume of Flow Through Cell : 320* mL	
Total Well Depth (btoc): 97.88 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL	
Depth to Water (btoc): 45.31 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc	Ambient PID/FID Reading: 0.0 ppm	
Depth to LNAPL/DNAPL (btoc): ft			
Depth to Top of Screen (btoc): 92.47 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): — ft btoc	Wellbore PID/FID Reading: 0.0 ppm	
Screen Length: 2 ft			
Water Column Height (not including NAPL): 52.57 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc		
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: 95.88 ft btoc		

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) +/-0.2 mg/L or Monitor Temp. +/-5% or +/-10% Monitor Turb +/-2 uS/cm +/-0.2 mg/L +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1154	45.31	CLEAR	SLIGHT	19.0	0.88	1.359 (mS/cm) uS/cm	7.00	-34.8	9.9
300	1155	45.29	↓	↓	19.0	0.71	1.362 (mS/cm) uS/cm	6.98	-37.8	10.4
600	1156	45.29			18.9	0.60	1.364 (mS/cm) uS/cm	6.97	-41.6	10.5
900	1157	45.29			18.9	0.48	1.364 (mS/cm) uS/cm	6.96	-45.9	9.4
1200	1158	45.29			19.0	0.40	1.362 (mS/cm) uS/cm	6.95	-48.7	8.3
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 1154 Elapsed Time (min): 4 Water Quality Meter ID & SN: YSI ProDSS - 17A7061

Stop Time: 1158 Average Purge Rate (mL/min): 300 Date Calibrated: 10/15/18

SAMPLING DATA

Sample Date: 10/15/18 Sample Time: 1205 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: N/A

VOA Vials, No Headspace ☑ Initials: JP

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: J. Peters, T. Jones

DATE: 10/15/18 WEATHER: Cloudy 37°

MONITORING WELL ID: P-93D SAMPLE ID: P93D-WRR-101518 P93D-ROX-101518

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: ft btoc
Total Well Depth (btoc): 128.00 ft	
Depth to Water (btoc): 45.70 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc
Depth to LNAPL/DNAPL (btoc): ft	
Depth to Top of Screen (btoc): 125.75 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): — ft btoc
Screen Length: 2 ft	
Water Column Height (not including NAPL): 82.3 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: 126.00 ft btoc

Volume of Flow Through Cell: 320* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Dedicated Well Wizard

	STABLE: (over 3 readings)	Monitor Temp.	+/-0.2 mg/L or +/-10%	+/-5% or +/-2 uS/cm	+/-0.2 mg/L	+/-20 mV	Monitor Turb Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	0942	45.70	CLEAR	MODERATE	17.5	0.47	1.441 (mS/cm) uS/cm	7.08	-102.8	83.0
300	0943	45.70			17.3	0.44	1.440 (mS/cm) uS/cm	7.06	-104.0	85.4
600	0944	45.70			17.3	0.42	1.439 (mS/cm) uS/cm	7.06	-104.7	86.5
900	0945	45.70			17.3	0.40	1.436 (mS/cm) uS/cm	7.06	-105.4	87.7
1200	0946	45.70			17.5	0.36	1.441 (mS/cm) uS/cm	7.04	-106.1	1.8
1500	0947	45.70			17.5	0.26	1.441 (mS/cm) uS/cm	7.05	-106.8	3.0
1800	0948	45.70			17.5	0.23	1.441 (mS/cm) uS/cm	7.05	-107.0	3.3
2100	0949	45.70			17.5	0.22	1.441 (mS/cm) uS/cm	7.05	-107.3	5.6
2400	0950	45.70			17.5	0.21	1.441 (mS/cm) uS/cm	7.05	-107.9	7.0
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 0942 Elapsed Time (min): 8 Water Quality Meter ID & SN: YSI ProDSS - 042061

Stop Time: 0950 Average Purge Rate (mL/min): 300 Date Calibrated: 10/15/18

SAMPLING DATA

Sample Date: 10/15/18 Sample Time: 0955 Lab Analysis: VOC, SVOC, PAH

Sample Method: Bladder Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: N/A

VOA Vials, No Headspace ☑ Initials: JP

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 2400 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: B. Howell M. Kamick

DATE: 10 11 18 WEATHER: Sunny 50°F

MONITORING WELL ID: P-114R SAMPLE ID: P114R-ROX-101118

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: ft btoc	Volume of Flow Through Cell: 320* mL	
Total Well Depth (btoc): 33.31 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL	
Depth to Water (btoc): 26.27 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 29.78 ft btoc	Ambient PID/FID Reading: 0.0 ppm	
Depth to LNAPL/DNAPL (btoc): NE ft			
Depth to Top of Screen (btoc): 23.01 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): — ft btoc	Wellbore PID/FID Reading: 0.1 ppm	
Screen Length: 10 ft			
Water Column Height (not including NAPL): 7.02 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc		
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: — ft btoc		

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) Monitor Temp. +/-0.2 mg/L or +/-10% +/-5% or +/-2 uS/cm +/-0.2 mg/L Monitor Turb +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	0916	26.48	Cloudy	Moderate	20.5	0.51	0.776 mS/cm uS/cm	6.73	60.4	49.8
300	0917	26.48	↓	↓	20.5	0.50	0.770 mS/cm uS/cm	6.73	56.9	71.9
600	0918	26.48			20.5	0.50	0.775 mS/cm uS/cm	6.74	52.9	64.1
900	0919	26.46			20.5	0.58	0.779 mS/cm uS/cm	6.74	50.9	57.3
1200	0920	26.45			20.4	0.50	0.782 mS/cm uS/cm	6.74	47.7	51.9
1500	0921	26.45			20.4	0.50	0.783 mS/cm uS/cm	6.74	45.6	46.1
1800	0922	26.45	↓	↓	20.5	0.49	0.784 mS/cm uS/cm	6.74	41.0	38.0
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

M.K.

Start Time: 0916 Elapsed Time (min): 6 Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 0922 Average Purge Rate (mL/min): 300 Date Calibrated: 10 11 18

SAMPLING DATA

Sample Date: 10 11 18 Sample Time: 0930 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: DUP

VOA Vials, No Headspace ☑ Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: B. Howell M. Karnick

DATE: 10 09 18 WEATHER: Sunny 75°F

MONITORING WELL ID: ROST-3-MW SAMPLE ID: ROST3MW-ROX-10 0918

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: ft btoc	Volume of Flow Through Cell: 320* mL
Total Well Depth (btoc): 48.06 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 40.72 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 44.39 ft btoc	Ambient PID/FID Reading: 0.0 ppm
Depth to LNAPL/DNAPL (btoc): NE ft		
Depth to Top of Screen (btoc): 37.81 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): ft btoc	Wellbore PID/FID Reading: 0.0 ppm
Screen Length: 10 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc	
Water Column Height (not including NAPL): 7.34 ft	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) +/-0.2 mg/L or Monitor Temp. +/-5% or +/-10% +/-2 uS/cm +/-0.2 mg/L Monitor Turb +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	0931	40.81	Slightly Cloudy	None	18.8	0.63	1.588 mS/cm uS/cm	6.49	43.2	19.9
300	0932	40.81	↓	↓	18.8	0.62	1.587 mS/cm uS/cm	6.49	39.5	19.3
600	0933	40.81			18.9	0.61	1.587 mS/cm uS/cm	6.49	35.3	15.6
900	0934	40.81			18.9	0.61	1.583 mS/cm uS/cm	6.49	28.9	14.0
1200	0935	40.81	↓	↓	19.1	0.61	1.585 mS/cm uS/cm	6.49	21.4	12.9
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 0931 Elapsed Time (min): 4 Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 0935 Average Purge Rate (mL/min): 300 Date Calibrated: 10 0918

SAMPLING DATA

Sample Date: 10 09 18 Sample Time: 0940 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: EB @ 0900

VOA Vials, No Headspace ☑ Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: M. Kamick T. Jones

DATE: 10/12/18 WEATHER: Cloudy 45°F

MONITORING WELL ID: ROST-4-PZ(C) SAMPLE ID: ROST4PZC-ROX-101218

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: ft btoc
Total Well Depth (btoc): 45.20 ft	
Depth to Water (btoc): 40.91 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 43.06 ft btoc
Depth to LNAPL/DNAPL (btoc): NF ft	
Depth to Top of Screen (btoc): 34.95 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHIEVER IS DEEPER): ft btoc
Screen Length: 10 ft	
Water Column Height (not including NAPL): 4.29 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: ft btoc

Volume of Flow Through Cell: 320* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) +/-0.2 mg/L or Monitor Temp. +/-5% or +/-10% +/-2 uS/cm +/-0.2 mg/L Monitor Turb +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1003	41.20	Cloudy	Moderate	17.3	0.90	1.109 (mS/cm) uS/cm	6.89	82.8	24.3
300	1004	41.29			17.5	0.80	1.114 (mS/cm) uS/cm	6.92	77.9	20.9
600	1005	41.35			17.6	0.75	1.117 (mS/cm) uS/cm	6.94	74.2	16.7
900	1006	41.40			17.6	0.72	1.119 (mS/cm) uS/cm	6.96	69.3	13.1
1200	1007	41.43			17.9	0.69	1.121 (mS/cm) uS/cm	6.98	65.2	12.8
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

M. Kamick

Start Time: 1003 Elapsed Time (min): 4 Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 1007 Average Purge Rate (mL/min): 300 Date Calibrated: 10 12 18

SAMPLING DATA

Sample Date: 10 12 18 Sample Time: 1015 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: EB @ 0945

VOA Vials, No Headspace ☑ Initials: TJ

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: B. Howell M. Karrick

DATE: 10 15 18 WEATHER: Cloudy, 38°F

MONITORING WELL ID: ROST-4-PZ(E) SAMPLE ID: ROST4PZE-PAX-101518

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: ft btoc
Total Well Depth (btoc): 45.00 ft	
Depth to Water (btoc): 39.76 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 42.38 ft btoc
Depth to LNAPL/DNAPL (btoc): NE ft	
Depth to Top of Screen (btoc): 34.75 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): — ft btoc
Screen Length: 10 ft	
Water Column Height (not including NAPL): 5.24 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: — ft btoc
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: — ft btoc

Volume of Flow Through Cell: 320* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) +/-0.2 mg/L or Monitor Temp. +/-5°o or +/-10% +/-2 uS/cm +/-0.2 mg/L Monitor Turb +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	0924	40.38	Cloudy	Strong	17.7	1.33	1.367 mS/cm uS/cm	6.22	155.0	55.6
300	0926	40.35			17.9	1.24	1.366 mS/cm uS/cm	6.25	153.9	44.4
600	0926	40.34			18.1	1.08 MK	1.395 mS/cm uS/cm	6.30	152.5	37.3
900	0927	40.34			18.4	1.04	1.416 mS/cm uS/cm	6.33	150.7	29.3
1200	0928	40.33			18.5	1.00	1.439 mS/cm uS/cm	6.36	150.5	25.1
1500	0929	40.32			18.7	0.96	1.456 mS/cm uS/cm	6.38	149.8	21.0
1800	0930	40.32			18.7	0.93	1.479 mS/cm uS/cm	6.42	147.3	16.9
2100	0931	40.31			18.6	0.91	1.500 mS/cm uS/cm	6.44	146.2	13.9
2400	0932	40.30			18.7	0.91	1.510 mS/cm uS/cm	6.45	145.5	13.4
2700	0933	40.30			18.7	0.89	1.518 mS/cm uS/cm	6.45	145.0	11.8
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 0924 Elapsed Time (min): 9 Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 0933 Average Purge Rate (mL/min): 300 Date Calibrated: 10 15 18

SAMPLING DATA

Sample Date: 10 15 18 Sample Time: 0940 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: NA

VOA Vials, No Headspace ☑ Initials: BH

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 2700 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: T. Jones M. Kamich

DATE: 10 12 18 WEATHER: Rainy 45°F

MONITORING WELL ID: ROST-4-PZ(G) SAMPLE ID: ~~RO~~ST4PZG-ROX-101218

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: ft btoc
Total Well Depth (btoc): 44.53 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc
Depth to Water (btoc): 40.93 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): ft btoc
Depth to LNAPL/DNAPL (btoc): NE ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc
Depth to Top of Screen (btoc): 34.28 ft	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: 42.53 ft btoc
Screen Length: 10 ft	
Water Column Height (not including NAPL): 3.60 ft	

Volume of Flow Through Cell: 320* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) +/-0.2 mg/L or Monitor Temp. +/-5% or +/-10% +/-2 uS/cm +/-0.2 mg/L Monitor Turb +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	1100	40.97	Cloudy	Slight	18.0	0.91	1.827 (mS/cm) uS/cm	6.94	60.5	19.2
300	1101	40.97	↓	↓	18.1	0.84	1.830 (mS/cm) uS/cm	6.93	59.7	16.7
600	1102	40.97			18.3	0.79	1.830 (mS/cm) uS/cm	6.93	55.6	13.8
900	1103	40.97			18.5	0.73	1.831 (mS/cm) uS/cm	6.92	54.2	12.4
1200	1104	40.97			18.7	0.69	1.832 (mS/cm) uS/cm	6.92	52.1	9.0
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

M. Kamich

Start Time: 1100 Elapsed Time (min): 4 Water Quality Meter ID & SN: YSI ProDSS - 37705

Stop Time: 1104 Average Purge Rate (mL/min): 300 Date Calibrated: 10 12 18

SAMPLING DATA

Sample Date: 101218 Sample Time: 1110 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: N/A

VOA Vials, No Headspace ☑ Initials: TJ

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q18 GW PROJECT NUMBER: 60527968 - 01.03.004 FIELD PERSONNEL: J. PETERS, T. JONES

DATE: 10/16/18 WEATHER: MOSTLY SUNNY 39°

MONITORING WELL ID: T-12 SAMPLE ID: T12-WRR-101618 T12-ROX-101618

INITIAL DATA

Well Diameter: 6 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: ft btoc	Volume of Flow Through Cell : 320* mL
Total Well Depth (btoc): 72.83 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 43.90 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc	Ambient PID/FID Reading: 0.0 ppm
Depth to LNAPL/DNAPL (btoc): NE ft		
Depth to Top of Screen (btoc): 46.83 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): 51.83 ft btoc	Wellbore PID/FID Reading: 16.2 ppm
Screen Length: 26 ft		
Water Column Height (not including NAPL): 28.93 ft	IF SCREEN >10 FT & WATER COLUMN HEIGHT <10 FT – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: ft btoc	
	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT TOTAL WELL DEPTH -2 FT: ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Stainless Steel Submersible Pump

STABLE: (over 3 readings) +/-0.2 mg/L or Monitor Temp. +/-5% or +/-10% +/-2 uS/cm +/-0.2 mg/L Monitor Turb +/-20 mV

Readings (<50)

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
0	0920	43.90	CLEAR	SLIGHT	22.8	0.70	1.696 mS/cm uS/cm	6.20	24.0	1.6
300	0921	43.90			22.8	0.57	1.702 mS/cm uS/cm	6.23	10.7	
600	0922						mS/cm uS/cm			
900	0923						mS/cm uS/cm			
1200	0924		TUBING CAME OFF				mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
0	0929	43.90	CLEAR	SLIGHT	21.9	0.95	1.660 mS/cm uS/cm	6.45	-35.0	3.5
300	0930	43.90	↓	↓	22.4	0.606	1.697 mS/cm uS/cm	6.48	-46.1	3.5
600	0931	43.90			22.7	0.47	1.714 mS/cm uS/cm	6.51	-57.6	3.0
900	0932	43.90			22.7	0.37	1.715 mS/cm uS/cm	6.53	-64.9	3.3
1200	0933	43.90	↓	↓	23.0	0.32	1.716 mS/cm uS/cm	6.54	-70.3	3.0
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 0929 Elapsed Time (min): 4 Water Quality Meter ID & SN: YSI ProDSS - 042061

Stop Time: 0933 Average Purge Rate (mL/min): 300 Date Calibrated: 10/16/18

SAMPLING DATA

Sample Date: 10/16/18 Sample Time: 0940 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: N/A

VOA Vials, No Headspace ☑ Initials: JP

COMMENTS:

* Flow through cell volume calculated as: Volume = cup (410 mL) - sonde (90 mL) = 320 mL

Total Purge Volume: 1200 mL

Appendix B

Data Review Forms and Laboratory Analytical Reports

Roxana Groundwater Quarterly – 4th Quarter 2018 Data Review

Laboratory SDG: 400-160182-1

Data Reviewer: Melissa Remiger

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 10/24/2018

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2017

Sample Identification	Sample Identification
TB-ROX-100418-8011	TB-ROX-100418-8260
MW6C-ROX-100418-EB	MW6C-ROX-100418
MW6B-ROX-100418	MW6A-ROX-100418
MW6D-ROX-100418	

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated SVOCs were detected in the method blank, and several analytes were detected in the equipment blank. SVOC LCS/LCSD recoveries for benzenethiol and hexachlorocyclopentadiene, and the LCS/LCSD RPD for benzenethiol, were outside evaluation criteria. The SVOC surrogate recoveries for terphenyl-d_{14} and 2-fluorophenol were outside criteria in several investigative and quality control samples. The VOC MS/MSD recovery for 2-chloroethyl vinyl ether was outside evaluation criteria in sample MW6A-ROX-100418. 1-Methylnaphthalene and 2-methylnaphthalene in sample MW6A-ROX-100418 were diluted due to the nature of the sample matrix. The continuing calibration verifications for hexachlorocyclopentadiene, n-nitrosodimethylamine, and quinolone were outside evaluation criteria, biased low. These issues are addressed further in the appropriate sections of this data review.

Three of 69 (2-chloroethyl vinyl ether, acrolein, and acrylonitrile) 8260 VOCs are acid-reactive compounds; results may be biased low due to the presence of HCl in the preservative.

The cooler receipt form did not indicate any problems.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

Yes

Blank ID	Parameter	Analyte	Concentration/ Amount
MW6C-ROX-100418-EB	VOCs	Benzene	2.3 µg/L
MW6C-ROX-100418-EB	PAHs	1-Methylnaphthalene	0.13 µg/L
MW6C-ROX-100418-EB	PAHs	2-Methylnaphthalene	0.12 µg/L
MW6C-ROX-100418-EB	SVOCs	Benzyl alcohol	12 µg/L
MW6C-ROX-100418-EB	SVOCs	bis(2-Ethylhexyl) phthalate	3.2 µg/L
MW6C-ROX-100418-EB	SVOCs	3,3'-Dichlorobenzidine	3.2 µg/L
MB 400-414659/1-A	SVOCs	bis(2-Ethylhexyl) phthalate	3.68 µg/L
MB 400-414659/1-A	SVOCs	3,3'-Dichlorobenzidine	3.47 µg/L

Qualifications due to blank contamination are included in the table below. Analytical data that were reported non-detect or at concentrations greater than five times (5X) the associated blank concentration did not require qualification.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
MW6A-ROX-100418	SVOCs	bis(2-Ethylhexyl) phthalate	-	**U**

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS/LCSD ID	Parameter	Analyte	LCS/ LCSD Recovery	RPD	LCS/LCSD/ RPD Criteria
LCS/LCSD 400-414659/2-A/3-A	SVOCs	Hexachlorocyclopentadiene	**6/7**	15	10-129/30
LCS/LCSD 400-415021/25-A/26-A	SVOCs	Benzenethiol	**1/4**	**95**	10-120/30

Analytical data that required qualification based on LCS/LCSD data are included in the table below. Professional judgment was used to qualify, however not reject, data associated with benzenethiol in LCS/LCSD 400-415021/25-A/26-A, and hexachlorocyclopentadiene in LCS/LCSD 400-414659/2-A/3-A; benzenethiol and hexachlorocyclopentadiene have been identified as poor performing analytes under Method 8270.

Sample ID	Parameter	Analyte	Qualification
MW6C-ROX-100418	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW6C-ROX-100418	SVOCs	Benzenethiol	**UJ**
MW6B-ROX-100418	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW6B-ROX-100418	SVOCs	Benzenethiol	**UJ**
MW6A-ROX-100418	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW6A-ROX-100418	SVOCs	Benzenethiol	**UJ**
MW6D-ROX-100418	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW6D-ROX-100418	SVOCs	Benzenethiol	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
MW6C-ROX-100418-EB	SVOCs	Terphenyl-d_{14}	**45**	53-125
MW6C-ROX-100418	SVOCs	Terphenyl-d_{14}	**46**	53-125
MW6B-ROX-100418	SVOCs	Terphenyl-d_{14}	**48**	53-125
MW6A-ROX-100418	SVOCs	2-Fluorophenol	**9**	10-120
MW6A-ROX-100418	SVOCs	Terphenyl-d_{14}	**46**	53-125
MW6D-ROX-100418	SVOCs	Terphenyl-d_{14}	**43**	53-125
LCSD 400-415021/26-A	SVOCs	Terphenyl-d_{14}	**52**	53-125

Qualifications due to surrogate recoveries were not required if only one of three base/neutral or acid fraction surrogate recoveries were outside evaluation criteria in the associated SVOC samples. Quality control samples do not require qualification. No qualification of data was required.

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

Yes, although no requested, sample MW6A-ROX-100418 was spiked and duplicated for Method 8260 VOCs.

Were MS/MSD recoveries within evaluation criteria?

No

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
MW6A-ROX-100418	VOCs	2-Chloroethyl vinyl ether	**6/0**	**NC**	10-150/50

Analytical data that required qualification based on MS/MSD data are included in the table below.

Sample ID	Parameter	Analyte	Qualification
MW6A-ROX-100418	VOCs	2-Chloroethyl vinyl ether	**UJ**

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; samples analyzed did not require dilution, with the exception of 1-methylnaphthalene and 2-methylnaphthalene in sample MW6A-ROX-100418 due to the nature of the sample matrix. 1-Methylnaphthalene and 2-methylnaphthalene were non-detect at a dilution factor of 3X, with a raised reporting limit of 0.59 µg/L, which is below project screening criteria. Due to historical 1-methylnaphthalene and 2-methylnaphthalene detections, please see section 12.0 of the data review for additional qualifications.

12.0 Additional Qualifications

Were additional qualifications applied?

Yes, the continuing calibration verifications for hexachlorocyclopentadiene, n-nitrosodimethylamine, and quinoline were below acceptance criteria and are qualified as summarized in the following table. Hexachlorocyclopentadiene was previously qualified in Section 5.0 of this review due to LCS/LCSD recoveries outside evaluation criteria; no further qualification of hexachlorocyclopentadiene was required.

Sample ID	Parameter	Analyte	Qualification
MW6C-ROX-100418	SVOCs	n-Nitrosodimethylamine	**UJ**
MW6C-ROX-100418	SVOCs	Quinoline	**UJ**
MW6B-ROX-100418	SVOCs	n-Nitrosodimethylamine	**UJ**
MW6B-ROX-100418	SVOCs	Quinoline	**UJ**
MW6A-ROX-100418	SVOCs	n-Nitrosodimethylamine	**UJ**
MW6A-ROX-100418	SVOCs	Quinoline	**UJ**
MW6D-ROX-100418	SVOCs	n-Nitrosodimethylamine	**UJ**
MW6D-ROX-100418	SVOCs	Quinoline	**UJ**

Additionally, 1-methylnaphthalene and 2-methylnaphthalene were qualified as estimated non-detect due to sample dilution and historical detections.

Sample ID	Parameter	Analyte	Qualification
MW6A-ROX-100418	PAHs	1-Methylnaphthalene	**UJ**
MW6A-ROX-100418	PAHs	2-Methylnaphthalene	**UJ**

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-160182-1
Client Project/Site: ROXANA QUARTERLY

For:
AECOM Technical Services Inc.
100 N. Broadway
20th Floor
St. Louis, Missouri 63102

Attn: Elizabeth Kunkel

Authorized for release by:
10/24/2018 9:52:35 AM

Leah Klingensmith, Senior Project Manager
(615)301-5038
leah.klingensmith@testamericainc.com

LINKS

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Reviewed 10/24/18 MR

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Narrative

Job Narrative
400-160182-1

Comments
No additional comments.

Receipt
The samples were received on 10/5/2018 8:46 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.1° C and 5.3° C.

GC/MS VOA
Method(s) 8260B: The preservative used in the sample containers provided is not compatible with some of the Method 8260 analytes requested. The following samples were received preserved with hydrochloric acid: TB-ROX-100418-8260 (400-160182-2), MW6C-ROX-100418-EB (400-160182-3), MW6C-ROX-100418 (400-160182-4), MW6B-ROX-100418 (400-160182-5), MW6A-ROX-100418 (400-160182-6) and MW6D-ROX-100418 (400-160182-7). The requested target analyte list includes 2-chloroethyl vinyl ether, Acrolein and Acrylonitrile, which are acid-labile compounds that degrade in an acidic medium.

Method(s) 8260B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 400-414804 were outside control limits for 2-Chloroethyl vinyl ether due to the acidic nature of the parent sample.

Method(s) 8260B: The RPD for the MS/MSD for 2-chloroethyl vinyl ether was not calculable for analytical batch 400-414804 because the recoveries were below the reporting limit due to the acidic nature of the parent sample.

Method(s) 8260B: The following sample contained Benzene above the reporting limit (RL): MW6C-ROX-100418-EB (400-160182-3). Reanalysis was performed with concurring results.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270D: The laboratory control sample and the laboratory control sample duplicate (LCS/LCSD) for preparation batch 400-414659 and analytical batch 400-414948 recovered outside control limits for the following analyte: Hexachlorocyclopentadiene. Hexachlorocyclopentadiene has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. Batch precision also exceeded control limits for these analyte(s). These results have been reported and qualified.

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 400-414948 recovered outside acceptance criteria, low biased, for Quinoline, Hexachlorocyclopentadiene and N-Nitrosodimethylamine. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 400-414948 recovered above the upper control limit for Di-n-octyl phthalate and Dibenz(g,h)acridine. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW6C-ROX-100418-EB (400-160182-3), MW6C-ROX-100418 (400-160182-4), MW6B-ROX-100418 (400-160182-5), MW6A-ROX-100418 (400-160182-6), MW6D-ROX-100418 (400-160182-7) and (MB 400-414659/1-A).

Method(s) 8270D: The method blank for preparation batch 400-414659 and analytical batch 400-414948 contained Bis(2-ethylhexyl) phthalate and 3,3'-Dichlorobenzidine above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8270D LL: The following sample was diluted due to the nature of the sample matrix: MW6A-ROX-100418 (400-160182-6). Elevated reporting limits (RLs) are provided.

Method(s) 8270D: The laboratory control sample and the laboratory control sample duplicate (LCS/LCSD) for preparation batch 400-415021 recovered outside control limits for the following analyte(s): Benzenethiol. Benzenethiol has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. Batch precision also

Job ID: 400-160182-1 (Continued)

Laboratory: TestAmerica Pensacola (Continued)

exceeded control limits for these analyte(s). These results have been reported and qualified.

Method(s) 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 400-415021 and analytical batch 400-415470 recovered outside control limits for the following analytes: Benzenethiol.

Method(s) 8270D: Six surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: (LCSD 400-415021/26-A). These results have been reported and qualified.

Method(s) 8270D: Six surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following samples contained an allowable number of surrogate compounds outside limits: MW6C-ROX-100418-EB (400-160182-3), MW6C-ROX-100418 (400-160182-4), MW6B-ROX-100418 (400-160182-5), MW6A-ROX-100418 (400-160182-6), MW6D-ROX-100418 (400-160182-7) and (LCSD 400-415021/26-A). These results have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

Method(s) 8011: The continuing calibration verification (CCV) associated with batch 400-416023 recovered above the upper control limit for 1,2-Dibromo-3-Chloropropane and Ethylene Dibromide. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW6B-ROX-100418 (400-160182-5), MW6A-ROX-100418 (400-160182-6) and MW6D-ROX-100418 (400-160182-7).

Method(s) 8011: The continuing calibration verification (CCV) associated with batch 400-416023 recovered above the upper control limit for Ethylene Dibromide. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: TB-ROX-100418-8011 (400-160182-1), MW6C-ROX-100418-EB (400-160182-3) and MW6C-ROX-100418 (400-160182-4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160182-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-160182-1	TB-ROX-100418-8011	Water	10/04/18 00:01	10/05/18 08:46
400-160182-2	TB-ROX-100418-8260	Water	10/04/18 00:01	10/05/18 08:46
400-160182-3	MW6C-ROX-100418-EB	Water	10/04/18 08:30	10/05/18 08:46
400-160182-4	MW6C-ROX-100418	Water	10/04/18 09:00	10/05/18 08:46
400-160182-5	MW6B-ROX-100418	Water	10/04/18 09:35	10/05/18 08:46
400-160182-6	MW6A-ROX-100418	Water	10/04/18 10:20	10/05/18 08:46
400-160182-7	MW6D-ROX-100418	Water	10/04/18 11:05	10/05/18 08:46

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160182-1

Client Sample ID: TB-ROX-100418-8011

Lab Sample ID: 400-160182-1

No Detections.

Client Sample ID: TB-ROX-100418-8260

Lab Sample ID: 400-160182-2

No Detections.

Client Sample ID: MW6C-ROX-100418-EB

Lab Sample ID: 400-160182-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.3		1.0	0.38	ug/L	1		8260B	Total/NA
1-Methylnaphthalene	0.13	J	0.20	0.020	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	0.12	J	0.20	0.020	ug/L	1		8270D LL	Total/NA
Benzyl alcohol	12		9.8	2.0	ug/L	1		8270D	Total/NA
Bis(2-ethylhexyl) phthalate	3.2	J B	9.8	2.2	ug/L	1		8270D	Total/NA
3,3'-Dichlorobenzidine	3.2	J B	9.8	2.5	ug/L	1		8270D	Total/NA

Client Sample ID: MW6C-ROX-100418

Lab Sample ID: 400-160182-4

No Detections.

Client Sample ID: MW6B-ROX-100418

Lab Sample ID: 400-160182-5

No Detections.

Client Sample ID: MW6A-ROX-100418

Lab Sample ID: 400-160182-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	1.5		1.0	0.74	ug/L	1		8260B	Total/NA
Benzo[a]anthracene	0.045	J	0.20	0.040	ug/L	1		8270D LL	Total/NA
Chrysene	0.072	J	0.20	0.040	ug/L	1		8270D LL	Total/NA
Fluoranthene	0.062	J	0.20	0.020	ug/L	1		8270D LL	Total/NA
Phenanthrene	0.094	J	0.20	0.020	ug/L	1		8270D LL	Total/NA
Pyrene	0.070	J	0.20	0.020	ug/L	1		8270D LL	Total/NA
Bis(2-ethylhexyl) phthalate	2.8	J B	9.9	2.2	ug/L	1		8270D	Total/NA

Client Sample ID: MW6D-ROX-100418

Lab Sample ID: 400-160182-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	0.023	J	0.20	0.020	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	0.026	J	0.20	0.020	ug/L	1		8270D LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160182-1

Client Sample ID: TB-ROX-100418-8011
Date Collected: 10/04/18 00:01
Date Received: 10/05/18 08:46

Lab Sample ID: 400-160182-1
Matrix: Water

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.031	0.0056	ug/L		10/16/18 15:12	10/18/18 22:08	1
1,2-Dibromoethane	ND		0.020	0.0051	ug/L		10/16/18 15:12	10/18/18 22:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*	*p*	*51 - 149*	*10/16/18 15:12*	*10/18/18 22:08*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160182-1

Client Sample ID: TB-ROX-100418-8260
Date Collected: 10/04/18 00:01
Date Received: 10/05/18 08:46

Lab Sample ID: 400-160182-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/10/18 12:01	1
Acrolein	ND		20	10	ug/L			10/10/18 12:01	1
Acrylonitrile	ND		10	2.8	ug/L			10/10/18 12:01	1
Benzene	ND		1.0	0.38	ug/L			10/10/18 12:01	1
Bromobenzene	ND		1.0	0.54	ug/L			10/10/18 12:01	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/10/18 12:01	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/10/18 12:01	1
Bromoform	ND		5.0	0.71	ug/L			10/10/18 12:01	1
Bromomethane	ND		1.0	0.98	ug/L			10/10/18 12:01	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/10/18 12:01	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/10/18 12:01	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/10/18 12:01	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/10/18 12:01	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/10/18 12:01	1
Chloroethane	ND		1.0	0.76	ug/L			10/10/18 12:01	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/10/18 12:01	1
Chloroform	ND		1.0	0.60	ug/L			10/10/18 12:01	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/10/18 12:01	1
Chloromethane	ND		1.0	0.83	ug/L			10/10/18 12:01	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/10/18 12:01	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/10/18 12:01	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/10/18 12:01	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/10/18 12:01	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/10/18 12:01	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/10/18 12:01	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/10/18 12:01	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/10/18 12:01	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/10/18 12:01	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/10/18 12:01	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/10/18 12:01	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/10/18 12:01	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/10/18 12:01	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/10/18 12:01	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/10/18 12:01	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/10/18 12:01	1
2-Hexanone	ND		25	3.1	ug/L			10/10/18 12:01	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/10/18 12:01	1
Methylene bromide	ND		5.0	0.59	ug/L			10/10/18 12:01	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/10/18 12:01	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/10/18 12:01	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/10/18 12:01	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/10/18 12:01	1
Naphthalene	ND		1.0	1.0	ug/L			10/10/18 12:01	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/10/18 12:01	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/10/18 12:01	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/10/18 12:01	1
o-Xylene	ND		5.0	0.60	ug/L			10/10/18 12:01	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/10/18 12:01	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/10/18 12:01	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160182-1

Client Sample ID: TB-ROX-100418-8260
Date Collected: 10/04/18 00:01
Date Received: 10/05/18 08:46

Lab Sample ID: 400-160182-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/10/18 12:01	1
Styrene	ND		1.0	1.0	ug/L			10/10/18 12:01	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/10/18 12:01	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/10/18 12:01	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/10/18 12:01	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/10/18 12:01	1
Toluene	ND		1.0	0.70	ug/L			10/10/18 12:01	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/10/18 12:01	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/10/18 12:01	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/10/18 12:01	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/10/18 12:01	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/10/18 12:01	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/10/18 12:01	1
Trichloroethene	ND		1.0	0.50	ug/L			10/10/18 12:01	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/10/18 12:01	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/10/18 12:01	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/10/18 12:01	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/10/18 12:01	1
Vinyl acetate	ND		25	2.0	ug/L			10/10/18 12:01	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/10/18 12:01	1
Xylenes, Total	ND		10	1.6	ug/L			10/10/18 12:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*113*		*78 - 118*		*10/10/18 12:01*	*1*
Dibromofluoromethane	*98*		*81 - 121*		*10/10/18 12:01*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*10/10/18 12:01*	*1*

Client Sample ID: MW6C-ROX-100418-EB
Date Collected: 10/04/18 08:30
Date Received: 10/05/18 08:46

Lab Sample ID: 400-160182-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/10/18 15:18	1
Acrolein	ND		20	10	ug/L			10/10/18 15:18	1
Acrylonitrile	ND		10	2.8	ug/L			10/10/18 15:18	1
Benzene	2.3		1.0	0.38	ug/L			10/10/18 15:18	1
Bromobenzene	ND		1.0	0.54	ug/L			10/10/18 15:18	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/10/18 15:18	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/10/18 15:18	1
Bromoform	ND		5.0	0.71	ug/L			10/10/18 15:18	1
Bromomethane	ND		1.0	0.98	ug/L			10/10/18 15:18	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/10/18 15:18	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/10/18 15:18	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/10/18 15:18	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/10/18 15:18	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/10/18 15:18	1
Chloroethane	ND		1.0	0.76	ug/L			10/10/18 15:18	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/10/18 15:18	1
Chloroform	ND		1.0	0.60	ug/L			10/10/18 15:18	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/10/18 15:18	1
Chloromethane	ND		1.0	0.83	ug/L			10/10/18 15:18	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/10/18 15:18	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/10/18 15:18	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/10/18 15:18	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/10/18 15:18	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/10/18 15:18	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/10/18 15:18	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/10/18 15:18	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/10/18 15:18	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/10/18 15:18	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/10/18 15:18	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/10/18 15:18	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/10/18 15:18	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/10/18 15:18	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/10/18 15:18	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/10/18 15:18	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/10/18 15:18	1
2-Hexanone	ND		25	3.1	ug/L			10/10/18 15:18	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/10/18 15:18	1
Methylene bromide	ND		5.0	0.59	ug/L			10/10/18 15:18	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/10/18 15:18	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/10/18 15:18	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/10/18 15:18	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/10/18 15:18	1
Naphthalene	ND		1.0	1.0	ug/L			10/10/18 15:18	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/10/18 15:18	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/10/18 15:18	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/10/18 15:18	1
o-Xylene	ND		5.0	0.60	ug/L			10/10/18 15:18	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/10/18 15:18	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/10/18 15:18	1

Client Sample ID: MW6C-ROX-100418-EB

Lab Sample ID: 400-160182-3

Date Collected: 10/04/18 08:30
Date Received: 10/05/18 08:46

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/10/18 15:18	1
Styrene	ND		1.0	1.0	ug/L			10/10/18 15:18	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/10/18 15:18	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/10/18 15:18	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/10/18 15:18	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/10/18 15:18	1
Toluene	ND		1.0	0.70	ug/L			10/10/18 15:18	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/10/18 15:18	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/10/18 15:18	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/10/18 15:18	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/10/18 15:18	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/10/18 15:18	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/10/18 15:18	1
Trichloroethene	ND		1.0	0.50	ug/L			10/10/18 15:18	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/10/18 15:18	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/10/18 15:18	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/10/18 15:18	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/10/18 15:18	1
Vinyl acetate	ND		25	2.0	ug/L			10/10/18 15:18	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/10/18 15:18	1
Xylenes, Total	ND		10	1.6	ug/L			10/10/18 15:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*111*		*78 - 118*		*10/10/18 15:18*	*1*
Dibromofluoromethane	*102*		*81 - 121*		*10/10/18 15:18*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*10/10/18 15:18*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:11	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:11	1
Anthracene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:11	1
Benzo[a]anthracene	ND		0.20	0.039	ug/L		10/09/18 10:03	10/10/18 21:11	1
Benzo[a]pyrene	ND		0.20	0.039	ug/L		10/09/18 10:03	10/10/18 21:11	1
Benzo[b]fluoranthene	ND		0.20	0.039	ug/L		10/09/18 10:03	10/10/18 21:11	1
Benzo[g,h,i]perylene	ND		0.20	0.039	ug/L		10/09/18 10:03	10/10/18 21:11	1
Benzo[k]fluoranthene	ND		0.20	0.039	ug/L		10/09/18 10:03	10/10/18 21:11	1
Chrysene	ND		0.20	0.039	ug/L		10/09/18 10:03	10/10/18 21:11	1
Dibenz(a,h)anthracene	ND		0.20	0.039	ug/L		10/09/18 10:03	10/10/18 21:11	1
Fluoranthene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:11	1
Fluorene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:11	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.039	ug/L		10/09/18 10:03	10/10/18 21:11	1
Phenanthrene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:11	1
Pyrene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:11	1
1-Methylnaphthalene	0.13	J	0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:11	1
2-Methylnaphthalene	0.12	J	0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*63*		*33 - 138*	*10/09/18 10:03*	*10/10/18 21:11*	*1*
2-Fluorobiphenyl	*50*		*15 - 122*	*10/09/18 10:03*	*10/10/18 21:11*	*1*

Client Sample ID: MW6C-ROX-100418-EB

Date Collected: 10/04/18 08:30
Date Received: 10/05/18 08:46

Lab Sample ID: 400-160182-3
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	30		19 - 130	10/09/18 10:03	10/10/18 21:11	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.8	3.7	ug/L		10/09/18 10:03	10/11/18 16:45	1
Benzoic acid	ND		29	7.1	ug/L		10/09/18 10:03	10/11/18 16:45	1
Benzyl alcohol	12		9.8	2.0	ug/L		10/09/18 10:03	10/11/18 16:45	1
Bis(2-chloroethoxy)methane	ND		9.8	0.67	ug/L		10/09/18 10:03	10/11/18 16:45	1
Bis(2-chloroethyl)ether	ND		9.8	0.72	ug/L		10/09/18 10:03	10/11/18 16:45	1
bis (2-chloroisopropyl) ether	ND		9.8	0.79	ug/L		10/09/18 10:03	10/11/18 16:45	1
Bis(2-ethylhexyl) phthalate	3.2	J B	9.8	2.2	ug/L		10/09/18 10:03	10/11/18 16:45	1
4-Bromophenyl phenyl ether	ND		9.8	0.31	ug/L		10/09/18 10:03	10/11/18 16:45	1
Butyl benzyl phthalate	ND		9.8	0.67	ug/L		10/09/18 10:03	10/11/18 16:45	1
4-Chloroaniline	ND		9.8	3.3	ug/L		10/09/18 10:03	10/11/18 16:45	1
4-Chloro-3-methylphenol	ND		9.8	3.7	ug/L		10/09/18 10:03	10/11/18 16:45	1
2-Chloronaphthalene	ND		9.8	0.51	ug/L		10/09/18 10:03	10/11/18 16:45	1
2-Chlorophenol	ND		9.8	2.1	ug/L		10/09/18 10:03	10/11/18 16:45	1
4-Chlorophenyl phenyl ether	ND		9.8	2.0	ug/L		10/09/18 10:03	10/11/18 16:45	1
Dibenz[a,h]acridine	ND		9.8	2.9	ug/L		10/09/18 10:03	10/11/18 16:45	1
Dibenzofuran	ND		9.8	0.51	ug/L		10/09/18 10:03	10/11/18 16:45	1
3,3'-Dichlorobenzidine	3.2	J B	9.8	2.5	ug/L		10/09/18 10:03	10/11/18 16:45	1
2,4-Dichlorophenol	ND		9.8	2.9	ug/L		10/09/18 10:03	10/11/18 16:45	1
Diethyl phthalate	ND		9.8	0.68	ug/L		10/09/18 10:03	10/11/18 16:45	1
2,4-Dimethylphenol	ND		9.8	3.4	ug/L		10/09/18 10:03	10/11/18 16:45	1
Dimethyl phthalate	ND		9.8	0.59	ug/L		10/09/18 10:03	10/11/18 16:45	1
Di-n-butyl phthalate	ND		9.8	2.6	ug/L		10/09/18 10:03	10/11/18 16:45	1
4,6-Dinitro-ortho-cresol	ND		9.8	2.0	ug/L		10/09/18 10:03	10/11/18 16:45	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		10/09/18 10:03	10/11/18 16:45	1
2,4-Dinitrotoluene	ND		9.8	1.9	ug/L		10/09/18 10:03	10/11/18 16:45	1
2,6-Dinitrotoluene	ND		9.8	1.9	ug/L		10/09/18 10:03	10/11/18 16:45	1
Di-n-octyl phthalate	ND		9.8	0.43	ug/L		10/09/18 10:03	10/11/18 16:45	1
1,4-Dioxane	ND		9.8	0.98	ug/L		10/09/18 10:03	10/11/18 16:45	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.8	0.98	ug/L		10/09/18 10:03	10/11/18 16:45	1
Hexachlorobenzene	ND		9.8	0.24	ug/L		10/09/18 10:03	10/11/18 16:45	1
Hexachlorocyclopentadiene	ND	*	20	2.5	ug/L		10/09/18 10:03	10/11/18 16:45	1
Hexachloroethane	ND		9.8	4.1	ug/L		10/09/18 10:03	10/11/18 16:45	1
Indene	ND		9.8	0.98	ug/L		10/09/18 10:03	10/11/18 16:45	1
Isophorone	ND		9.8	0.56	ug/L		10/09/18 10:03	10/11/18 16:45	1
2-Methylphenol	ND		9.8	1.8	ug/L		10/09/18 10:03	10/11/18 16:45	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/09/18 10:03	10/11/18 16:45	1
2-Nitroaniline	ND		9.8	2.1	ug/L		10/09/18 10:03	10/11/18 16:45	1
3-Nitroaniline	ND		9.8	1.8	ug/L		10/09/18 10:03	10/11/18 16:45	1
4-Nitroaniline	ND		9.8	2.4	ug/L		10/09/18 10:03	10/11/18 16:45	1
Nitrobenzene	ND		9.8	0.54	ug/L		10/09/18 10:03	10/11/18 16:45	1
2-Nitrophenol	ND		9.8	0.63	ug/L		10/09/18 10:03	10/11/18 16:45	1
4-Nitrophenol	ND		9.8	2.0	ug/L		10/09/18 10:03	10/11/18 16:45	1
N-Nitrosodimethylamine	ND		9.8	3.4	ug/L		10/09/18 10:03	10/11/18 16:45	1
N-Nitrosodi-n-propylamine	ND		9.8	3.2	ug/L		10/09/18 10:03	10/11/18 16:45	1

Client Sample ID: MW6C-ROX-100418-EB
Date Collected: 10/04/18 08:30
Date Received: 10/05/18 08:46

Lab Sample ID: 400-160182-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodiphenylamine	ND		9.8	0.46	ug/L		10/09/18 10:03	10/11/18 16:45	1
Pentachlorophenol	ND		20	1.8	ug/L		10/09/18 10:03	10/11/18 16:45	1
Phenol	ND		9.8	2.5	ug/L		10/09/18 10:03	10/11/18 16:45	1
Pyridine	ND		9.8	3.1	ug/L		10/09/18 10:03	10/11/18 16:45	1
Quinoline	ND		9.8	5.9	ug/L		10/09/18 10:03	10/11/18 16:45	1
2,4,5-Trichlorophenol	ND		9.8	3.6	ug/L		10/09/18 10:03	10/11/18 16:45	1
2,4,6-Trichlorophenol	ND		9.8	3.4	ug/L		10/09/18 10:03	10/11/18 16:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*55*		*34 - 120*	*10/09/18 10:03*	*10/11/18 16:45*	*1*
2-Fluorophenol	*12*		*10 - 120*	*10/09/18 10:03*	*10/11/18 16:45*	*1*
Nitrobenzene-d5	*41*		*27 - 120*	*10/09/18 10:03*	*10/11/18 16:45*	*1*
Phenol-d5	*32*		*10 - 120*	*10/09/18 10:03*	*10/11/18 16:45*	*1*
Terphenyl-d14	*59*		*53 - 125*	*10/09/18 10:03*	*10/11/18 16:45*	*1*
2,4,6-Tribromophenol	*56*		*15 - 135*	*10/09/18 10:03*	*10/11/18 16:45*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzenethiol	ND	*	9.5	1.6	ug/L		10/11/18 14:08	10/15/18 23:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*43*		*34 - 120*	*10/11/18 14:08*	*10/15/18 23:43*	*1*
2-Fluorophenol	*24*		*10 - 120*	*10/11/18 14:08*	*10/15/18 23:43*	*1*
Nitrobenzene-d5	*45*		*27 - 120*	*10/11/18 14:08*	*10/15/18 23:43*	*1*
Phenol-d5	*41*		*10 - 120*	*10/11/18 14:08*	*10/15/18 23:43*	*1*
Terphenyl-d14	*45*	*X*	*53 - 125*	*10/11/18 14:08*	*10/15/18 23:43*	*1*
2,4,6-Tribromophenol	*32*		*15 - 135*	*10/11/18 14:08*	*10/15/18 23:43*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0055	ug/L		10/16/18 15:12	10/18/18 22:41	1
1,2-Dibromoethane	ND		0.020	0.0050	ug/L		10/16/18 15:12	10/18/18 22:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*	*p*	*51 - 149*	*10/16/18 15:12*	*10/18/18 22:41*	*1*

Client Sample ID: MW6C-ROX-100418
Date Collected: 10/04/18 09:00
Date Received: 10/05/18 08:46

Lab Sample ID: 400-160182-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/10/18 15:39	1
Acrolein	ND		20	10	ug/L			10/10/18 15:39	1
Acrylonitrile	ND		10	2.8	ug/L			10/10/18 15:39	1
Benzene	ND		1.0	0.38	ug/L			10/10/18 15:39	1
Bromobenzene	ND		1.0	0.54	ug/L			10/10/18 15:39	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/10/18 15:39	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/10/18 15:39	1
Bromoform	ND		5.0	0.71	ug/L			10/10/18 15:39	1
Bromomethane	ND		1.0	0.98	ug/L			10/10/18 15:39	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/10/18 15:39	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/10/18 15:39	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/10/18 15:39	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/10/18 15:39	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/10/18 15:39	1
Chloroethane	ND		1.0	0.76	ug/L			10/10/18 15:39	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/10/18 15:39	1
Chloroform	ND		1.0	0.60	ug/L			10/10/18 15:39	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/10/18 15:39	1
Chloromethane	ND		1.0	0.83	ug/L			10/10/18 15:39	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/10/18 15:39	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/10/18 15:39	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/10/18 15:39	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/10/18 15:39	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/10/18 15:39	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/10/18 15:39	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/10/18 15:39	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/10/18 15:39	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/10/18 15:39	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/10/18 15:39	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/10/18 15:39	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/10/18 15:39	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/10/18 15:39	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/10/18 15:39	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/10/18 15:39	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/10/18 15:39	1
2-Hexanone	ND		25	3.1	ug/L			10/10/18 15:39	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/10/18 15:39	1
Methylene bromide	ND		5.0	0.59	ug/L			10/10/18 15:39	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/10/18 15:39	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/10/18 15:39	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/10/18 15:39	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/10/18 15:39	1
Naphthalene	ND		1.0	1.0	ug/L			10/10/18 15:39	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/10/18 15:39	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/10/18 15:39	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/10/18 15:39	1
o-Xylene	ND		5.0	0.60	ug/L			10/10/18 15:39	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/10/18 15:39	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/10/18 15:39	1

Client Sample ID: MW6C-ROX-100418

Date Collected: 10/04/18 09:00
Date Received: 10/05/18 08:46

Lab Sample ID: 400-160182-4

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/10/18 15:39	1
Styrene	ND		1.0	1.0	ug/L			10/10/18 15:39	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/10/18 15:39	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/10/18 15:39	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/10/18 15:39	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/10/18 15:39	1
Toluene	ND		1.0	0.70	ug/L			10/10/18 15:39	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/10/18 15:39	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/10/18 15:39	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/10/18 15:39	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/10/18 15:39	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/10/18 15:39	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/10/18 15:39	1
Trichloroethene	ND		1.0	0.50	ug/L			10/10/18 15:39	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/10/18 15:39	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/10/18 15:39	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/10/18 15:39	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/10/18 15:39	1
Vinyl acetate	ND		25	2.0	ug/L			10/10/18 15:39	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/10/18 15:39	1
Xylenes, Total	ND		10	1.6	ug/L			10/10/18 15:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*111*		*78 - 118*		*10/10/18 15:39*	*1*
Dibromofluoromethane	*103*		*81 - 121*		*10/10/18 15:39*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*10/10/18 15:39*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:27	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:27	1
Anthracene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:27	1
Benzo[a]anthracene	ND		0.20	0.039	ug/L		10/09/18 10:03	10/10/18 21:27	1
Benzo[a]pyrene	ND		0.20	0.039	ug/L		10/09/18 10:03	10/10/18 21:27	1
Benzo[b]fluoranthene	ND		0.20	0.039	ug/L		10/09/18 10:03	10/10/18 21:27	1
Benzo[g,h,i]perylene	ND		0.20	0.039	ug/L		10/09/18 10:03	10/10/18 21:27	1
Benzo[k]fluoranthene	ND		0.20	0.039	ug/L		10/09/18 10:03	10/10/18 21:27	1
Chrysene	ND		0.20	0.039	ug/L		10/09/18 10:03	10/10/18 21:27	1
Dibenz(a,h)anthracene	ND		0.20	0.039	ug/L		10/09/18 10:03	10/10/18 21:27	1
Fluoranthene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:27	1
Fluorene	ND		0.20	0.021	ug/L		10/09/18 10:03	10/10/18 21:27	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.039	ug/L		10/09/18 10:03	10/10/18 21:27	1
Phenanthrene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:27	1
Pyrene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:27	1
1-Methylnaphthalene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:27	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*71*		*33 - 138*	*10/09/18 10:03*	*10/10/18 21:27*	*1*
2-Fluorobiphenyl	*62*		*15 - 122*	*10/09/18 10:03*	*10/10/18 21:27*	*1*

Client Sample ID: MW6C-ROX-100418
Date Collected: 10/04/18 09:00
Date Received: 10/05/18 08:46

Lab Sample ID: 400-160182-4
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	*38*		*19 - 130*	*10/09/18 10:03*	*10/10/18 21:27*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.8	3.7	ug/L		10/09/18 10:03	10/11/18 17:10	1
Benzoic acid	ND		30	7.2	ug/L		10/09/18 10:03	10/11/18 17:10	1
Benzyl alcohol	ND		9.8	2.0	ug/L		10/09/18 10:03	10/11/18 17:10	1
Bis(2-chloroethoxy)methane	ND		9.8	0.68	ug/L		10/09/18 10:03	10/11/18 17:10	1
Bis(2-chloroethyl)ether	ND		9.8	0.73	ug/L		10/09/18 10:03	10/11/18 17:10	1
bis (2-chloroisopropyl) ether	ND		9.8	0.80	ug/L		10/09/18 10:03	10/11/18 17:10	1
Bis(2-ethylhexyl) phthalate	ND		9.8	2.2	ug/L		10/09/18 10:03	10/11/18 17:10	1
4-Bromophenyl phenyl ether	ND		9.8	0.31	ug/L		10/09/18 10:03	10/11/18 17:10	1
Butyl benzyl phthalate	ND		9.8	0.68	ug/L		10/09/18 10:03	10/11/18 17:10	1
4-Chloroaniline	ND		9.8	3.3	ug/L		10/09/18 10:03	10/11/18 17:10	1
4-Chloro-3-methylphenol	ND		9.8	3.7	ug/L		10/09/18 10:03	10/11/18 17:10	1
2-Chloronaphthalene	ND		9.8	0.51	ug/L		10/09/18 10:03	10/11/18 17:10	1
2-Chlorophenol	ND		9.8	2.2	ug/L		10/09/18 10:03	10/11/18 17:10	1
4-Chlorophenyl phenyl ether	ND		9.8	2.0	ug/L		10/09/18 10:03	10/11/18 17:10	1
Dibenz[a,h]acridine	ND		9.8	3.0	ug/L		10/09/18 10:03	10/11/18 17:10	1
Dibenzofuran	ND		9.8	0.51	ug/L		10/09/18 10:03	10/11/18 17:10	1
3,3'-Dichlorobenzidine	ND		9.8	2.6	ug/L		10/09/18 10:03	10/11/18 17:10	1
2,4-Dichlorophenol	ND		9.8	3.0	ug/L		10/09/18 10:03	10/11/18 17:10	1
Diethyl phthalate	ND		9.8	0.69	ug/L		10/09/18 10:03	10/11/18 17:10	1
2,4-Dimethylphenol	ND		9.8	3.4	ug/L		10/09/18 10:03	10/11/18 17:10	1
Dimethyl phthalate	ND		9.8	0.59	ug/L		10/09/18 10:03	10/11/18 17:10	1
Di-n-butyl phthalate	ND		9.8	2.7	ug/L		10/09/18 10:03	10/11/18 17:10	1
4,6-Dinitro-ortho-cresol	ND		9.8	2.0	ug/L		10/09/18 10:03	10/11/18 17:10	1
2,4-Dinitrophenol	ND		30	3.3	ug/L		10/09/18 10:03	10/11/18 17:10	1
2,4-Dinitrotoluene	ND		9.8	1.9	ug/L		10/09/18 10:03	10/11/18 17:10	1
2,6-Dinitrotoluene	ND		9.8	1.9	ug/L		10/09/18 10:03	10/11/18 17:10	1
Di-n-octyl phthalate	ND		9.8	0.43	ug/L		10/09/18 10:03	10/11/18 17:10	1
1,4-Dioxane	ND		9.8	0.98	ug/L		10/09/18 10:03	10/11/18 17:10	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.8	0.98	ug/L		10/09/18 10:03	10/11/18 17:10	1
Hexachlorobenzene	ND		9.8	0.25	ug/L		10/09/18 10:03	10/11/18 17:10	1
Hexachlorocyclopentadiene	ND * UJ		20	2.6	ug/L		10/09/18 10:03	10/11/18 17:10	1
Hexachloroethane	ND		9.8	4.1	ug/L		10/09/18 10:03	10/11/18 17:10	1
Indene	ND		9.8	0.98	ug/L		10/09/18 10:03	10/11/18 17:10	1
Isophorone	ND		9.8	0.56	ug/L		10/09/18 10:03	10/11/18 17:10	1
2-Methylphenol	ND		9.8	1.8	ug/L		10/09/18 10:03	10/11/18 17:10	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/09/18 10:03	10/11/18 17:10	1
2-Nitroaniline	ND		9.8	2.2	ug/L		10/09/18 10:03	10/11/18 17:10	1
3-Nitroaniline	ND		9.8	1.8	ug/L		10/09/18 10:03	10/11/18 17:10	1
4-Nitroaniline	ND		9.8	2.4	ug/L		10/09/18 10:03	10/11/18 17:10	1
Nitrobenzene	ND		9.8	0.54	ug/L		10/09/18 10:03	10/11/18 17:10	1
2-Nitrophenol	ND		9.8	0.64	ug/L		10/09/18 10:03	10/11/18 17:10	1
4-Nitrophenol	ND		9.8	2.1	ug/L		10/09/18 10:03	10/11/18 17:10	1
N-Nitrosodimethylamine	ND UJ		9.8	3.4	ug/L		10/09/18 10:03	10/11/18 17:10	1
N-Nitrosodi-n-propylamine	ND		9.8	3.2	ug/L		10/09/18 10:03	10/11/18 17:10	1

Client Sample ID: MW6C-ROX-100418

Lab Sample ID: 400-160182-4

Date Collected: 10/04/18 09:00
Date Received: 10/05/18 08:46

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodiphenylamine	ND		9.8	0.46	ug/L		10/09/18 10:03	10/11/18 17:10	1
Pentachlorophenol	ND		20	1.8	ug/L		10/09/18 10:03	10/11/18 17:10	1
Phenol	ND		9.8	2.6	ug/L		10/09/18 10:03	10/11/18 17:10	1
Pyridine	ND		9.8	3.1	ug/L		10/09/18 10:03	10/11/18 17:10	1
Quinoline	ND	UJ	9.8	5.9	ug/L		10/09/18 10:03	10/11/18 17:10	1
2,4,5-Trichlorophenol	ND		9.8	3.6	ug/L		10/09/18 10:03	10/11/18 17:10	1
2,4,6-Trichlorophenol	ND		9.8	3.4	ug/L		10/09/18 10:03	10/11/18 17:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*65*		*34 - 120*	*10/09/18 10:03*	*10/11/18 17:10*	*1*
2-Fluorophenol	*17*		*10 - 120*	*10/09/18 10:03*	*10/11/18 17:10*	*1*
Nitrobenzene-d5	*48*		*27 - 120*	*10/09/18 10:03*	*10/11/18 17:10*	*1*
Phenol-d5	*34*		*10 - 120*	*10/09/18 10:03*	*10/11/18 17:10*	*1*
Terphenyl-d14	*65*		*53 - 125*	*10/09/18 10:03*	*10/11/18 17:10*	*1*
2,4,6-Tribromophenol	*62*		*15 - 135*	*10/09/18 10:03*	*10/11/18 17:10*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzenethiol	ND	* UJ	9.8	1.7	ug/L		10/11/18 14:08	10/16/18 00:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*44*		*34 - 120*	*10/11/18 14:08*	*10/16/18 00:04*	*1*
2-Fluorophenol	*26*		*10 - 120*	*10/11/18 14:08*	*10/16/18 00:04*	*1*
Nitrobenzene-d5	*45*		*27 - 120*	*10/11/18 14:08*	*10/16/18 00:04*	*1*
Phenol-d5	*41*		*10 - 120*	*10/11/18 14:08*	*10/16/18 00:04*	*1*
Terphenyl-d14	*46*	*X*	*53 - 125*	*10/11/18 14:08*	*10/16/18 00:04*	*1*
2,4,6-Tribromophenol	*48*		*15 - 135*	*10/11/18 14:08*	*10/16/18 00:04*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0055	ug/L		10/16/18 15:12	10/18/18 23:13	1
1,2-Dibromoethane	ND		0.020	0.0050	ug/L		10/16/18 15:12	10/18/18 23:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*	*p*	*51 - 149*	*10/16/18 15:12*	*10/18/18 23:13*	*1*

Client Sample ID: MW6B-ROX-100418
Date Collected: 10/04/18 09:35
Date Received: 10/05/18 08:46

Lab Sample ID: 400-160182-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/10/18 16:01	1
Acrolein	ND		20	10	ug/L			10/10/18 16:01	1
Acrylonitrile	ND		10	2.8	ug/L			10/10/18 16:01	1
Benzene	ND		1.0	0.38	ug/L			10/10/18 16:01	1
Bromobenzene	ND		1.0	0.54	ug/L			10/10/18 16:01	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/10/18 16:01	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/10/18 16:01	1
Bromoform	ND		5.0	0.71	ug/L			10/10/18 16:01	1
Bromomethane	ND		1.0	0.98	ug/L			10/10/18 16:01	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/10/18 16:01	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/10/18 16:01	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/10/18 16:01	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/10/18 16:01	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/10/18 16:01	1
Chloroethane	ND		1.0	0.76	ug/L			10/10/18 16:01	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/10/18 16:01	1
Chloroform	ND		1.0	0.60	ug/L			10/10/18 16:01	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/10/18 16:01	1
Chloromethane	ND		1.0	0.83	ug/L			10/10/18 16:01	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/10/18 16:01	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/10/18 16:01	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/10/18 16:01	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/10/18 16:01	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/10/18 16:01	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/10/18 16:01	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/10/18 16:01	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/10/18 16:01	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/10/18 16:01	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/10/18 16:01	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/10/18 16:01	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/10/18 16:01	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/10/18 16:01	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/10/18 16:01	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/10/18 16:01	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/10/18 16:01	1
2-Hexanone	ND		25	3.1	ug/L			10/10/18 16:01	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/10/18 16:01	1
Methylene bromide	ND		5.0	0.59	ug/L			10/10/18 16:01	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/10/18 16:01	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/10/18 16:01	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/10/18 16:01	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/10/18 16:01	1
Naphthalene	ND		1.0	1.0	ug/L			10/10/18 16:01	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/10/18 16:01	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/10/18 16:01	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/10/18 16:01	1
o-Xylene	ND		5.0	0.60	ug/L			10/10/18 16:01	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/10/18 16:01	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/10/18 16:01	1

Client Sample ID: MW6B-ROX-100418

Lab Sample ID: 400-160182-5

Date Collected: 10/04/18 09:35
Date Received: 10/05/18 08:46

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/10/18 16:01	1
Styrene	ND		1.0	1.0	ug/L			10/10/18 16:01	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/10/18 16:01	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/10/18 16:01	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/10/18 16:01	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/10/18 16:01	1
Toluene	ND		1.0	0.70	ug/L			10/10/18 16:01	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/10/18 16:01	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/10/18 16:01	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/10/18 16:01	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/10/18 16:01	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/10/18 16:01	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/10/18 16:01	1
Trichloroethene	ND		1.0	0.50	ug/L			10/10/18 16:01	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/10/18 16:01	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/10/18 16:01	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/10/18 16:01	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/10/18 16:01	1
Vinyl acetate	ND		25	2.0	ug/L			10/10/18 16:01	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/10/18 16:01	1
Xylenes, Total	ND		10	1.6	ug/L			10/10/18 16:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*114*		*78 - 118*		*10/10/18 16:01*	*1*
Dibromofluoromethane	*102*		*81 - 121*		*10/10/18 16:01*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*10/10/18 16:01*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:43	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:43	1
Anthracene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:43	1
Benzo[a]anthracene	ND		0.20	0.040	ug/L		10/09/18 10:03	10/10/18 21:43	1
Benzo[a]pyrene	ND		0.20	0.040	ug/L		10/09/18 10:03	10/10/18 21:43	1
Benzo[b]fluoranthene	ND		0.20	0.040	ug/L		10/09/18 10:03	10/10/18 21:43	1
Benzo[g,h,i]perylene	ND		0.20	0.040	ug/L		10/09/18 10:03	10/10/18 21:43	1
Benzo[k]fluoranthene	ND		0.20	0.040	ug/L		10/09/18 10:03	10/10/18 21:43	1
Chrysene	ND		0.20	0.040	ug/L		10/09/18 10:03	10/10/18 21:43	1
Dibenz(a,h)anthracene	ND		0.20	0.040	ug/L		10/09/18 10:03	10/10/18 21:43	1
Fluoranthene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:43	1
Fluorene	ND		0.20	0.021	ug/L		10/09/18 10:03	10/10/18 21:43	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.040	ug/L		10/09/18 10:03	10/10/18 21:43	1
Phenanthrene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:43	1
Pyrene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:43	1
1-Methylnaphthalene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:43	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*54*		*33 - 138*	*10/09/18 10:03*	*10/10/18 21:43*	*1*
2-Fluorobiphenyl	*42*		*15 - 122*	*10/09/18 10:03*	*10/10/18 21:43*	*1*

Client Sample ID: MW6B-ROX-100418
Date Collected: 10/04/18 09:35
Date Received: 10/05/18 08:46

Lab Sample ID: 400-160182-5
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	28		19 - 130	10/09/18 10:03	10/10/18 21:43	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.8	ug/L		10/09/18 10:03	10/11/18 17:35	1
Benzoic acid	ND		30	7.3	ug/L		10/09/18 10:03	10/11/18 17:35	1
Benzyl alcohol	ND		10	2.0	ug/L		10/09/18 10:03	10/11/18 17:35	1
Bis(2-chloroethoxy)methane	ND		10	0.69	ug/L		10/09/18 10:03	10/11/18 17:35	1
Bis(2-chloroethyl)ether	ND		10	0.74	ug/L		10/09/18 10:03	10/11/18 17:35	1
bis (2-chloroisopropyl) ether	ND		10	0.81	ug/L		10/09/18 10:03	10/11/18 17:35	1
4-Bromophenyl phenyl ether	ND		10	0.32	ug/L		10/09/18 10:03	10/11/18 17:35	1
Butyl benzyl phthalate	ND		10	0.69	ug/L		10/09/18 10:03	10/11/18 17:35	1
4-Chloroaniline	ND		10	3.4	ug/L		10/09/18 10:03	10/11/18 17:35	1
4-Chloro-3-methylphenol	ND		10	3.8	ug/L		10/09/18 10:03	10/11/18 17:35	1
2-Chloronaphthalene	ND		10	0.52	ug/L		10/09/18 10:03	10/11/18 17:35	1
2-Chlorophenol	ND		10	2.2	ug/L		10/09/18 10:03	10/11/18 17:35	1
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		10/09/18 10:03	10/11/18 17:35	1
Dibenz[a,h]acridine	ND		10	3.0	ug/L		10/09/18 10:03	10/11/18 17:35	1
Dibenzofuran	ND		10	0.52	ug/L		10/09/18 10:03	10/11/18 17:35	1
3,3'-Dichlorobenzidine	ND		10	2.6	ug/L		10/09/18 10:03	10/11/18 17:35	1
2,4-Dichlorophenol	ND		10	3.0	ug/L		10/09/18 10:03	10/11/18 17:35	1
Diethyl phthalate	ND		10	0.70	ug/L		10/09/18 10:03	10/11/18 17:35	1
2,4-Dimethylphenol	ND		10	3.5	ug/L		10/09/18 10:03	10/11/18 17:35	1
Dimethyl phthalate	ND		10	0.60	ug/L		10/09/18 10:03	10/11/18 17:35	1
Di-n-butyl phthalate	ND		10	2.7	ug/L		10/09/18 10:03	10/11/18 17:35	1
4,6-Dinitro-ortho-cresol	ND		10	2.0	ug/L		10/09/18 10:03	10/11/18 17:35	1
2,4-Dinitrophenol	ND		30	3.4	ug/L		10/09/18 10:03	10/11/18 17:35	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		10/09/18 10:03	10/11/18 17:35	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		10/09/18 10:03	10/11/18 17:35	1
Di-n-octyl phthalate	ND		10	0.44	ug/L		10/09/18 10:03	10/11/18 17:35	1
1,4-Dioxane	ND		10	1.0	ug/L		10/09/18 10:03	10/11/18 17:35	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		10/09/18 10:03	10/11/18 17:35	1
Hexachlorobenzene	ND		10	0.25	ug/L		10/09/18 10:03	10/11/18 17:35	1
Hexachlorocyclopentadiene	ND	* UJ	20	2.6	ug/L		10/09/18 10:03	10/11/18 17:35	1
Hexachloroethane	ND		10	4.2	ug/L		10/09/18 10:03	10/11/18 17:35	1
Indene	ND		10	1.0	ug/L		10/09/18 10:03	10/11/18 17:35	1
Isophorone	ND		10	0.57	ug/L		10/09/18 10:03	10/11/18 17:35	1
2-Methylphenol	ND		10	1.8	ug/L		10/09/18 10:03	10/11/18 17:35	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/09/18 10:03	10/11/18 17:35	1
2-Nitroaniline	ND		10	2.2	ug/L		10/09/18 10:03	10/11/18 17:35	1
3-Nitroaniline	ND		10	1.8	ug/L		10/09/18 10:03	10/11/18 17:35	1
4-Nitroaniline	ND		10	2.5	ug/L		10/09/18 10:03	10/11/18 17:35	1
Nitrobenzene	ND		10	0.55	ug/L		10/09/18 10:03	10/11/18 17:35	1
2-Nitrophenol	ND		10	0.65	ug/L		10/09/18 10:03	10/11/18 17:35	1
4-Nitrophenol	ND		10	2.1	ug/L		10/09/18 10:03	10/11/18 17:35	1
N-Nitrosodimethylamine	ND	UJ	10	3.5	ug/L		10/09/18 10:03	10/11/18 17:35	1
N-Nitrosodi-n-propylamine	ND		10	3.3	ug/L		10/09/18 10:03	10/11/18 17:35	1
N-Nitrosodiphenylamine	ND		10	0.47	ug/L		10/09/18 10:03	10/11/18 17:35	1

Client Sample ID: MW6B-ROX-100418

Lab Sample ID: 400-160182-5

Date Collected: 10/04/18 09:35
Date Received: 10/05/18 08:46

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		20	1.8	ug/L		10/09/18 10:03	10/11/18 17:35	1
Phenol	ND		10	2.6	ug/L		10/09/18 10:03	10/11/18 17:35	1
Pyridine	ND		10	3.2	ug/L		10/09/18 10:03	10/11/18 17:35	1
Quinoline	ND	UJ	10	6.0	ug/L		10/09/18 10:03	10/11/18 17:35	1
2,4,5-Trichlorophenol	ND		10	3.7	ug/L		10/09/18 10:03	10/11/18 17:35	1
2,4,6-Trichlorophenol	ND		10	3.5	ug/L		10/09/18 10:03	10/11/18 17:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*55*		*34 - 120*	*10/09/18 10:03*	*10/11/18 17:35*	*1*
2-Fluorophenol	*13*		*10 - 120*	*10/09/18 10:03*	*10/11/18 17:35*	*1*
Nitrobenzene-d5	*40*		*27 - 120*	*10/09/18 10:03*	*10/11/18 17:35*	*1*
Phenol-d5	*27*		*10 - 120*	*10/09/18 10:03*	*10/11/18 17:35*	*1*
Terphenyl-d14	*59*		*53 - 125*	*10/09/18 10:03*	*10/11/18 17:35*	*1*
2,4,6-Tribromophenol	*54*		*15 - 135*	*10/09/18 10:03*	*10/11/18 17:35*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzenethiol	ND	* UJ	9.9	1.7	ug/L		10/11/18 14:08	10/16/18 00:25	1
Bis(2-ethylhexyl) phthalate	ND		9.9	2.2	ug/L		10/11/18 14:08	10/16/18 00:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*47*		*34 - 120*	*10/11/18 14:08*	*10/16/18 00:25*	*1*
2-Fluorophenol	*25*		*10 - 120*	*10/11/18 14:08*	*10/16/18 00:25*	*1*
Nitrobenzene-d5	*51*		*27 - 120*	*10/11/18 14:08*	*10/16/18 00:25*	*1*
Phenol-d5	*41*		*10 - 120*	*10/11/18 14:08*	*10/16/18 00:25*	*1*
Terphenyl-d14	*48*	*X*	*53 - 125*	*10/11/18 14:08*	*10/16/18 00:25*	*1*
2,4,6-Tribromophenol	*50*		*15 - 135*	*10/11/18 14:08*	*10/16/18 00:25*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.029	0.0053	ug/L		10/16/18 15:12	10/19/18 00:17	1
1,2-Dibromoethane	ND		0.019	0.0048	ug/L		10/16/18 15:12	10/19/18 00:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*	*p*	*51 - 149*	*10/16/18 15:12*	*10/19/18 00:17*	*1*

Client Sample ID: MW6A-ROX-100418
Date Collected: 10/04/18 10:20
Date Received: 10/05/18 08:46

Lab Sample ID: 400-160182-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/10/18 08:44	1
Acrolein	ND		20	10	ug/L			10/10/18 08:44	1
Acrylonitrile	ND		10	2.8	ug/L			10/10/18 08:44	1
Benzene	ND		1.0	0.38	ug/L			10/10/18 08:44	1
Bromobenzene	ND		1.0	0.54	ug/L			10/10/18 08:44	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/10/18 08:44	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/10/18 08:44	1
Bromoform	ND		5.0	0.71	ug/L			10/10/18 08:44	1
Bromomethane	ND		1.0	0.98	ug/L			10/10/18 08:44	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/10/18 08:44	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/10/18 08:44	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/10/18 08:44	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/10/18 08:44	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/10/18 08:44	1
Chloroethane	ND		1.0	0.76	ug/L			10/10/18 08:44	1
2-Chloroethyl vinyl ether	ND	F1 UJ	5.0	2.0	ug/L			10/10/18 08:44	1
Chloroform	ND		1.0	0.60	ug/L			10/10/18 08:44	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/10/18 08:44	1
Chloromethane	ND		1.0	0.83	ug/L			10/10/18 08:44	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/10/18 08:44	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/10/18 08:44	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/10/18 08:44	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/10/18 08:44	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/10/18 08:44	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/10/18 08:44	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/10/18 08:44	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/10/18 08:44	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/10/18 08:44	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/10/18 08:44	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/10/18 08:44	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/10/18 08:44	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/10/18 08:44	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/10/18 08:44	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/10/18 08:44	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/10/18 08:44	1
2-Hexanone	ND		25	3.1	ug/L			10/10/18 08:44	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/10/18 08:44	1
Methylene bromide	ND		5.0	0.59	ug/L			10/10/18 08:44	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/10/18 08:44	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/10/18 08:44	1
Methyl tert-butyl ether	1.5		1.0	0.74	ug/L			10/10/18 08:44	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/10/18 08:44	1
Naphthalene	ND		1.0	1.0	ug/L			10/10/18 08:44	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/10/18 08:44	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/10/18 08:44	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/10/18 08:44	1
o-Xylene	ND		5.0	0.60	ug/L			10/10/18 08:44	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/10/18 08:44	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/10/18 08:44	1

Client Sample ID: MW6A-ROX-100418
Date Collected: 10/04/18 10:20
Date Received: 10/05/18 08:46

Lab Sample ID: 400-160182-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/10/18 08:44	1
Styrene	ND		1.0	1.0	ug/L			10/10/18 08:44	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/10/18 08:44	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/10/18 08:44	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/10/18 08:44	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/10/18 08:44	1
Toluene	ND		1.0	0.70	ug/L			10/10/18 08:44	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/10/18 08:44	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/10/18 08:44	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/10/18 08:44	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/10/18 08:44	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/10/18 08:44	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/10/18 08:44	1
Trichloroethene	ND		1.0	0.50	ug/L			10/10/18 08:44	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/10/18 08:44	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/10/18 08:44	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/10/18 08:44	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/10/18 08:44	1
Vinyl acetate	ND		25	2.0	ug/L			10/10/18 08:44	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/10/18 08:44	1
Xylenes, Total	ND		10	1.6	ug/L			10/10/18 08:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*116*		*78 - 118*		*10/10/18 08:44*	*1*
Dibromofluoromethane	*103*		*81 - 121*		*10/10/18 08:44*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*10/10/18 08:44*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:59	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:59	1
Anthracene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:59	1
Benzo[a]anthracene	0.045	J	0.20	0.040	ug/L		10/09/18 10:03	10/10/18 21:59	1
Benzo[a]pyrene	ND		0.20	0.040	ug/L		10/09/18 10:03	10/10/18 21:59	1
Benzo[b]fluoranthene	ND		0.20	0.040	ug/L		10/09/18 10:03	10/10/18 21:59	1
Benzo[g,h,i]perylene	ND		0.20	0.040	ug/L		10/09/18 10:03	10/10/18 21:59	1
Benzo[k]fluoranthene	ND		0.20	0.040	ug/L		10/09/18 10:03	10/10/18 21:59	1
Chrysene	0.072	J	0.20	0.040	ug/L		10/09/18 10:03	10/10/18 21:59	1
Dibenz(a,h)anthracene	ND		0.20	0.040	ug/L		10/09/18 10:03	10/10/18 21:59	1
Fluoranthene	0.062	J	0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:59	1
Fluorene	ND		0.20	0.021	ug/L		10/09/18 10:03	10/10/18 21:59	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.040	ug/L		10/09/18 10:03	10/10/18 21:59	1
Phenanthrene	0.094	J	0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:59	1
Pyrene	0.070	J	0.20	0.020	ug/L		10/09/18 10:03	10/10/18 21:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*51*		*33 - 138*	*10/09/18 10:03*	*10/10/18 21:59*	*1*
2-Fluorobiphenyl	*44*		*15 - 122*	*10/09/18 10:03*	*10/10/18 21:59*	*1*

Client Sample ID: MW6A-ROX-100418

Date Collected: 10/04/18 10:20
Date Received: 10/05/18 08:46

Lab Sample ID: 400-160182-6
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND	UJ	0.59	0.059	ug/L		10/09/18 10:03	10/11/18 13:20	3
2-Methylnaphthalene	ND	UJ	0.59	0.059	ug/L		10/09/18 10:03	10/11/18 13:20	3

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*24*		*19 - 130*	*10/09/18 10:03*	*10/11/18 13:20*	*3*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.9	3.8	ug/L		10/09/18 10:03	10/11/18 18:00	1
Benzoic acid	ND		30	7.2	ug/L		10/09/18 10:03	10/11/18 18:00	1
Benzyl alcohol	ND		9.9	2.0	ug/L		10/09/18 10:03	10/11/18 18:00	1
Bis(2-chloroethoxy)methane	ND		9.9	0.68	ug/L		10/09/18 10:03	10/11/18 18:00	1
Bis(2-chloroethyl)ether	ND		9.9	0.73	ug/L		10/09/18 10:03	10/11/18 18:00	1
bis (2-chloroisopropyl) ether	ND		9.9	0.80	ug/L		10/09/18 10:03	10/11/18 18:00	1
Bis(2-ethylhexyl) phthalate	~~2.8~~ J B	UJ	9.9	2.2	ug/L		10/09/18 10:03	10/11/18 18:00	1
4-Bromophenyl phenyl ether	ND		9.9	0.32	ug/L		10/09/18 10:03	10/11/18 18:00	1
Butyl benzyl phthalate	ND		9.9	0.68	ug/L		10/09/18 10:03	10/11/18 18:00	1
4-Chloroaniline	ND		9.9	3.4	ug/L		10/09/18 10:03	10/11/18 18:00	1
4-Chloro-3-methylphenol	ND		9.9	3.8	ug/L		10/09/18 10:03	10/11/18 18:00	1
2-Chloronaphthalene	ND		9.9	0.51	ug/L		10/09/18 10:03	10/11/18 18:00	1
2-Chlorophenol	ND		9.9	2.2	ug/L		10/09/18 10:03	10/11/18 18:00	1
4-Chlorophenyl phenyl ether	ND		9.9	2.0	ug/L		10/09/18 10:03	10/11/18 18:00	1
Dibenz[a,h]acridine	ND		9.9	3.0	ug/L		10/09/18 10:03	10/11/18 18:00	1
Dibenzofuran	ND		9.9	0.51	ug/L		10/09/18 10:03	10/11/18 18:00	1
3,3'-Dichlorobenzidine	ND		9.9	2.6	ug/L		10/09/18 10:03	10/11/18 18:00	1
2,4-Dichlorophenol	ND		9.9	3.0	ug/L		10/09/18 10:03	10/11/18 18:00	1
Diethyl phthalate	ND		9.9	0.69	ug/L		10/09/18 10:03	10/11/18 18:00	1
2,4-Dimethylphenol	ND		9.9	3.5	ug/L		10/09/18 10:03	10/11/18 18:00	1
Dimethyl phthalate	ND		9.9	0.59	ug/L		10/09/18 10:03	10/11/18 18:00	1
Di-n-butyl phthalate	ND		9.9	2.7	ug/L		10/09/18 10:03	10/11/18 18:00	1
4,6-Dinitro-ortho-cresol	ND		9.9	2.0	ug/L		10/09/18 10:03	10/11/18 18:00	1
2,4-Dinitrophenol	ND		30	3.4	ug/L		10/09/18 10:03	10/11/18 18:00	1
2,4-Dinitrotoluene	ND		9.9	1.9	ug/L		10/09/18 10:03	10/11/18 18:00	1
2,6-Dinitrotoluene	ND		9.9	1.9	ug/L		10/09/18 10:03	10/11/18 18:00	1
Di-n-octyl phthalate	ND		9.9	0.43	ug/L		10/09/18 10:03	10/11/18 18:00	1
1,4-Dioxane	ND		9.9	0.99	ug/L		10/09/18 10:03	10/11/18 18:00	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.9	0.99	ug/L		10/09/18 10:03	10/11/18 18:00	1
Hexachlorobenzene	ND		9.9	0.25	ug/L		10/09/18 10:03	10/11/18 18:00	1
Hexachlorocyclopentadiene	ND	UJ	20	2.6	ug/L		10/09/18 10:03	10/11/18 18:00	1
Hexachloroethane	ND		9.9	4.1	ug/L		10/09/18 10:03	10/11/18 18:00	1
Indene	ND		9.9	0.99	ug/L		10/09/18 10:03	10/11/18 18:00	1
Isophorone	ND		9.9	0.56	ug/L		10/09/18 10:03	10/11/18 18:00	1
2-Methylphenol	ND		9.9	1.8	ug/L		10/09/18 10:03	10/11/18 18:00	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/09/18 10:03	10/11/18 18:00	1
2-Nitroaniline	ND		9.9	2.2	ug/L		10/09/18 10:03	10/11/18 18:00	1
3-Nitroaniline	ND		9.9	1.8	ug/L		10/09/18 10:03	10/11/18 18:00	1
4-Nitroaniline	ND		9.9	2.4	ug/L		10/09/18 10:03	10/11/18 18:00	1
Nitrobenzene	ND		9.9	0.54	ug/L		10/09/18 10:03	10/11/18 18:00	1
2-Nitrophenol	ND		9.9	0.64	ug/L		10/09/18 10:03	10/11/18 18:00	1

Client Sample ID: MW6A-ROX-100418

Date Collected: 10/04/18 10:20
Date Received: 10/05/18 08:46

Lab Sample ID: 400-160182-6
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	ND		9.9	2.1	ug/L		10/09/18 10:03	10/11/18 18:00	1
N-Nitrosodimethylamine	ND	UJ	9.9	3.5	ug/L		10/09/18 10:03	10/11/18 18:00	1
N-Nitrosodi-n-propylamine	ND		9.9	3.3	ug/L		10/09/18 10:03	10/11/18 18:00	1
N-Nitrosodiphenylamine	ND		9.9	0.46	ug/L		10/09/18 10:03	10/11/18 18:00	1
Pentachlorophenol	ND		20	1.8	ug/L		10/09/18 10:03	10/11/18 18:00	1
Phenol	ND		9.9	2.6	ug/L		10/09/18 10:03	10/11/18 18:00	1
Pyridine	ND		9.9	3.2	ug/L		10/09/18 10:03	10/11/18 18:00	1
Quinoline	ND	UJ	9.9	5.9	ug/L		10/09/18 10:03	10/11/18 18:00	1
2,4,5-Trichlorophenol	ND		9.9	3.7	ug/L		10/09/18 10:03	10/11/18 18:00	1
2,4,6-Trichlorophenol	ND		9.9	3.5	ug/L		10/09/18 10:03	10/11/18 18:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*61*		*34 - 120*	*10/09/18 10:03*	*10/11/18 18:00*	*1*
2-Fluorophenol	*9*	*X*	*10 - 120*	*10/09/18 10:03*	*10/11/18 18:00*	*1*
Nitrobenzene-d5	*40*		*27 - 120*	*10/09/18 10:03*	*10/11/18 18:00*	*1*
Phenol-d5	*28*		*10 - 120*	*10/09/18 10:03*	*10/11/18 18:00*	*1*
Terphenyl-d14	*58*		*53 - 125*	*10/09/18 10:03*	*10/11/18 18:00*	*1*
2,4,6-Tribromophenol	*63*		*15 - 135*	*10/09/18 10:03*	*10/11/18 18:00*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzenethiol	ND	* UJ	10	1.7	ug/L		10/11/18 14:08	10/16/18 00:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*55*		*34 - 120*	*10/11/18 14:08*	*10/16/18 00:46*	*1*
2-Fluorophenol	*35*		*10 - 120*	*10/11/18 14:08*	*10/16/18 00:46*	*1*
Nitrobenzene-d5	*58*		*27 - 120*	*10/11/18 14:08*	*10/16/18 00:46*	*1*
Phenol-d5	*44*		*10 - 120*	*10/11/18 14:08*	*10/16/18 00:46*	*1*
Terphenyl-d14	*46*	*X*	*53 - 125*	*10/11/18 14:08*	*10/16/18 00:46*	*1*
2,4,6-Tribromophenol	*52*		*15 - 135*	*10/11/18 14:08*	*10/16/18 00:46*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0055	ug/L		10/16/18 15:12	10/19/18 00:51	1
1,2-Dibromoethane	ND		0.020	0.0050	ug/L		10/16/18 15:12	10/19/18 00:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*106*	*p*	*51 - 149*	*10/16/18 15:12*	*10/19/18 00:51*	*1*

Client Sample ID: MW6D-ROX-100418
Date Collected: 10/04/18 11:05
Date Received: 10/05/18 08:46

Lab Sample ID: 400-160182-7
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/10/18 16:45	1
Acrolein	ND		20	10	ug/L			10/10/18 16:45	1
Acrylonitrile	ND		10	2.8	ug/L			10/10/18 16:45	1
Benzene	ND		1.0	0.38	ug/L			10/10/18 16:45	1
Bromobenzene	ND		1.0	0.54	ug/L			10/10/18 16:45	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/10/18 16:45	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/10/18 16:45	1
Bromoform	ND		5.0	0.71	ug/L			10/10/18 16:45	1
Bromomethane	ND		1.0	0.98	ug/L			10/10/18 16:45	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/10/18 16:45	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/10/18 16:45	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/10/18 16:45	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/10/18 16:45	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/10/18 16:45	1
Chloroethane	ND		1.0	0.76	ug/L			10/10/18 16:45	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/10/18 16:45	1
Chloroform	ND		1.0	0.60	ug/L			10/10/18 16:45	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/10/18 16:45	1
Chloromethane	ND		1.0	0.83	ug/L			10/10/18 16:45	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/10/18 16:45	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/10/18 16:45	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/10/18 16:45	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/10/18 16:45	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/10/18 16:45	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/10/18 16:45	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/10/18 16:45	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/10/18 16:45	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/10/18 16:45	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/10/18 16:45	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/10/18 16:45	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/10/18 16:45	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/10/18 16:45	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/10/18 16:45	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/10/18 16:45	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/10/18 16:45	1
2-Hexanone	ND		25	3.1	ug/L			10/10/18 16:45	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/10/18 16:45	1
Methylene bromide	ND		5.0	0.59	ug/L			10/10/18 16:45	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/10/18 16:45	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/10/18 16:45	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/10/18 16:45	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/10/18 16:45	1
Naphthalene	ND		1.0	1.0	ug/L			10/10/18 16:45	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/10/18 16:45	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/10/18 16:45	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/10/18 16:45	1
o-Xylene	ND		5.0	0.60	ug/L			10/10/18 16:45	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/10/18 16:45	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/10/18 16:45	1

Client Sample ID: MW6D-ROX-100418

Date Collected: 10/04/18 11:05
Date Received: 10/05/18 08:46

Lab Sample ID: 400-160182-7
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/10/18 16:45	1
Styrene	ND		1.0	1.0	ug/L			10/10/18 16:45	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/10/18 16:45	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/10/18 16:45	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/10/18 16:45	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/10/18 16:45	1
Toluene	ND		1.0	0.70	ug/L			10/10/18 16:45	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/10/18 16:45	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/10/18 16:45	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/10/18 16:45	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/10/18 16:45	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/10/18 16:45	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/10/18 16:45	1
Trichloroethene	ND		1.0	0.50	ug/L			10/10/18 16:45	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/10/18 16:45	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/10/18 16:45	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/10/18 16:45	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/10/18 16:45	1
Vinyl acetate	ND		25	2.0	ug/L			10/10/18 16:45	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/10/18 16:45	1
Xylenes, Total	ND		10	1.6	ug/L			10/10/18 16:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*111*		*78 - 118*		*10/10/18 16:45*	*1*
Dibromofluoromethane	*103*		*81 - 121*		*10/10/18 16:45*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*10/10/18 16:45*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 22:15	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 22:15	1
Anthracene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 22:15	1
Benzo[a]anthracene	ND		0.20	0.039	ug/L		10/09/18 10:03	10/10/18 22:15	1
Benzo[a]pyrene	ND		0.20	0.039	ug/L		10/09/18 10:03	10/10/18 22:15	1
Benzo[b]fluoranthene	ND		0.20	0.039	ug/L		10/09/18 10:03	10/10/18 22:15	1
Benzo[g,h,i]perylene	ND		0.20	0.039	ug/L		10/09/18 10:03	10/10/18 22:15	1
Benzo[k]fluoranthene	ND		0.20	0.039	ug/L		10/09/18 10:03	10/10/18 22:15	1
Chrysene	ND		0.20	0.039	ug/L		10/09/18 10:03	10/10/18 22:15	1
Dibenz(a,h)anthracene	ND		0.20	0.039	ug/L		10/09/18 10:03	10/10/18 22:15	1
Fluoranthene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 22:15	1
Fluorene	ND		0.20	0.021	ug/L		10/09/18 10:03	10/10/18 22:15	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.039	ug/L		10/09/18 10:03	10/10/18 22:15	1
Phenanthrene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 22:15	1
Pyrene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 22:15	1
1-Methylnaphthalene	0.023	J	0.20	0.020	ug/L		10/09/18 10:03	10/10/18 22:15	1
2-Methylnaphthalene	0.026	J	0.20	0.020	ug/L		10/09/18 10:03	10/10/18 22:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*71*		*33 - 138*	*10/09/18 10:03*	*10/10/18 22:15*	*1*
2-Fluorobiphenyl	*57*		*15 - 122*	*10/09/18 10:03*	*10/10/18 22:15*	*1*

Client Sample ID: MW6D-ROX-100418

Lab Sample ID: 400-160182-7
Matrix: Water

Date Collected: 10/04/18 11:05
Date Received: 10/05/18 08:46

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	*34*		*19 - 130*	*10/09/18 10:03*	*10/10/18 22:15*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.9	3.8	ug/L		10/09/18 10:03	10/11/18 18:25	1
Benzoic acid	ND		30	7.2	ug/L		10/09/18 10:03	10/11/18 18:25	1
Benzyl alcohol	ND		9.9	2.0	ug/L		10/09/18 10:03	10/11/18 18:25	1
Bis(2-chloroethoxy)methane	ND		9.9	0.68	ug/L		10/09/18 10:03	10/11/18 18:25	1
Bis(2-chloroethyl)ether	ND		9.9	0.73	ug/L		10/09/18 10:03	10/11/18 18:25	1
bis (2-chloroisopropyl) ether	ND		9.9	0.80	ug/L		10/09/18 10:03	10/11/18 18:25	1
4-Bromophenyl phenyl ether	ND		9.9	0.32	ug/L		10/09/18 10:03	10/11/18 18:25	1
Butyl benzyl phthalate	ND		9.9	0.68	ug/L		10/09/18 10:03	10/11/18 18:25	1
4-Chloroaniline	ND		9.9	3.4	ug/L		10/09/18 10:03	10/11/18 18:25	1
4-Chloro-3-methylphenol	ND		9.9	3.8	ug/L		10/09/18 10:03	10/11/18 18:25	1
2-Chloronaphthalene	ND		9.9	0.51	ug/L		10/09/18 10:03	10/11/18 18:25	1
2-Chlorophenol	ND		9.9	2.2	ug/L		10/09/18 10:03	10/11/18 18:25	1
4-Chlorophenyl phenyl ether	ND		9.9	2.0	ug/L		10/09/18 10:03	10/11/18 18:25	1
Dibenz[a,h]acridine	ND		9.9	3.0	ug/L		10/09/18 10:03	10/11/18 18:25	1
Dibenzofuran	ND		9.9	0.51	ug/L		10/09/18 10:03	10/11/18 18:25	1
3,3'-Dichlorobenzidine	ND		9.9	2.6	ug/L		10/09/18 10:03	10/11/18 18:25	1
2,4-Dichlorophenol	ND		9.9	3.0	ug/L		10/09/18 10:03	10/11/18 18:25	1
Diethyl phthalate	ND		9.9	0.69	ug/L		10/09/18 10:03	10/11/18 18:25	1
2,4-Dimethylphenol	ND		9.9	3.5	ug/L		10/09/18 10:03	10/11/18 18:25	1
Dimethyl phthalate	ND		9.9	0.59	ug/L		10/09/18 10:03	10/11/18 18:25	1
Di-n-butyl phthalate	ND		9.9	2.7	ug/L		10/09/18 10:03	10/11/18 18:25	1
4,6-Dinitro-ortho-cresol	ND		9.9	2.0	ug/L		10/09/18 10:03	10/11/18 18:25	1
2,4-Dinitrophenol	ND		30	3.4	ug/L		10/09/18 10:03	10/11/18 18:25	1
2,4-Dinitrotoluene	ND		9.9	1.9	ug/L		10/09/18 10:03	10/11/18 18:25	1
2,6-Dinitrotoluene	ND		9.9	1.9	ug/L		10/09/18 10:03	10/11/18 18:25	1
Di-n-octyl phthalate	ND		9.9	0.43	ug/L		10/09/18 10:03	10/11/18 18:25	1
1,4-Dioxane	ND		9.9	0.99	ug/L		10/09/18 10:03	10/11/18 18:25	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.9	0.99	ug/L		10/09/18 10:03	10/11/18 18:25	1
Hexachlorobenzene	ND		9.9	0.25	ug/L		10/09/18 10:03	10/11/18 18:25	1
Hexachlorocyclopentadiene	ND	* UJ	20	2.6	ug/L		10/09/18 10:03	10/11/18 18:25	1
Hexachloroethane	ND		9.9	4.1	ug/L		10/09/18 10:03	10/11/18 18:25	1
Indene	ND		9.9	0.99	ug/L		10/09/18 10:03	10/11/18 18:25	1
Isophorone	ND		9.9	0.56	ug/L		10/09/18 10:03	10/11/18 18:25	1
2-Methylphenol	ND		9.9	1.8	ug/L		10/09/18 10:03	10/11/18 18:25	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/09/18 10:03	10/11/18 18:25	1
2-Nitroaniline	ND		9.9	2.2	ug/L		10/09/18 10:03	10/11/18 18:25	1
3-Nitroaniline	ND		9.9	1.8	ug/L		10/09/18 10:03	10/11/18 18:25	1
4-Nitroaniline	ND		9.9	2.4	ug/L		10/09/18 10:03	10/11/18 18:25	1
Nitrobenzene	ND		9.9	0.54	ug/L		10/09/18 10:03	10/11/18 18:25	1
2-Nitrophenol	ND		9.9	0.64	ug/L		10/09/18 10:03	10/11/18 18:25	1
4-Nitrophenol	ND		9.9	2.1	ug/L		10/09/18 10:03	10/11/18 18:25	1
N-Nitrosodimethylamine	ND	UJ	9.9	3.5	ug/L		10/09/18 10:03	10/11/18 18:25	1
N-Nitrosodi-n-propylamine	ND		9.9	3.3	ug/L		10/09/18 10:03	10/11/18 18:25	1
N-Nitrosodiphenylamine	ND		9.9	0.46	ug/L		10/09/18 10:03	10/11/18 18:25	1

Client Sample ID: MW6D-ROX-100418

Lab Sample ID: 400-160182-7

Date Collected: 10/04/18 11:05
Date Received: 10/05/18 08:46

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		20	1.8	ug/L		10/09/18 10:03	10/11/18 18:25	1
Phenol	ND		9.9	2.6	ug/L		10/09/18 10:03	10/11/18 18:25	1
Pyridine	ND		9.9	3.2	ug/L		10/09/18 10:03	10/11/18 18:25	1
Quinoline	ND	U5	9.9	5.9	ug/L		10/09/18 10:03	10/11/18 18:25	1
2,4,5-Trichlorophenol	ND		9.9	3.7	ug/L		10/09/18 10:03	10/11/18 18:25	1
2,4,6-Trichlorophenol	ND		9.9	3.5	ug/L		10/09/18 10:03	10/11/18 18:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*62*		*34 - 120*	*10/09/18 10:03*	*10/11/18 18:25*	*1*
2-Fluorophenol	*20*		*10 - 120*	*10/09/18 10:03*	*10/11/18 18:25*	*1*
Nitrobenzene-d5	*46*		*27 - 120*	*10/09/18 10:03*	*10/11/18 18:25*	*1*
Phenol-d5	*33*		*10 - 120*	*10/09/18 10:03*	*10/11/18 18:25*	*1*
Terphenyl-d14	*65*		*53 - 125*	*10/09/18 10:03*	*10/11/18 18:25*	*1*
2,4,6-Tribromophenol	*58*		*15 - 135*	*10/09/18 10:03*	*10/11/18 18:25*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzenethiol	ND	* U5	9.9	1.7	ug/L		10/11/18 14:08	10/16/18 01:07	1
Bis(2-ethylhexyl) phthalate	ND		9.9	2.2	ug/L		10/11/18 14:08	10/16/18 01:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*54*		*34 - 120*	*10/11/18 14:08*	*10/16/18 01:07*	*1*
2-Fluorophenol	*40*		*10 - 120*	*10/11/18 14:08*	*10/16/18 01:07*	*1*
Nitrobenzene-d5	*59*		*27 - 120*	*10/11/18 14:08*	*10/16/18 01:07*	*1*
Phenol-d5	*52*		*10 - 120*	*10/11/18 14:08*	*10/16/18 01:07*	*1*
Terphenyl-d14	*43*	X	*53 - 125*	*10/11/18 14:08*	*10/16/18 01:07*	*1*
2,4,6-Tribromophenol	*51*		*15 - 135*	*10/11/18 14:08*	*10/16/18 01:07*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0055	ug/L		10/18/18 14:46	10/19/18 20:07	1
1,2-Dibromoethane	ND		0.020	0.0050	ug/L		10/18/18 14:46	10/19/18 20:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*104*		*51 - 149*	*10/18/18 14:46*	*10/19/18 20:07*	*1*

Definitions/Glossary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160182-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
X	Surrogate is outside control limits

GC Semi VOA

Qualifier	Qualifier Description
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160182-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(78-118)	(81-121)	(80-120)
400-160182-2	TB-ROX-100418-8260	113	98	100
400-160182-3	MW6C-ROX-100418-EB	111	102	101
400-160182-4	MW6C-ROX-100418	111	103	102
400-160182-5	MW6B-ROX-100418	114	102	99
400-160182-6	MW6A-ROX-100418	116	103	101
400-160182-6 MS	MW6A-ROX-100418	109	99	100
400-160182-6 MSD	MW6A-ROX-100418	108	98	101
400-160182-7	MW6D-ROX-100418	111	103	102
LCS 400-414804/1003	Lab Control Sample	109	100	100
MB 400-414804/5	Method Blank	113	98	100

Surrogate Legend

BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPHL	TBP
Lab Sample ID	Client Sample ID	(34-120)	(10-120)	(27-120)	(10-120)	(53-125)	(15-135)
400-160182-3	MW6C-ROX-100418-EB	55	12	41	32	59	56
400-160182-3 - RA	MW6C-ROX-100418-EB	43	24	45	41	45 X	32
400-160182-4	MW6C-ROX-100418	65	17	48	34	65	62
400-160182-4 - RA	MW6C-ROX-100418	44	26	45	41	46 X	48
400-160182-5	MW6B-ROX-100418	55	13	40	27	59	54
400-160182-5 - RA	MW6B-ROX-100418	47	25	51	41	48 X	50
400-160182-6	MW6A-ROX-100418	61	9 X	40	28	58	63
400-160182-6 - RA	MW6A-ROX-100418	55	35	58	44	46 X	52
400-160182-7	MW6D-ROX-100418	62	20	46	33	65	58
400-160182-7 - RA	MW6D-ROX-100418	54	40	59	52	43 X	51
LCS 400-414659/2-A	Lab Control Sample	59	27	43	36	61	63
LCS 400-415021/25-A	Lab Control Sample	53	24	59	54	56	23
LCS 400-415021/2-A	Lab Control Sample	50	24	58	45	57	64
LCSD 400-414659/3-A	Lab Control Sample Dup	59	16	43	36	63	65
LCSD 400-415021/26-A	Lab Control Sample Dup	51	39	55	54	52 X	37
LCSD 400-415021/3-A	Lab Control Sample Dup	50	32	59	47	54	63
MB 400-414659/1-A	Method Blank	56	29	43	33	64	54
MB 400-415021/1-A	Method Blank	54	37	56	52	62	65

Surrogate Legend

FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPHL = Terphenyl-d14
TBP = 2,4,6-Tribromophenol

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160182-1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		TPHL	FBP	NBZ
Lab Sample ID	Client Sample ID	(33-138)	(15-122)	(19-130)
400-160182-3	MW6C-ROX-100418-EB	63	50	30
400-160182-4	MW6C-ROX-100418	71	62	38
400-160182-5	MW6B-ROX-100418	54	42	28
400-160182-6	MW6A-ROX-100418	51	44	
400-160182-6 - DL	MW6A-ROX-100418			24
400-160182-7	MW6D-ROX-100418	71	57	34
LCS 400-414659/2-A	Lab Control Sample	59	49	24
LCSD 400-414659/3-A	Lab Control Sample Dup	64	51	24
MB 400-414659/1-A	Method Blank	66	52	34

Surrogate Legend

TPHL = Terphenyl-d14
FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5

Method: 8011 - EDB and DBCP in Water by Microextraction

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		BFB2
Lab Sample ID	Client Sample ID	(51-149)
400-160182-1	TB-ROX-100418-8011	101 p
400-160182-3	MW6C-ROX-100418-EB	100 p
400-160182-4	MW6C-ROX-100418	99 p
400-160182-5	MW6B-ROX-100418	93 p
400-160182-6	MW6A-ROX-100418	106 p
400-160182-7	MW6D-ROX-100418	104
LCS 400-415673/2-A	Lab Control Sample	93
LCS 400-415996/2-A	Lab Control Sample	110
LCSD 400-415673/3-A	Lab Control Sample Dup	103
LCSD 400-415996/3-A	Lab Control Sample Dup	115
MB 400-415673/1-A	Method Blank	100
MB 400-415996/1-A	Method Blank	96

Surrogate Legend

BFB = 4-Bromofluorobenzene

Method Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160182-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL PEN
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	TAL PEN
8011	EDB and DBCP in Water by Microextraction	EPA	TAL PEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL PEN
5030B	Purge and Trap	SW846	TAL PEN
8011	Microextraction	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160182-1

Client Sample ID: TB-ROX-100418-8011

Lab Sample ID: 400-160182-1
Matrix: Water

Date Collected: 10/04/18 00:01
Date Received: 10/05/18 08:46

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			34.4 mL	35 mL	415673	10/16/18 15:12	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/18/18 22:08	DS	TAL PEN

Client Sample ID: TB-ROX-100418-8260

Lab Sample ID: 400-160182-2
Matrix: Water

Date Collected: 10/04/18 00:01
Date Received: 10/05/18 08:46

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	414804	10/10/18 12:01	RS	TAL PEN

Client Sample ID: MW6C-ROX-100418-EB

Lab Sample ID: 400-160182-3
Matrix: Water

Date Collected: 10/04/18 08:30
Date Received: 10/05/18 08:46

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	414804	10/10/18 15:18	RS	TAL PEN
Total/NA	Prep	3520C	RA		1050 mL	1.0 mL	415021	10/11/18 14:08	JJA	TAL PEN
Total/NA	Analysis	8270D	RA	1			415470	10/15/18 23:43	VC1	TAL PEN
Total/NA	Prep	3520C			1025 mL	1.0 mL	414659	10/09/18 10:03	JJA	TAL PEN
Total/NA	Analysis	8270D		1			414948	10/11/18 16:45	VC1	TAL PEN
Total/NA	Prep	3520C			1025 mL	1.0 mL	414659	10/09/18 10:03	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			414888	10/10/18 21:11	RM	TAL PEN
Total/NA	Prep	8011			35.3 mL	35 mL	415673	10/16/18 15:12	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/18/18 22:41	DS	TAL PEN

Client Sample ID: MW6C-ROX-100418

Lab Sample ID: 400-160182-4
Matrix: Water

Date Collected: 10/04/18 09:00
Date Received: 10/05/18 08:46

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	414804	10/10/18 15:39	RS	TAL PEN
Total/NA	Prep	3520C	RA		1022.6 mL	1.0 mL	415021	10/11/18 14:08	JJA	TAL PEN
Total/NA	Analysis	8270D	RA	1			415470	10/16/18 00:04	VC1	TAL PEN
Total/NA	Prep	3520C			1016.8 mL	1.0 mL	414659	10/09/18 10:03	JJA	TAL PEN
Total/NA	Analysis	8270D		1			414948	10/11/18 17:10	VC1	TAL PEN
Total/NA	Prep	3520C			1016.8 mL	1.0 mL	414659	10/09/18 10:03	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			414888	10/10/18 21:27	RM	TAL PEN
Total/NA	Prep	8011			35 mL	35 mL	415673	10/16/18 15:12	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/18/18 23:13	DS	TAL PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160182-1

Client Sample ID: MW6B-ROX-100418

Lab Sample ID: 400-160182-5
Matrix: Water

Date Collected: 10/04/18 09:35
Date Received: 10/05/18 08:46

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	414804	10/10/18 16:01	RS	TAL PEN
Total/NA	Prep	3520C	RA		1013 mL	1.0 mL	415021	10/11/18 14:08	JJA	TAL PEN
Total/NA	Analysis	8270D	RA	1			415470	10/16/18 00:25	VC1	TAL PEN
Total/NA	Prep	3520C			997.4 mL	1.0 mL	414659	10/09/18 10:03	JJA	TAL PEN
Total/NA	Analysis	8270D		1			414948	10/11/18 17:35	VC1	TAL PEN
Total/NA	Prep	3520C			997.4 mL	1.0 mL	414659	10/09/18 10:03	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			414888	10/10/18 21:43	RM	TAL PEN
Total/NA	Prep	8011			36.2 mL	35 mL	415673	10/16/18 15:12	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 00:17	DS	TAL PEN

Client Sample ID: MW6A-ROX-100418

Lab Sample ID: 400-160182-6
Matrix: Water

Date Collected: 10/04/18 10:20
Date Received: 10/05/18 08:46

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	414804	10/10/18 08:44	RS	TAL PEN
Total/NA	Prep	3520C	RA		1002.8 mL	1.0 mL	415021	10/11/18 14:08	JJA	TAL PEN
Total/NA	Analysis	8270D	RA	1			415470	10/16/18 00:46	VC1	TAL PEN
Total/NA	Prep	3520C			1012.4 mL	1.0 mL	414659	10/09/18 10:03	JJA	TAL PEN
Total/NA	Analysis	8270D		1			414948	10/11/18 18:00	VC1	TAL PEN
Total/NA	Prep	3520C			1012.4 mL	1.0 mL	414659	10/09/18 10:03	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			414888	10/10/18 21:59	RM	TAL PEN
Total/NA	Prep	3520C	DL		1012.4 mL	1.0 mL	414659	10/09/18 10:03	JJA	TAL PEN
Total/NA	Analysis	8270D LL	DL	3			414990	10/11/18 13:20	VC1	TAL PEN
Total/NA	Prep	8011			35.3 mL	35 mL	415673	10/16/18 15:12	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 00:51	DS	TAL PEN

Client Sample ID: MW6D-ROX-100418

Lab Sample ID: 400-160182-7
Matrix: Water

Date Collected: 10/04/18 11:05
Date Received: 10/05/18 08:46

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	414804	10/10/18 16:45	RS	TAL PEN
Total/NA	Prep	3520C	RA		1011.8 mL	1.0 mL	415021	10/11/18 14:08	JJA	TAL PEN
Total/NA	Analysis	8270D	RA	1			415470	10/16/18 01:07	VC1	TAL PEN
Total/NA	Prep	3520C			1012.8 mL	1.0 mL	414659	10/09/18 10:03	JJA	TAL PEN
Total/NA	Analysis	8270D		1			414948	10/11/18 18:25	VC1	TAL PEN
Total/NA	Prep	3520C			1012.8 mL	1.0 mL	414659	10/09/18 10:03	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			414888	10/10/18 22:15	RM	TAL PEN
Total/NA	Prep	8011			34.9 mL	35 mL	415996	10/18/18 14:46	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 20:07	DS	TAL PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160182-1

Client Sample ID: Method Blank
Lab Sample ID: MB 400-414659/1-A
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	414659	10/09/18 10:03	JJA	TAL PEN
Total/NA	Analysis	8270D		1			414948	10/11/18 15:29	VC1	TAL PEN
Total/NA	Prep	3520C			1000 mL	1.0 mL	414659	10/09/18 10:03	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			414888	10/10/18 20:24	RM	TAL PEN

Client Sample ID: Method Blank
Lab Sample ID: MB 400-414804/5
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	414804	10/10/18 08:22	RS	TAL PEN

Client Sample ID: Method Blank
Lab Sample ID: MB 400-415021/1-A
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	415021	10/11/18 14:08	JJA	TAL PEN
Total/NA	Analysis	8270D		1			415197	10/12/18 20:40	VC1	TAL PEN

Client Sample ID: Method Blank
Lab Sample ID: MB 400-415673/1-A
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	415673	10/16/18 15:12	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/18/18 18:20	DS	TAL PEN

Client Sample ID: Method Blank
Lab Sample ID: MB 400-415996/1-A
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	415996	10/18/18 14:46	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 07:07	DS	TAL PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-414659/2-A
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	414659	10/09/18 10:03	JJA	TAL PEN
Total/NA	Analysis	8270D		1			414948	10/11/18 15:54	VC1	TAL PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160182-1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	414659	10/09/18 10:03	JJA	TAL PEN
Total/NA	Analysis	8270D LL		5			414888	10/10/18 20:40	RM	TAL PEN

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 400-414804/1003**
Date Collected: N/A — Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	414804	10/10/18 07:29	RS	TAL PEN

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 400-415021/25-A**
Date Collected: N/A — Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	415021	10/11/18 14:08	JJA	TAL PEN
Total/NA	Analysis	8270D		1			415470	10/15/18 23:01	VC1	TAL PEN

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 400-415021/2-A**
Date Collected: N/A — Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	415021	10/11/18 14:08	JJA	TAL PEN
Total/NA	Analysis	8270D		1			415197	10/12/18 21:02	VC1	TAL PEN

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 400-415673/2-A**
Date Collected: N/A — Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	415673	10/16/18 15:12	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/18/18 18:53	DS	TAL PEN

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 400-415996/2-A**
Date Collected: N/A — Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	415996	10/18/18 14:46	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 07:38	DS	TAL PEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-414659/3-A
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	414659	10/09/18 10:03	JJA	TAL PEN
Total/NA	Analysis	8270D		1			414948	10/11/18 16:20	VC1	TAL PEN
Total/NA	Prep	3520C			1000 mL	1.0 mL	414659	10/09/18 10:03	JJA	TAL PEN
Total/NA	Analysis	8270D LL		5			414888	10/10/18 20:56	RM	TAL PEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-415021/26-A
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	415021	10/11/18 14:12	JJA	TAL PEN
Total/NA	Analysis	8270D		1			415470	10/15/18 23:22	VC1	TAL PEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-415021/3-A
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	415021	10/11/18 14:08	JJA	TAL PEN
Total/NA	Analysis	8270D		1			415197	10/12/18 21:23	VC1	TAL PEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-415673/3-A
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	415673	10/16/18 15:12	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/18/18 19:25	DS	TAL PEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-415996/3-A
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	415996	10/18/18 14:46	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 08:10	DS	TAL PEN

Client Sample ID: MW6A-ROX-100418
Lab Sample ID: 400-160182-6 MS
Date Collected: 10/04/18 10:20
Matrix: Water
Date Received: 10/05/18 08:46

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	414804	10/10/18 09:06	RS	TAL PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160182-1

Client Sample ID: MW6A-ROX-100418
Date Collected: 10/04/18 10:20
Date Received: 10/05/18 08:46

Lab Sample ID: 400-160182-6 MSD
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	414804	10/10/18 09:28	RS	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

QC Association Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160182-1

GC/MS VOA

Analysis Batch: 414804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160182-2	TB-ROX-100418-8260	Total/NA	Water	8260B	
400-160182-3	MW6C-ROX-100418-EB	Total/NA	Water	8260B	
400-160182-4	MW6C-ROX-100418	Total/NA	Water	8260B	
400-160182-5	MW6B-ROX-100418	Total/NA	Water	8260B	
400-160182-6	MW6A-ROX-100418	Total/NA	Water	8260B	
400-160182-7	MW6D-ROX-100418	Total/NA	Water	8260B	
MB 400-414804/5	Method Blank	Total/NA	Water	8260B	
LCS 400-414804/1003	Lab Control Sample	Total/NA	Water	8260B	
400-160182-6 MS	MW6A-ROX-100418	Total/NA	Water	8260B	
400-160182-6 MSD	MW6A-ROX-100418	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 414659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160182-3	MW6C-ROX-100418-EB	Total/NA	Water	3520C	
400-160182-4	MW6C-ROX-100418	Total/NA	Water	3520C	
400-160182-5	MW6B-ROX-100418	Total/NA	Water	3520C	
400-160182-6	MW6A-ROX-100418	Total/NA	Water	3520C	
400-160182-6 - DL	MW6A-ROX-100418	Total/NA	Water	3520C	
400-160182-7	MW6D-ROX-100418	Total/NA	Water	3520C	
MB 400-414659/1-A	Method Blank	Total/NA	Water	3520C	
LCS 400-414659/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-414659/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 414888

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160182-3	MW6C-ROX-100418-EB	Total/NA	Water	8270D LL	414659
400-160182-4	MW6C-ROX-100418	Total/NA	Water	8270D LL	414659
400-160182-5	MW6B-ROX-100418	Total/NA	Water	8270D LL	414659
400-160182-6	MW6A-ROX-100418	Total/NA	Water	8270D LL	414659
400-160182-7	MW6D-ROX-100418	Total/NA	Water	8270D LL	414659
MB 400-414659/1-A	Method Blank	Total/NA	Water	8270D LL	414659
LCS 400-414659/2-A	Lab Control Sample	Total/NA	Water	8270D LL	414659
LCSD 400-414659/3-A	Lab Control Sample Dup	Total/NA	Water	8270D LL	414659

Analysis Batch: 414948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160182-3	MW6C-ROX-100418-EB	Total/NA	Water	8270D	414659
400-160182-4	MW6C-ROX-100418	Total/NA	Water	8270D	414659
400-160182-5	MW6B-ROX-100418	Total/NA	Water	8270D	414659
400-160182-6	MW6A-ROX-100418	Total/NA	Water	8270D	414659
400-160182-7	MW6D-ROX-100418	Total/NA	Water	8270D	414659
MB 400-414659/1-A	Method Blank	Total/NA	Water	8270D	414659
LCS 400-414659/2-A	Lab Control Sample	Total/NA	Water	8270D	414659
LCSD 400-414659/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	414659

Analysis Batch: 414990

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160182-6 - DL	MW6A-ROX-100418	Total/NA	Water	8270D LL	414659

GC/MS Semi VOA (Continued)

Prep Batch: 415021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160182-3 - RA	MW6C-ROX-100418-EB	Total/NA	Water	3520C	
400-160182-4 - RA	MW6C-ROX-100418	Total/NA	Water	3520C	
400-160182-5 - RA	MW6B-ROX-100418	Total/NA	Water	3520C	
400-160182-6 - RA	MW6A-ROX-100418	Total/NA	Water	3520C	
400-160182-7 - RA	MW6D-ROX-100418	Total/NA	Water	3520C	
MB 400-415021/1-A	Method Blank	Total/NA	Water	3520C	
LCS 400-415021/25-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 400-415021/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-415021/26-A	Lab Control Sample Dup	Total/NA	Water	3520C	
LCSD 400-415021/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 415197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-415021/1-A	Method Blank	Total/NA	Water	8270D	415021
LCS 400-415021/2-A	Lab Control Sample	Total/NA	Water	8270D	415021
LCSD 400-415021/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	415021

Analysis Batch: 415470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160182-3 - RA	MW6C-ROX-100418-EB	Total/NA	Water	8270D	415021
400-160182-4 - RA	MW6C-ROX-100418	Total/NA	Water	8270D	415021
400-160182-5 - RA	MW6B-ROX-100418	Total/NA	Water	8270D	415021
400-160182-6 - RA	MW6A-ROX-100418	Total/NA	Water	8270D	415021
400-160182-7 - RA	MW6D-ROX-100418	Total/NA	Water	8270D	415021
LCS 400-415021/25-A	Lab Control Sample	Total/NA	Water	8270D	415021
LCSD 400-415021/26-A	Lab Control Sample Dup	Total/NA	Water	8270D	415021

GC Semi VOA

Prep Batch: 415673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160182-1	TB-ROX-100418-8011	Total/NA	Water	8011	
400-160182-3	MW6C-ROX-100418-EB	Total/NA	Water	8011	
400-160182-4	MW6C-ROX-100418	Total/NA	Water	8011	
400-160182-5	MW6B-ROX-100418	Total/NA	Water	8011	
400-160182-6	MW6A-ROX-100418	Total/NA	Water	8011	
MB 400-415673/1-A	Method Blank	Total/NA	Water	8011	
LCS 400-415673/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 400-415673/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Prep Batch: 415996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160182-7	MW6D-ROX-100418	Total/NA	Water	8011	
MB 400-415996/1-A	Method Blank	Total/NA	Water	8011	
LCS 400-415996/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 400-415996/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 416023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160182-1	TB-ROX-100418-8011	Total/NA	Water	8011	415673

GC Semi VOA (Continued)

Analysis Batch: 416023 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160182-3	MW6C-ROX-100418-EB	Total/NA	Water	8011	415673
400-160182-4	MW6C-ROX-100418	Total/NA	Water	8011	415673
400-160182-5	MW6B-ROX-100418	Total/NA	Water	8011	415673
400-160182-6	MW6A-ROX-100418	Total/NA	Water	8011	415673
400-160182-7	MW6D-ROX-100418	Total/NA	Water	8011	415996
MB 400-415673/1-A	Method Blank	Total/NA	Water	8011	415673
MB 400-415996/1-A	Method Blank	Total/NA	Water	8011	415996
LCS 400-415673/2-A	Lab Control Sample	Total/NA	Water	8011	415673
LCS 400-415996/2-A	Lab Control Sample	Total/NA	Water	8011	415996
LCSD 400-415673/3-A	Lab Control Sample Dup	Total/NA	Water	8011	415673
LCSD 400-415996/3-A	Lab Control Sample Dup	Total/NA	Water	8011	415996

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-414804/5
Matrix: Water
Analysis Batch: 414804

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/10/18 08:22	1
Acrolein	ND		20	10	ug/L			10/10/18 08:22	1
Acrylonitrile	ND		10	2.8	ug/L			10/10/18 08:22	1
Benzene	ND		1.0	0.38	ug/L			10/10/18 08:22	1
Bromobenzene	ND		1.0	0.54	ug/L			10/10/18 08:22	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/10/18 08:22	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/10/18 08:22	1
Bromoform	ND		5.0	0.71	ug/L			10/10/18 08:22	1
Bromomethane	ND		1.0	0.98	ug/L			10/10/18 08:22	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/10/18 08:22	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/10/18 08:22	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/10/18 08:22	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/10/18 08:22	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/10/18 08:22	1
Chloroethane	ND		1.0	0.76	ug/L			10/10/18 08:22	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/10/18 08:22	1
Chloroform	ND		1.0	0.60	ug/L			10/10/18 08:22	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/10/18 08:22	1
Chloromethane	ND		1.0	0.83	ug/L			10/10/18 08:22	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/10/18 08:22	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/10/18 08:22	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/10/18 08:22	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/10/18 08:22	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/10/18 08:22	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/10/18 08:22	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/10/18 08:22	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/10/18 08:22	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/10/18 08:22	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/10/18 08:22	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/10/18 08:22	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/10/18 08:22	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/10/18 08:22	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/10/18 08:22	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/10/18 08:22	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/10/18 08:22	1
2-Hexanone	ND		25	3.1	ug/L			10/10/18 08:22	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/10/18 08:22	1
Methylene bromide	ND		5.0	0.59	ug/L			10/10/18 08:22	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/10/18 08:22	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/10/18 08:22	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/10/18 08:22	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/10/18 08:22	1
Naphthalene	ND		1.0	1.0	ug/L			10/10/18 08:22	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/10/18 08:22	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/10/18 08:22	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/10/18 08:22	1
o-Xylene	ND		5.0	0.60	ug/L			10/10/18 08:22	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/10/18 08:22	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-414804/5
Matrix: Water
Analysis Batch: 414804

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/10/18 08:22	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/10/18 08:22	1
Styrene	ND		1.0	1.0	ug/L			10/10/18 08:22	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/10/18 08:22	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/10/18 08:22	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/10/18 08:22	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/10/18 08:22	1
Toluene	ND		1.0	0.70	ug/L			10/10/18 08:22	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/10/18 08:22	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/10/18 08:22	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/10/18 08:22	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/10/18 08:22	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/10/18 08:22	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/10/18 08:22	1
Trichloroethene	ND		1.0	0.50	ug/L			10/10/18 08:22	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/10/18 08:22	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/10/18 08:22	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/10/18 08:22	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/10/18 08:22	1
Vinyl acetate	ND		25	2.0	ug/L			10/10/18 08:22	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/10/18 08:22	1
Xylenes, Total	ND		10	1.6	ug/L			10/10/18 08:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*113*		*78 - 118*		*10/10/18 08:22*	*1*
Dibromofluoromethane	*98*		*81 - 121*		*10/10/18 08:22*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*10/10/18 08:22*	*1*

Lab Sample ID: LCS 400-414804/1003
Matrix: Water
Analysis Batch: 414804

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	200	195		ug/L		98	43 - 160
Acrolein	500	500		ug/L		100	38 - 160
Acrylonitrile	500	457		ug/L		91	64 - 142
Benzene	50.0	47.2		ug/L		94	70 - 130
Bromobenzene	50.0	45.0		ug/L		90	70 - 132
Bromochloromethane	50.0	44.5		ug/L		89	70 - 130
Bromodichloromethane	50.0	48.3		ug/L		97	67 - 133
Bromoform	50.0	47.0		ug/L		94	57 - 140
Bromomethane	50.0	30.7		ug/L		61	10 - 160
2-Butanone (MEK)	200	179		ug/L		90	61 - 145
Carbon disulfide	50.0	50.2		ug/L		100	61 - 137
Carbon tetrachloride	50.0	49.3		ug/L		99	61 - 137
Chlorobenzene	50.0	45.1		ug/L		90	70 - 130
Dibromochloromethane	50.0	47.7		ug/L		95	67 - 135
Chloroethane	50.0	52.1		ug/L		104	55 - 141

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-414804/1003
Matrix: Water
Analysis Batch: 414804

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloroethyl vinyl ether	50.0	51.5		ug/L		103	10 - 160
Chloroform	50.0	46.3		ug/L		93	69 - 130
1-Chlorohexane	50.0	52.1		ug/L		104	69 - 130
Chloromethane	50.0	51.5		ug/L		103	58 - 137
cis-1,2-Dichloroethene	50.0	48.3		ug/L		97	68 - 130
cis-1,3-Dichloropropene	50.0	50.5		ug/L		101	69 - 132
1,2-Dichlorobenzene	50.0	45.3		ug/L		91	67 - 130
1,3-Dichlorobenzene	50.0	44.4		ug/L		89	70 - 130
1,4-Dichlorobenzene	50.0	43.8		ug/L		88	70 - 130
Dichlorodifluoromethane	50.0	49.7		ug/L		99	41 - 146
1,1-Dichloroethane	50.0	47.5		ug/L		95	70 - 130
1,2-Dichloroethane	50.0	47.1		ug/L		94	69 - 130
1,1-Dichloroethene	50.0	44.5		ug/L		89	63 - 134
1,2-Dichloropropane	50.0	47.0		ug/L		94	70 - 130
1,3-Dichloropropane	50.0	47.2		ug/L		94	70 - 130
2,2-Dichloropropane	50.0	50.0		ug/L		100	52 - 135
1,1-Dichloropropene	50.0	48.5		ug/L		97	70 - 130
Ethylbenzene	50.0	47.7		ug/L		95	70 - 130
Ethyl methacrylate	50.0	49.4		ug/L		99	68 - 130
Hexachlorobutadiene	50.0	45.0		ug/L		90	53 - 140
2-Hexanone	200	207		ug/L		104	65 - 137
Isopropylbenzene	50.0	47.2		ug/L		94	70 - 130
Methylene bromide	50.0	47.0		ug/L		94	70 - 130
Methylene Chloride	50.0	47.0		ug/L		94	66 - 135
4-Methyl-2-pentanone (MIBK)	200	200		ug/L		100	69 - 138
Methyl tert-butyl ether	50.0	47.3		ug/L		95	66 - 130
m-Xylene & p-Xylene	50.0	48.2		ug/L		96	70 - 130
Naphthalene	50.0	40.4		ug/L		81	47 - 149
n-Butylbenzene	50.0	52.9		ug/L		106	67 - 130
N-Propylbenzene	50.0	49.8		ug/L		100	70 - 130
o-Chlorotoluene	50.0	51.5		ug/L		103	70 - 130
o-Xylene	50.0	47.8		ug/L		96	70 - 130
p-Chlorotoluene	50.0	51.1		ug/L		102	70 - 130
p-Isopropyltoluene	50.0	49.4		ug/L		99	65 - 130
sec-Butylbenzene	50.0	49.9		ug/L		100	66 - 130
Styrene	50.0	45.9		ug/L		92	70 - 130
tert-Butylbenzene	50.0	52.6		ug/L		105	64 - 139
1,1,1,2-Tetrachloroethane	50.0	48.0		ug/L		96	67 - 131
1,1,2,2-Tetrachloroethane	50.0	49.1		ug/L		98	70 - 131
Tetrachloroethene	50.0	43.6		ug/L		87	65 - 130
Toluene	50.0	46.6		ug/L		93	70 - 130
trans-1,2-Dichloroethene	50.0	45.2		ug/L		90	70 - 130
trans-1,3-Dichloropropene	50.0	53.5		ug/L		107	63 - 130
1,2,3-Trichlorobenzene	50.0	45.8		ug/L		92	60 - 138
1,2,4-Trichlorobenzene	50.0	44.8		ug/L		90	60 - 140
1,1,1-Trichloroethane	50.0	49.2		ug/L		98	68 - 130
1,1,2-Trichloroethane	50.0	46.2		ug/L		92	70 - 130
Trichloroethene	50.0	45.8		ug/L		92	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-414804/1003
Matrix: Water
Analysis Batch: 414804

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	50.0	51.5		ug/L		103	65 - 138
1,2,3-Trichloropropane	50.0	46.3		ug/L		93	70 - 130
1,2,4-Trimethylbenzene	50.0	50.5		ug/L		101	70 - 130
1,3,5-Trimethylbenzene	50.0	51.4		ug/L		103	69 - 130
Vinyl acetate	100	94.2		ug/L		94	26 - 160
Vinyl chloride	50.0	46.2		ug/L		92	59 - 136
Xylenes, Total	100	96.0		ug/L		96	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*109*		*78 - 118*
Dibromofluoromethane	*100*		*81 - 121*
Toluene-d8 (Surr)	*100*		*80 - 120*

Lab Sample ID: 400-160182-6 MS
Matrix: Water
Analysis Batch: 414804

Client Sample ID: MW6A-ROX-100418
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	ND		200	231		ug/L		116	43 - 150
Acrolein	ND		500	520		ug/L		104	38 - 150
Acrylonitrile	ND		500	521		ug/L		104	62 - 149
Benzene	ND		50.0	49.2		ug/L		98	56 - 142
Bromobenzene	ND		50.0	45.8		ug/L		92	59 - 136
Bromochloromethane	ND		50.0	47.2		ug/L		94	64 - 140
Bromodichloromethane	ND		50.0	51.1		ug/L		102	59 - 143
Bromoform	ND		50.0	49.8		ug/L		100	50 - 140
Bromomethane	ND		50.0	36.5		ug/L		73	10 - 150
2-Butanone (MEK)	ND		200	205		ug/L		103	55 - 150
Carbon disulfide	ND		50.0	51.5		ug/L		103	48 - 150
Carbon tetrachloride	ND		50.0	51.2		ug/L		102	55 - 145
Chlorobenzene	ND		50.0	45.9		ug/L		92	64 - 130
Dibromochloromethane	ND		50.0	49.1		ug/L		98	56 - 143
Chloroethane	ND		50.0	49.2		ug/L		98	50 - 150
2-Chloroethyl vinyl ether	ND	F1	50.0	2.76	J F1	ug/L		6	10 - 150
Chloroform	ND		50.0	48.5		ug/L		97	60 - 141
1-Chlorohexane	ND		50.0	51.6		ug/L		103	56 - 136
Chloromethane	ND		50.0	49.6		ug/L		99	49 - 148
cis-1,2-Dichloroethene	ND		50.0	51.2		ug/L		102	59 - 143
cis-1,3-Dichloropropene	ND		50.0	52.7		ug/L		105	57 - 140
1,2-Dichlorobenzene	ND		50.0	47.1		ug/L		94	52 - 137
1,3-Dichlorobenzene	ND		50.0	44.3		ug/L		89	54 - 135
1,4-Dichlorobenzene	ND		50.0	43.4		ug/L		87	53 - 135
Dichlorodifluoromethane	ND		50.0	47.7		ug/L		95	16 - 150
1,1-Dichloroethane	ND		50.0	49.9		ug/L		100	61 - 144
1,2-Dichloroethane	ND		50.0	50.3		ug/L		101	60 - 141
1,1-Dichloroethene	ND		50.0	47.5		ug/L		95	54 - 147
1,2-Dichloropropane	ND		50.0	50.1		ug/L		100	66 - 137
1,3-Dichloropropane	ND		50.0	49.3		ug/L		99	66 - 133

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-160182-6 MS
Matrix: Water
Analysis Batch: 414804

Client Sample ID: MW6A-ROX-100418
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,2-Dichloropropane	ND		50.0	52.2		ug/L		104	42 - 144
1,1-Dichloropropene	ND		50.0	49.4		ug/L		99	65 - 136
Ethylbenzene	ND		50.0	48.0		ug/L		96	58 - 131
Ethyl methacrylate	ND		50.0	53.3		ug/L		107	64 - 130
Hexachlorobutadiene	ND		50.0	42.6		ug/L		85	31 - 149
2-Hexanone	ND		200	230		ug/L		115	65 - 140
Isopropylbenzene	ND		50.0	46.6		ug/L		93	56 - 133
Methylene bromide	ND		50.0	49.9		ug/L		100	63 - 138
Methylene Chloride	ND		50.0	49.6		ug/L		99	60 - 146
4-Methyl-2-pentanone (MIBK)	ND		200	226		ug/L		113	63 - 146
Methyl tert-butyl ether	1.5		50.0	52.2		ug/L		101	59 - 137
m-Xylene & p-Xylene	ND		50.0	48.5		ug/L		97	57 - 130
Naphthalene	ND		50.0	41.5		ug/L		83	25 - 150
n-Butylbenzene	ND		50.0	51.4		ug/L		103	41 - 142
N-Propylbenzene	ND		50.0	48.4		ug/L		97	51 - 138
o-Chlorotoluene	ND		50.0	51.5		ug/L		103	53 - 134
o-Xylene	ND		50.0	48.5		ug/L		97	61 - 130
p-Chlorotoluene	ND		50.0	51.1		ug/L		102	54 - 133
p-Isopropyltoluene	ND		50.0	48.1		ug/L		96	48 - 139
sec-Butylbenzene	ND		50.0	48.7		ug/L		97	50 - 138
Styrene	ND		50.0	46.7		ug/L		93	58 - 131
tert-Butylbenzene	ND		50.0	52.1		ug/L		104	54 - 146
1,1,1,2-Tetrachloroethane	ND		50.0	49.0		ug/L		98	59 - 137
1,1,2,2-Tetrachloroethane	ND		50.0	52.7		ug/L		105	66 - 135
Tetrachloroethene	ND		50.0	43.7		ug/L		87	52 - 133
Toluene	ND		50.0	47.5		ug/L		95	65 - 130
trans-1,2-Dichloroethene	ND		50.0	47.8		ug/L		96	61 - 143
trans-1,3-Dichloropropene	ND		50.0	54.7		ug/L		109	53 - 133
1,2,3-Trichlorobenzene	ND		50.0	45.1		ug/L		90	43 - 145
1,2,4-Trichlorobenzene	ND		50.0	43.9		ug/L		88	39 - 148
1,1,1-Trichloroethane	ND		50.0	51.0		ug/L		102	57 - 142
1,1,2-Trichloroethane	ND		50.0	48.9		ug/L		98	66 - 131
Trichloroethene	ND		50.0	46.1		ug/L		92	64 - 136
Trichlorofluoromethane	ND		50.0	49.5		ug/L		99	54 - 150
1,2,3-Trichloropropane	ND		50.0	50.6		ug/L		101	65 - 133
1,2,4-Trimethylbenzene	ND		50.0	50.4		ug/L		101	50 - 139
1,3,5-Trimethylbenzene	ND		50.0	50.6		ug/L		101	52 - 135
Vinyl acetate	ND		100	91.4		ug/L		91	26 - 150
Vinyl chloride	ND		50.0	43.6		ug/L		87	46 - 150
Xylenes, Total	ND		100	97.0		ug/L		97	59 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*109*		*78 - 118*
Dibromofluoromethane	*99*		*81 - 121*
Toluene-d8 (Surr)	*100*		*80 - 120*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-160182-6 MSD
Matrix: Water
Analysis Batch: 414804

Client Sample ID: MW6A-ROX-100418
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	ND		200	224		ug/L		112	43 - 150	3	30
Acrolein	ND		500	547		ug/L		109	38 - 150	5	31
Acrylonitrile	ND		500	503		ug/L		101	62 - 149	4	30
Benzene	ND		50.0	47.4		ug/L		95	56 - 142	4	30
Bromobenzene	ND		50.0	43.4		ug/L		87	59 - 136	5	30
Bromochloromethane	ND		50.0	44.5		ug/L		89	64 - 140	6	30
Bromodichloromethane	ND		50.0	47.4		ug/L		95	59 - 143	8	30
Bromoform	ND		50.0	46.0		ug/L		92	50 - 140	8	30
Bromomethane	ND		50.0	40.8		ug/L		82	10 - 150	11	50
2-Butanone (MEK)	ND		200	200		ug/L		100	55 - 150	3	30
Carbon disulfide	ND		50.0	49.6		ug/L		99	48 - 150	4	30
Carbon tetrachloride	ND		50.0	48.5		ug/L		97	55 - 145	5	30
Chlorobenzene	ND		50.0	43.5		ug/L		87	64 - 130	5	30
Dibromochloromethane	ND		50.0	46.0		ug/L		92	56 - 143	6	30
Chloroethane	ND		50.0	49.4		ug/L		99	50 - 150	0	30
2-Chloroethyl vinyl ether	ND	F1	50.0	ND	F1	ug/L		0	10 - 150	NC	50
Chloroform	ND		50.0	46.1		ug/L		92	60 - 141	5	30
1-Chlorohexane	ND		50.0	47.8		ug/L		96	56 - 136	8	30
Chloromethane	ND		50.0	53.0		ug/L		106	49 - 148	7	31
cis-1,2-Dichloroethene	ND		50.0	48.4		ug/L		97	59 - 143	6	30
cis-1,3-Dichloropropene	ND		50.0	48.9		ug/L		98	57 - 140	8	30
1,2-Dichlorobenzene	ND		50.0	41.6		ug/L		83	52 - 137	12	30
1,3-Dichlorobenzene	ND		50.0	40.3		ug/L		81	54 - 135	9	30
1,4-Dichlorobenzene	ND		50.0	39.9		ug/L		80	53 - 135	8	30
Dichlorodifluoromethane	ND		50.0	51.3		ug/L		103	16 - 150	7	31
1,1-Dichloroethane	ND		50.0	48.1		ug/L		96	61 - 144	4	30
1,2-Dichloroethane	ND		50.0	46.9		ug/L		94	60 - 141	7	30
1,1-Dichloroethene	ND		50.0	46.5		ug/L		93	54 - 147	2	30
1,2-Dichloropropane	ND		50.0	46.6		ug/L		93	66 - 137	7	30
1,3-Dichloropropane	ND		50.0	47.1		ug/L		94	66 - 133	4	30
2,2-Dichloropropane	ND		50.0	50.6		ug/L		101	42 - 144	3	31
1,1-Dichloropropene	ND		50.0	47.9		ug/L		96	65 - 136	3	30
Ethylbenzene	ND		50.0	44.3		ug/L		89	58 - 131	8	30
Ethyl methacrylate	ND		50.0	49.5		ug/L		99	64 - 130	7	30
Hexachlorobutadiene	ND		50.0	34.0		ug/L		68	31 - 149	23	36
2-Hexanone	ND		200	223		ug/L		112	65 - 140	3	30
Isopropylbenzene	ND		50.0	46.1		ug/L		92	56 - 133	1	30
Methylene bromide	ND		50.0	46.3		ug/L		93	63 - 138	7	30
Methylene Chloride	ND		50.0	46.3		ug/L		93	60 - 146	7	32
4-Methyl-2-pentanone (MIBK)	ND		200	214		ug/L		107	63 - 146	5	30
Methyl tert-butyl ether	1.5		50.0	49.6		ug/L		96	59 - 137	5	30
m-Xylene & p-Xylene	ND		50.0	45.3		ug/L		91	57 - 130	7	30
Naphthalene	ND		50.0	37.0		ug/L		74	25 - 150	11	30
n-Butylbenzene	ND		50.0	43.2		ug/L		86	41 - 142	17	31
N-Propylbenzene	ND		50.0	44.7		ug/L		89	51 - 138	8	30
o-Chlorotoluene	ND		50.0	47.1		ug/L		94	53 - 134	9	30
o-Xylene	ND		50.0	45.6		ug/L		91	61 - 130	6	30
p-Chlorotoluene	ND		50.0	45.8		ug/L		92	54 - 133	11	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-160182-6 MSD
Matrix: Water
Analysis Batch: 414804

Client Sample ID: MW6A-ROX-100418
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
p-Isopropyltoluene	ND		50.0	42.3		ug/L		85	48 - 139	13	30
sec-Butylbenzene	ND		50.0	43.6		ug/L		87	50 - 138	11	30
Styrene	ND		50.0	44.5		ug/L		89	58 - 131	5	30
tert-Butylbenzene	ND		50.0	45.8		ug/L		92	54 - 146	13	30
1,1,1,2-Tetrachloroethane	ND		50.0	46.1		ug/L		92	59 - 137	6	30
1,1,2,2-Tetrachloroethane	ND		50.0	49.6		ug/L		99	66 - 135	6	30
Tetrachloroethene	ND		50.0	40.7		ug/L		81	52 - 133	7	30
Toluene	ND		50.0	44.7		ug/L		89	65 - 130	6	30
trans-1,2-Dichloroethene	ND		50.0	45.4		ug/L		91	61 - 143	5	30
trans-1,3-Dichloropropene	ND		50.0	50.7		ug/L		101	53 - 133	8	30
1,2,3-Trichlorobenzene	ND		50.0	38.5		ug/L		77	43 - 145	16	30
1,2,4-Trichlorobenzene	ND		50.0	35.9		ug/L		72	39 - 148	20	30
1,1,1-Trichloroethane	ND		50.0	49.4		ug/L		99	57 - 142	3	30
1,1,2-Trichloroethane	ND		50.0	45.8		ug/L		92	66 - 131	7	30
Trichloroethene	ND		50.0	45.2		ug/L		90	64 - 136	2	30
Trichlorofluoromethane	ND		50.0	52.2		ug/L		104	54 - 150	5	30
1,2,3-Trichloropropane	ND		50.0	48.7		ug/L		97	65 - 133	4	30
1,2,4-Trimethylbenzene	ND		50.0	44.9		ug/L		90	50 - 139	12	30
1,3,5-Trimethylbenzene	ND		50.0	46.1		ug/L		92	52 - 135	9	30
Vinyl acetate	ND		100	96.7		ug/L		97	26 - 150	6	33
Vinyl chloride	ND		50.0	47.5		ug/L		95	46 - 150	9	30
Xylenes, Total	ND		100	90.9		ug/L		91	59 - 130	6	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*108*		*78 - 118*
Dibromofluoromethane	*98*		*81 - 121*
Toluene-d8 (Surr)	*101*		*80 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-414659/1-A
Matrix: Water
Analysis Batch: 414948

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 414659

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.8	ug/L		10/09/18 10:03	10/11/18 15:29	1
Benzoic acid	ND		30	7.3	ug/L		10/09/18 10:03	10/11/18 15:29	1
Benzyl alcohol	ND		10	2.0	ug/L		10/09/18 10:03	10/11/18 15:29	1
Bis(2-chloroethoxy)methane	ND		10	0.69	ug/L		10/09/18 10:03	10/11/18 15:29	1
Bis(2-chloroethyl)ether	ND		10	0.74	ug/L		10/09/18 10:03	10/11/18 15:29	1
bis (2-chloroisopropyl) ether	ND		10	0.81	ug/L		10/09/18 10:03	10/11/18 15:29	1
Bis(2-ethylhexyl) phthalate	3.68	J	10	2.3	ug/L		10/09/18 10:03	10/11/18 15:29	1
4-Bromophenyl phenyl ether	ND		10	0.32	ug/L		10/09/18 10:03	10/11/18 15:29	1
Butyl benzyl phthalate	ND		10	0.69	ug/L		10/09/18 10:03	10/11/18 15:29	1
4-Chloroaniline	ND		10	3.4	ug/L		10/09/18 10:03	10/11/18 15:29	1
4-Chloro-3-methylphenol	ND		10	3.8	ug/L		10/09/18 10:03	10/11/18 15:29	1
2-Chloronaphthalene	ND		10	0.52	ug/L		10/09/18 10:03	10/11/18 15:29	1
2-Chlorophenol	ND		10	2.2	ug/L		10/09/18 10:03	10/11/18 15:29	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-414659/1-A
Matrix: Water
Analysis Batch: 414948

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 414659

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		10/09/18 10:03	10/11/18 15:29	1
Dibenz[a,h]acridine	ND		10	3.0	ug/L		10/09/18 10:03	10/11/18 15:29	1
Dibenzofuran	ND		10	0.52	ug/L		10/09/18 10:03	10/11/18 15:29	1
3,3'-Dichlorobenzidine	3.47	J	10	2.6	ug/L		10/09/18 10:03	10/11/18 15:29	1
2,4-Dichlorophenol	ND		10	3.0	ug/L		10/09/18 10:03	10/11/18 15:29	1
Diethyl phthalate	ND		10	0.70	ug/L		10/09/18 10:03	10/11/18 15:29	1
2,4-Dimethylphenol	ND		10	3.5	ug/L		10/09/18 10:03	10/11/18 15:29	1
Dimethyl phthalate	ND		10	0.60	ug/L		10/09/18 10:03	10/11/18 15:29	1
Di-n-butyl phthalate	ND		10	2.7	ug/L		10/09/18 10:03	10/11/18 15:29	1
4,6-Dinitro-ortho-cresol	ND		10	2.0	ug/L		10/09/18 10:03	10/11/18 15:29	1
2,4-Dinitrophenol	ND		30	3.4	ug/L		10/09/18 10:03	10/11/18 15:29	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		10/09/18 10:03	10/11/18 15:29	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		10/09/18 10:03	10/11/18 15:29	1
Di-n-octyl phthalate	ND		10	0.44	ug/L		10/09/18 10:03	10/11/18 15:29	1
1,4-Dioxane	ND		10	1.0	ug/L		10/09/18 10:03	10/11/18 15:29	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		10/09/18 10:03	10/11/18 15:29	1
Hexachlorobenzene	ND		10	0.25	ug/L		10/09/18 10:03	10/11/18 15:29	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		10/09/18 10:03	10/11/18 15:29	1
Hexachloroethane	ND		10	4.2	ug/L		10/09/18 10:03	10/11/18 15:29	1
Indene	ND		10	1.0	ug/L		10/09/18 10:03	10/11/18 15:29	1
Isophorone	ND		10	0.57	ug/L		10/09/18 10:03	10/11/18 15:29	1
2-Methylphenol	ND		10	1.8	ug/L		10/09/18 10:03	10/11/18 15:29	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/09/18 10:03	10/11/18 15:29	1
2-Nitroaniline	ND		10	2.2	ug/L		10/09/18 10:03	10/11/18 15:29	1
3-Nitroaniline	ND		10	1.8	ug/L		10/09/18 10:03	10/11/18 15:29	1
4-Nitroaniline	ND		10	2.5	ug/L		10/09/18 10:03	10/11/18 15:29	1
Nitrobenzene	ND		10	0.55	ug/L		10/09/18 10:03	10/11/18 15:29	1
2-Nitrophenol	ND		10	0.65	ug/L		10/09/18 10:03	10/11/18 15:29	1
4-Nitrophenol	ND		10	2.1	ug/L		10/09/18 10:03	10/11/18 15:29	1
N-Nitrosodimethylamine	ND		10	3.5	ug/L		10/09/18 10:03	10/11/18 15:29	1
N-Nitrosodi-n-propylamine	ND		10	3.3	ug/L		10/09/18 10:03	10/11/18 15:29	1
N-Nitrosodiphenylamine	ND		10	0.47	ug/L		10/09/18 10:03	10/11/18 15:29	1
Pentachlorophenol	ND		20	1.8	ug/L		10/09/18 10:03	10/11/18 15:29	1
Phenol	ND		10	2.6	ug/L		10/09/18 10:03	10/11/18 15:29	1
Pyridine	ND		10	3.2	ug/L		10/09/18 10:03	10/11/18 15:29	1
Quinoline	ND		10	6.0	ug/L		10/09/18 10:03	10/11/18 15:29	1
2,4,5-Trichlorophenol	ND		10	3.7	ug/L		10/09/18 10:03	10/11/18 15:29	1
2,4,6-Trichlorophenol	ND		10	3.5	ug/L		10/09/18 10:03	10/11/18 15:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*56*		*34 - 120*	*10/09/18 10:03*	*10/11/18 15:29*	*1*
2-Fluorophenol	*29*		*10 - 120*	*10/09/18 10:03*	*10/11/18 15:29*	*1*
Nitrobenzene-d5	*43*		*27 - 120*	*10/09/18 10:03*	*10/11/18 15:29*	*1*
Phenol-d5	*33*		*10 - 120*	*10/09/18 10:03*	*10/11/18 15:29*	*1*
Terphenyl-d14	*64*		*53 - 125*	*10/09/18 10:03*	*10/11/18 15:29*	*1*
2,4,6-Tribromophenol	*54*		*15 - 135*	*10/09/18 10:03*	*10/11/18 15:29*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-414659/2-A
Matrix: Water
Analysis Batch: 414948

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 414659

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aniline	30.0	23.0		ug/L		77	29 - 120
Benzoic acid	118	54.2		ug/L		46	10 - 150
Benzyl alcohol	30.0	25.8		ug/L		86	19 - 125
Bis(2-chloroethoxy)methane	30.0	23.4		ug/L		78	45 - 120
Bis(2-chloroethyl)ether	30.0	27.1		ug/L		90	48 - 120
bis (2-chloroisopropyl) ether	30.0	18.1		ug/L		60	30 - 125
Bis(2-ethylhexyl) phthalate	30.0	37.0		ug/L		123	48 - 150
4-Bromophenyl phenyl ether	30.0	31.3		ug/L		104	55 - 122
Butyl benzyl phthalate	30.0	32.0		ug/L		107	46 - 145
4-Chloroaniline	30.0	20.4		ug/L		68	30 - 120
4-Chloro-3-methylphenol	30.0	27.1		ug/L		90	39 - 140
2-Chloronaphthalene	30.0	28.8		ug/L		96	52 - 120
2-Chlorophenol	30.0	22.7		ug/L		76	34 - 120
4-Chlorophenyl phenyl ether	30.0	30.8		ug/L		103	58 - 124
Dibenz[a,h]acridine	30.0	34.2		ug/L		114	46 - 149
Dibenzofuran	30.0	30.1		ug/L		100	58 - 123
3,3'-Dichlorobenzidine	40.0	51.2		ug/L		128	39 - 135
2,4-Dichlorophenol	30.0	25.5		ug/L		85	39 - 128
Diethyl phthalate	30.0	33.8		ug/L		113	44 - 146
2,4-Dimethylphenol	30.0	24.8		ug/L		83	44 - 120
Dimethyl phthalate	30.0	31.7		ug/L		106	50 - 131
Di-n-butyl phthalate	30.0	33.6		ug/L		112	55 - 131
4,6-Dinitro-ortho-cresol	60.0	59.0		ug/L		98	10 - 150
2,4-Dinitrophenol	60.0	63.4		ug/L		106	10 - 150
2,4-Dinitrotoluene	30.0	35.3		ug/L		118	58 - 140
2,6-Dinitrotoluene	30.0	32.3		ug/L		108	57 - 130
Di-n-octyl phthalate	30.0	35.9		ug/L		120	50 - 150
1,4-Dioxane	30.0	18.0		ug/L		60	25 - 120
1,2-Diphenylhydrazine (as Azobenzene)	30.0	25.9		ug/L		86	47 - 123
Hexachlorobenzene	30.0	33.1		ug/L		110	52 - 131
Hexachlorocyclopentadiene	30.0	ND	*	ug/L		6	10 - 129
Hexachloroethane	30.0	17.2		ug/L		57	41 - 120
Indene	30.0	31.4		ug/L		105	47 - 120
Isophorone	30.0	23.1		ug/L		77	49 - 120
2-Methylphenol	30.0	26.2		ug/L		87	39 - 123
3 & 4 Methylphenol	30.0	25.5		ug/L		85	38 - 121
2-Nitroaniline	30.0	27.5		ug/L		92	47 - 150
3-Nitroaniline	30.0	28.7		ug/L		96	34 - 132
4-Nitroaniline	30.0	32.4		ug/L		108	41 - 135
Nitrobenzene	30.0	22.1		ug/L		74	47 - 120
2-Nitrophenol	30.0	25.8		ug/L		86	28 - 136
4-Nitrophenol	60.0	54.7		ug/L		91	10 - 150
N-Nitrosodimethylamine	30.0	16.5		ug/L		55	22 - 148
N-Nitrosodi-n-propylamine	30.0	25.1		ug/L		84	44 - 120
N-Nitrosodiphenylamine	29.8	30.7		ug/L		103	56 - 120
Pentachlorophenol	60.0	49.5		ug/L		82	15 - 141
Phenol	30.0	19.1		ug/L		64	33 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-414659/2-A
Matrix: Water
Analysis Batch: 414948

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 414659

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Pyridine	60.0	35.1		ug/L		58	26 - 120
Quinoline	30.0	28.3		ug/L		94	51 - 129
2,4,5-Trichlorophenol	30.0	30.2		ug/L		101	38 - 147
2,4,6-Trichlorophenol	30.0	29.6		ug/L		99	36 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*59*		*34 - 120*
2-Fluorophenol	*27*		*10 - 120*
Nitrobenzene-d5	*43*		*27 - 120*
Phenol-d5	*36*		*10 - 120*
Terphenyl-d14	*61*		*53 - 125*
2,4,6-Tribromophenol	*63*		*15 - 135*

Lab Sample ID: LCSD 400-414659/3-A
Matrix: Water
Analysis Batch: 414948

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 414659

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aniline	30.0	27.5		ug/L		92	29 - 120	18	30
Benzoic acid	118	56.3		ug/L		48	10 - 150	4	30
Benzyl alcohol	30.0	25.6		ug/L		85	19 - 125	1	30
Bis(2-chloroethoxy)methane	30.0	23.8		ug/L		79	45 - 120	2	30
Bis(2-chloroethyl)ether	30.0	23.4		ug/L		78	48 - 120	15	30
bis (2-chloroisopropyl) ether	30.0	17.3		ug/L		58	30 - 125	4	30
Bis(2-ethylhexyl) phthalate	30.0	35.7		ug/L		119	48 - 150	4	30
4-Bromophenyl phenyl ether	30.0	32.3		ug/L		108	55 - 122	3	30
Butyl benzyl phthalate	30.0	32.5		ug/L		108	46 - 145	1	30
4-Chloroaniline	30.0	20.5		ug/L		68	30 - 120	0	30
4-Chloro-3-methylphenol	30.0	28.2		ug/L		94	39 - 140	4	30
2-Chloronaphthalene	30.0	28.9		ug/L		96	52 - 120	0	30
2-Chlorophenol	30.0	19.7		ug/L		66	34 - 120	14	30
4-Chlorophenyl phenyl ether	30.0	31.6		ug/L		105	58 - 124	2	30
Dibenz[a,h]acridine	30.0	33.9		ug/L		113	46 - 149	1	30
Dibenzofuran	30.0	30.7		ug/L		102	58 - 123	2	30
3,3'-Dichlorobenzidine	40.0	51.1		ug/L		128	39 - 135	0	30
2,4-Dichlorophenol	30.0	25.7		ug/L		86	39 - 128	1	30
Diethyl phthalate	30.0	34.4		ug/L		115	44 - 146	2	30
2,4-Dimethylphenol	30.0	26.2		ug/L		87	44 - 120	5	30
Dimethyl phthalate	30.0	33.2		ug/L		111	50 - 131	4	30
Di-n-butyl phthalate	30.0	33.6		ug/L		112	55 - 131	0	30
4,6-Dinitro-ortho-cresol	60.0	62.8		ug/L		105	10 - 150	6	30
2,4-Dinitrophenol	60.0	63.6		ug/L		106	10 - 150	0	30
2,4-Dinitrotoluene	30.0	36.7		ug/L		122	58 - 140	4	30
2,6-Dinitrotoluene	30.0	32.7		ug/L		109	57 - 130	1	30
Di-n-octyl phthalate	30.0	36.1		ug/L		120	50 - 150	0	30
1,4-Dioxane	30.0	16.6		ug/L		55	25 - 120	8	30
1,2-Diphenylhydrazine (as Azobenzene)	30.0	26.5		ug/L		88	47 - 123	2	30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-414659/3-A
Matrix: Water
Analysis Batch: 414948

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 414659

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hexachlorobenzene	30.0	33.5		ug/L		112	52 - 131	1	30
Hexachlorocyclopentadiene	30.0	ND	*	ug/L		7	10 - 129	15	30
Hexachloroethane	30.0	17.1		ug/L		57	41 - 120	0	30
Indene	30.0	31.1		ug/L		104	47 - 120	1	30
Isophorone	30.0	23.2		ug/L		77	49 - 120	0	30
2-Methylphenol	30.0	27.0		ug/L		90	39 - 123	3	30
3 & 4 Methylphenol	30.0	25.8		ug/L		86	38 - 121	1	30
2-Nitroaniline	30.0	28.7		ug/L		96	47 - 150	4	30
3-Nitroaniline	30.0	29.0		ug/L		97	34 - 132	1	30
4-Nitroaniline	30.0	32.5		ug/L		108	41 - 135	0	30
Nitrobenzene	30.0	22.1		ug/L		74	47 - 120	0	30
2-Nitrophenol	30.0	25.4		ug/L		85	28 - 136	1	30
4-Nitrophenol	60.0	63.0		ug/L		105	10 - 150	14	30
N-Nitrosodimethylamine	30.0	17.3		ug/L		58	22 - 148	5	30
N-Nitrosodi-n-propylamine	30.0	25.7		ug/L		86	44 - 120	2	30
N-Nitrosodiphenylamine	29.8	31.6		ug/L		106	56 - 120	3	30
Pentachlorophenol	60.0	51.0		ug/L		85	15 - 141	3	30
Phenol	30.0	19.5		ug/L		65	33 - 120	2	30
Pyridine	60.0	36.8		ug/L		61	26 - 120	5	30
Quinoline	30.0	28.8		ug/L		96	51 - 129	2	30
2,4,5-Trichlorophenol	30.0	31.7		ug/L		106	38 - 147	5	30
2,4,6-Trichlorophenol	30.0	31.3		ug/L		104	36 - 139	6	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*59*		*34 - 120*
2-Fluorophenol	*16*		*10 - 120*
Nitrobenzene-d5	*43*		*27 - 120*
Phenol-d5	*36*		*10 - 120*
Terphenyl-d14	*63*		*53 - 125*
2,4,6-Tribromophenol	*65*		*15 - 135*

Lab Sample ID: MB 400-415021/1-A
Matrix: Water
Analysis Batch: 415197

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 415021

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzenethiol	ND		10	1.7	ug/L		10/11/18 14:08	10/12/18 20:40	1
Bis(2-ethylhexyl) phthalate	ND		10	2.3	ug/L		10/11/18 14:08	10/12/18 20:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*54*		*34 - 120*	*10/11/18 14:08*	*10/12/18 20:40*	*1*
2-Fluorophenol	*37*		*10 - 120*	*10/11/18 14:08*	*10/12/18 20:40*	*1*
Nitrobenzene-d5	*56*		*27 - 120*	*10/11/18 14:08*	*10/12/18 20:40*	*1*
Phenol-d5	*52*		*10 - 120*	*10/11/18 14:08*	*10/12/18 20:40*	*1*
Terphenyl-d14	*62*		*53 - 125*	*10/11/18 14:08*	*10/12/18 20:40*	*1*
2,4,6-Tribromophenol	*65*		*15 - 135*	*10/11/18 14:08*	*10/12/18 20:40*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-415021/25-A
Matrix: Water
Analysis Batch: 415470

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 415021

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzenethiol	30.0	ND	*	ug/L		1	10 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl	53		34 - 120
2-Fluorophenol	24		10 - 120
Nitrobenzene-d5	59		27 - 120
Phenol-d5	54		10 - 120
Terphenyl-d14	56		53 - 125
2,4,6-Tribromophenol	23		15 - 135

Lab Sample ID: LCS 400-415021/2-A
Matrix: Water
Analysis Batch: 415197

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 415021

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bis(2-ethylhexyl) phthalate	30.0	34.8		ug/L		116	48 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl	50		34 - 120
2-Fluorophenol	24		10 - 120
Nitrobenzene-d5	58		27 - 120
Phenol-d5	45		10 - 120
Terphenyl-d14	57		53 - 125
2,4,6-Tribromophenol	64		15 - 135

Lab Sample ID: LCSD 400-415021/26-A
Matrix: Water
Analysis Batch: 415470

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 415021

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzenethiol	30.0	ND	*	ug/L		4	10 - 120	95	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl	51		34 - 120
2-Fluorophenol	39		10 - 120
Nitrobenzene-d5	55		27 - 120
Phenol-d5	54		10 - 120
Terphenyl-d14	52	X	53 - 125
2,4,6-Tribromophenol	37		15 - 135

Lab Sample ID: LCSD 400-415021/3-A
Matrix: Water
Analysis Batch: 415197

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 415021

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bis(2-ethylhexyl) phthalate	30.0	34.2		ug/L		114	48 - 150	2	30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-415021/3-A
Matrix: Water
Analysis Batch: 415197

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 415021

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl	50		34 - 120
2-Fluorophenol	32		10 - 120
Nitrobenzene-d5	59		27 - 120
Phenol-d5	47		10 - 120
Terphenyl-d14	54		53 - 125
2,4,6-Tribromophenol	63		15 - 135

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 400-414659/1-A
Matrix: Water
Analysis Batch: 414888

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 414659

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 20:24	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 20:24	1
Anthracene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 20:24	1
Benzo[a]anthracene	ND		0.20	0.040	ug/L		10/09/18 10:03	10/10/18 20:24	1
Benzo[a]pyrene	ND		0.20	0.040	ug/L		10/09/18 10:03	10/10/18 20:24	1
Benzo[b]fluoranthene	ND		0.20	0.040	ug/L		10/09/18 10:03	10/10/18 20:24	1
Benzo[g,h,i]perylene	ND		0.20	0.040	ug/L		10/09/18 10:03	10/10/18 20:24	1
Benzo[k]fluoranthene	ND		0.20	0.040	ug/L		10/09/18 10:03	10/10/18 20:24	1
Chrysene	ND		0.20	0.040	ug/L		10/09/18 10:03	10/10/18 20:24	1
Dibenz(a,h)anthracene	ND		0.20	0.040	ug/L		10/09/18 10:03	10/10/18 20:24	1
Fluoranthene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 20:24	1
Fluorene	ND		0.20	0.021	ug/L		10/09/18 10:03	10/10/18 20:24	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.040	ug/L		10/09/18 10:03	10/10/18 20:24	1
Phenanthrene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 20:24	1
Pyrene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 20:24	1
1-Methylnaphthalene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 20:24	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		10/09/18 10:03	10/10/18 20:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	66		33 - 138	10/09/18 10:03	10/10/18 20:24	1
2-Fluorobiphenyl	52		15 - 122	10/09/18 10:03	10/10/18 20:24	1
Nitrobenzene-d5	34		19 - 130	10/09/18 10:03	10/10/18 20:24	1

Lab Sample ID: LCS 400-414659/2-A
Matrix: Water
Analysis Batch: 414888

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 414659

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	30.0	25.1		ug/L		84	41 - 120
Acenaphthylene	30.0	24.8		ug/L		83	44 - 120
Anthracene	30.0	26.2		ug/L		87	49 - 120
Benzo[a]anthracene	30.0	27.0		ug/L		90	61 - 135
Benzo[a]pyrene	30.0	25.0		ug/L		83	52 - 120

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCS 400-414659/2-A
Matrix: Water
Analysis Batch: 414888

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 414659

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	30.0	27.5		ug/L		92	53 - 134
Benzo[g,h,i]perylene	30.0	19.3		ug/L		64	47 - 133
Benzo[k]fluoranthene	30.0	27.6		ug/L		92	57 - 134
Chrysene	30.0	26.7		ug/L		89	55 - 122
Dibenz(a,h)anthracene	30.0	21.3		ug/L		71	48 - 146
Fluoranthene	30.0	27.8		ug/L		93	54 - 128
Fluorene	30.0	28.1		ug/L		94	45 - 125
Indeno[1,2,3-cd]pyrene	30.0	21.5		ug/L		72	43 - 142
Phenanthrene	30.0	26.3		ug/L		88	48 - 120
Pyrene	30.0	26.1		ug/L		87	48 - 132
1-Methylnaphthalene	30.0	15.3		ug/L		51	41 - 120
2-Methylnaphthalene	30.0	15.0		ug/L		50	32 - 124

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14	*59*		*33 - 138*
2-Fluorobiphenyl	*49*		*15 - 122*
Nitrobenzene-d5	*24*		*19 - 130*

Lab Sample ID: LCSD 400-414659/3-A
Matrix: Water
Analysis Batch: 414888

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 414659

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	30.0	26.3		ug/L		88	41 - 120	5	56
Acenaphthylene	30.0	26.0		ug/L		87	44 - 120	5	56
Anthracene	30.0	27.3		ug/L		91	49 - 120	4	51
Benzo[a]anthracene	30.0	28.2		ug/L		94	61 - 135	4	49
Benzo[a]pyrene	30.0	26.5		ug/L		88	52 - 120	6	50
Benzo[b]fluoranthene	30.0	30.2		ug/L		101	53 - 134	9	54
Benzo[g,h,i]perylene	30.0	21.4		ug/L		71	47 - 133	10	50
Benzo[k]fluoranthene	30.0	28.3		ug/L		94	57 - 134	2	52
Chrysene	30.0	27.2		ug/L		91	55 - 122	2	50
Dibenz(a,h)anthracene	30.0	23.8		ug/L		79	48 - 146	11	50
Fluoranthene	30.0	28.9		ug/L		96	54 - 128	4	52
Fluorene	30.0	29.6		ug/L		99	45 - 125	5	56
Indeno[1,2,3-cd]pyrene	30.0	23.4		ug/L		78	43 - 142	9	51
Phenanthrene	30.0	27.0		ug/L		90	48 - 120	3	56
Pyrene	30.0	28.5		ug/L		95	48 - 132	9	52
1-Methylnaphthalene	30.0	16.3		ug/L		54	41 - 120	6	55
2-Methylnaphthalene	30.0	16.0		ug/L		53	32 - 124	6	57

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Terphenyl-d14	*64*		*33 - 138*
2-Fluorobiphenyl	*51*		*15 - 122*
Nitrobenzene-d5	*24*		*19 - 130*

Method: 8011 - EDB and DBCP in Water by Microextraction

Lab Sample ID: MB 400-415673/1-A
Matrix: Water
Analysis Batch: 416023

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 415673

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0055	ug/L		10/16/18 15:12	10/18/18 18:20	1
1,2-Dibromoethane	ND		0.020	0.0050	ug/L		10/16/18 15:12	10/18/18 18:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*51 - 149*	*10/16/18 15:12*	*10/18/18 18:20*	*1*

Lab Sample ID: LCS 400-415673/2-A
Matrix: Water
Analysis Batch: 416023

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 415673

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	0.100	0.0783		ug/L		78	60 - 140
1,2-Dibromoethane	0.100	0.120		ug/L		120	60 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*93*		*51 - 149*

Lab Sample ID: LCSD 400-415673/3-A
Matrix: Water
Analysis Batch: 416023

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 415673

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane	0.100	0.0894		ug/L		89	60 - 140	8	30
1,2-Dibromoethane	0.100	0.135		ug/L		135	60 - 140	4	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*103*		*51 - 149*

Lab Sample ID: MB 400-415996/1-A
Matrix: Water
Analysis Batch: 416023

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 415996

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0055	ug/L		10/18/18 14:46	10/19/18 07:07	1
1,2-Dibromoethane	ND		0.020	0.0050	ug/L		10/18/18 14:46	10/19/18 07:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*51 - 149*	*10/18/18 14:46*	*10/19/18 07:07*	*1*

Lab Sample ID: LCS 400-415996/2-A
Matrix: Water
Analysis Batch: 416023

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 415996

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	0.100	0.111		ug/L		111	60 - 140
1,2-Dibromoethane	0.100	0.134		ug/L		134	60 - 140

Method: 8011 - EDB and DBCP in Water by Microextraction (Continued)

Lab Sample ID: LCS 400-415996/2-A
Matrix: Water
Analysis Batch: 416023

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 415996

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	110		51 - 149

Lab Sample ID: LCSD 400-415996/3-A
Matrix: Water
Analysis Batch: 416023

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 415996

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane			0.100	0.119		ug/L		119	60 - 140	7	30
1,2-Dibromoethane			0.100	0.135		ug/L		135	60 - 140	1	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	115		51 - 149

Shell Oil Products US Chain Of Custody Record

AECOM

LAB (LOCATION)

☐ ACCUTEST ( )

☐ CALSCIENCE ( )

☑ TESTAMERICA (TestAmerica Pensacola; 3355 McLemore Dr Pensacola, FL 32514 (850-474-1001))

☐ Other Lab Vendor # 1364583 (Testamerica)

Please Check Appropriate Box:

☐ SGW FDG ☐ PIPELINE ☐ RETAIL

☐ CHEMICALS ☐ CONSULTANT ☐ LUBES

☐ TRANSPORTATION ☑ OTHER _ENV. SERVICES

Print Bill To Contact Name: Bob Billman

PO #: 60527968 - 01.03.004 | 60527968 - 01.03.0044

PlaNet Site or Project ID: 25278

GSAP Project ID: USPC/00114/RV02

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 10/04/18

PAGE: 1 of 1

SAMPLING COMPANY: AECOM

LEAD CODE:

SITE ADDRESS: Street and City: 900 South Central Ave; ROXANA

State: IL

AECOM Project / Task Number: Roxana Quarterly GW 60527968 - 01.03.004 60527968 - 01.03.0044

ADDRESS: 100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA

LDF DELIVERABLE TO (Name, Company, Office Location):

PHONE NO:

E MAIL:

AECOM Other ID:

PROJECT CONTACT (Hardcopy or PDF Report to): Elizabeth Kunkel, Bob Billman, Melissa Remiger

SAMPLER NAME(S) (Print): B. Howell M. Karrick

LAB USE ONLY

TELEPHONE: 314-429-0100

FAX: 314-429-0462

Bill To Contact E MAIL: bob.billman@aecom.com; elizabeth.kunkel@aecom.com; melissa.remiger@aecom.com

TURNAROUND TIME (CALENDAR DAYS)

☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAY ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT

DELIVERABLES: ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :

* Please include "J" values on Reports
* Please provide sample receipt upon login

☑ SHELL CONTRACT RATE APPLIES

☐ STATE REIMBURSEMENT RATE APPLIES

☐ EDD NOT NEEDED

☑ RECEIPT VERIFICATION REQUESTED

☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

NON-UNIT COST 60527968 - 01.03.004: VOC 8260; SVOC 8270

UNIT COST 60527968 - 01.03.0044: VOC 8011; PAH 8270LL

400-160182 COC

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

Container PID Readings or Laboratory Notes

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT	VOC 8260	SVOC 8270	VOC 8011	PAH 8270LL
	TB-ROX-100418-8011	10.4.18	0000	Water	2					2			✓	
	TB-ROX-100418-8260		0000		2					2	✓			
	MW6C-ROX-100418-EB		0830		4			2		6	✓	✓	✓	✓
	MW6C-ROX-100418		0900		4			2		6	✓	✓	✓	✓
	MW6B-ROX-100418		0935		4			2		6	✓	✓	✓	✓
	MW6A-ROX-100418		1020		4			2		6	✓	✓	✓	✓
	MW6D-ROX-100418		1105		4			2		6	✓	✓	✓	✓

M. Karrick

Relinquished by: (Signature) Megan Karrick

Received by: (Signature) Fedex: 4535 0238 9828, 4535 0238 9817

Date: 10/04/18 Time: 1640

Relinquished by: (Signature)

Received by: (Signature)

Date: Time:

Relinquished by: (Signature)

Received by: (Signature) 1.1°C, 5.3°C IR-7

Date: 10/5/18 Time: 6

Version: 14Dec15

Custody Seals: 480093, 480092, 572446, 572447

10/24/2018

Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 400-160182-1

Login Number: 160182
List Number: 1
Creator: Conrady, Hank W

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	480093 480092 572446 572447
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.1°C 5.3°C IR-7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160182-1

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-16	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

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Roxana Groundwater Quarterly – 4th Quarter 2018 Data Review

Laboratory SDG: 400-160226-1

Data Reviewer: Melissa Remiger

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 10/23/2018

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2017

Sample Identification	Sample Identification
TB-ROX-100518-8011	TB-ROX-100518-8260
MW3-ROX-100518	MW16-ROX-100518
MW24-ROX-100518	P54-ROX-100518

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated SVOC LCS/LCSD recoveries for benzenethiol, and VOC by 8011 LCS/LCSD recoveries were outside evaluation criteria. The SVOC surrogate recovery for terphenyl-d_{14}, and the PAH surrogate recovery for nitrobenzene-d_5, were outside criteria in several investigative and quality control samples. Several VOC, SVOC, and VOC by 8011 MS/MSD recoveries, and MS/MSD RPDs, were outside evaluation criteria in sample MW3-ROX-100518. These issues are addressed further in the appropriate sections of this data review.

Three of 69 (2-chloroethyl vinyl ether, acrolein, and acrylonitrile) 8260 VOCs are acid-reactive compounds; results may be biased low due to the presence of HCl in the preservative.

The cooler receipt form did not indicate any problems.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS/LCSD ID	Parameter	Analyte	LCS/LCSD Recovery	RPD	LCS/LCSD/ RPD Criteria
LCS/LCSD 400-414706/3-A/4-A	SVOCs	Benzenethiol	**3/3**	**NA**	10-120/30
LCS/LCSD 400-416188/2-A/3-A	VOCs by 8011	1,2-Dibromo-3-chloropropane	140/**142**	2	60-140/30
LCS/LCSD 400-416188/2-A/3-A	VOCs by 8011	1,2-Dibromoethane	**145/147**	2	60-140/30

Analytical data that required qualification based on LCS/LCSD data are included in the table below. Professional judgment was used to qualify, however not reject, data associated with benzenethiol in LCS/LCSD 400-414706/3-A/4-A; benzenethiol has been identified as a poor performing analyte under Method 8270. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Sample ID	Parameter	Analyte	Qualification
MW3-ROX-100518	SVOCs	Benzenethiol	**UJ**
MW16-ROX-100518	SVOCs	Benzenethiol	**UJ**
MW24-ROX-100518	SVOCs	Benzenethiol	**UJ**
P54-ROX-100518	SVOCs	Benzenethiol	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
MW3-ROX-100518	SVOCs	Terphenyl-d_{14}	**40**	53-125
MW16-ROX-100518	SVOCs	Terphenyl-d_{14}	**51**	53-125
MW24-ROX-100518	SVOCs	Terphenyl-d_{14}	**42**	53-125
P54-ROX-100518	SVOCs	Terphenyl-d_{14}	**32**	53-125
MB 400-414706/1-A	SVOCs	Terphenyl-d_{14}	**39**	53-125
LCS 400-414706/2-A	SVOCs	Terphenyl-d_{14}	**33**	53-125
LCS 400-414706/3-A	SVOCs	Terphenyl-d_{14}	**43**	53-125
LCSD 400-414706/4-A	SVOCs	Terphenyl-d_{14}	**42**	53-125
MW3-ROX-100518 MS	SVOCs	Terphenyl-d_{14}	**34**	53-125
MW3-ROX-100518 MSD	SVOCs	Terphenyl-d_{14}	**46**	53-125
LCS 400-414706/2-A	PAHs	Nitrobenzene-d_5	**271**	19-130
MW3-ROX-100518 MS	PAHs	Nitrobenzene-d_5	**325**	19-130
MW3-ROX-100518 MSD	PAHs	Nitrobenzene-d_5	**313**	19-130

Qualifications due to surrogate recoveries were not required if only one of three base/neutral fraction surrogate recoveries were outside evaluation criteria in the associated PAH/SVOC samples. Quality control samples do not require qualification. No qualification of data was required.

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

Yes, sample MW3-ROX-100518 was spiked and duplicated for Method 8260 VOCs, Method 8011 VOCs, and Method 8270 SVOCs/PAHs.

Were MS/MSD recoveries within evaluation criteria?

No

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
MW3-ROX-100518	VOCs	2-Chloroethyl vinyl ether	**0/0**	**NC**	10-150/50
MW3-ROX-100518	SVOCs	3,3'-Dichlorobenzidine	20/**0**	**NC**	10-172/58
MW3-ROX-100518	SVOCs	Quinoline	75/37	**70**	10-180/40
MW3-ROX-100518	VOCs by 8011	1,2-Dibromo-3-Chloropropane	**142**/135	6	65-135/20
MW3-ROX-100518	VOCs by 8011	1,2-Dibromoethane	**148/148**	1	65-135/20

Analytical data that required qualification based on MS/MSD data are included in the table below. Analytical data associated with RPD alone outside evaluation criteria did not require qualification. Analytical data reported as non-detect and associated with MSMSD recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Sample ID	Parameter	Analyte	Qualification
MW3-ROX-100518	VOCs	2-Chloroethyl vinyl ether	**UJ**
MW3-ROX-100518	SVOCs	3,3'-Dichlorobenzidine	**UJ**

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; samples analyzed did not require dilution.

12.0 Additional Qualifications

Were additional qualifications applied?

No

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-160226-1
Client Project/Site: ROXANA QUARTERLY

For:
AECOM Technical Services Inc.
100 N. Broadway
20th Floor
St. Louis, Missouri 63102

Attn: Elizabeth Kunkel

Authorized for release by:
10/22/2018 4:53:27 PM

Leah Klingensmith, Senior Project Manager
(615)301-5038
leah.klingensmith@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

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Reviewed 10/23/18 LR

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Certification Summary 56

Job ID: 400-160226-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-160226-1

Comments
No additional comments.

Receipt
The samples were received on 10/6/2018 8:31 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 0.0° C, 2.6° C, 4.0° C and 4.1° C.

GC/MS VOA
Method(s) 8260B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 400-415685 were outside control limits for 2-Chloroethyl vinyl ether due to the acidic nature of the parent sample.

Method(s) 8260B: The RPD for the MS/MSD for 2-chloroethyl vinyl ether was not calculable for analytical batch 400-415685 because the recoveries were below the reporting limit due to the acidic nature of the parent sample.

Method(s) 8260B: The preservative used in the sample containers provided is not compatible with some of the Method 8260 analytes requested. The following samples were received preserved with hydrochloric acid: TB-ROX-100518-8260 (400-160226-2), MW3-ROX-100518 (400-160226-3), MW16-ROX-100518 (400-160226-4), MW24-ROX-100518 (400-160226-5) and P54-ROX-100518 (400-160226-6). The requested target analyte list includes 2-chloroethyl vinyl ether, Acrolein and Acrylonitrile, which are acid-labile compounds that degrade in an acidic medium.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270D LL: Three surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following samples contained an allowable number of surrogate compounds outside limits: MW3-ROX-100518 (400-160226-3[MS]), MW3-ROX-100518 (400-160226-3[MSD]) and (CCVIS 400-415046/3). These results have been reported and qualified.

Method(s) 8270D: Six surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following samples contained an allowable number of surrogate compounds outside limits: MW3-ROX-100518 (400-160226-3), MW3-ROX-100518 (400-160226-3[MS]), MW3-ROX-100518 (400-160226-3[MSD]), MW16-ROX-100518 (400-160226-4), MW24-ROX-100518 (400-160226-5), P54-ROX-100518 (400-160226-6), (LCS 400-414706/2-A), (LCS 400-414706/3-A), (LCSD 400-414706/4-A) and (MB 400-414706/1-A). These results have been reported and qualified.

Method(s) 8270D: The laboratory control sample and the laboratory control sample duplicate (LCS/LCSD) for preparation batch 400-414706 and analytical batch 400-415020 recovered outside control limits for the following analyte: Benzenethiol. Benzenethiol has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. Batch precision also exceeded control limits for these analyte(s). These results have been reported and qualified.

Method(s) 8270D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 400-414706 and analytical batch 400-415020 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 8270D: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 400-414706 and analytical batch 400-415020 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method(s) 8011: The continuing calibration verification (CCV) associated with batch 400-416023 recovered above the upper control limit

Job ID: 400-160226-1 (Continued)

Laboratory: TestAmerica Pensacola (Continued)

for 1,2-Dibromo-3-Chloropropane and Ethylene Dibromide. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: TB-ROX-100518-8011 (400-160226-1), MW3-ROX-100518 (400-160226-3), MW16-ROX-100518 (400-160226-4), MW24-ROX-100518 (400-160226-5) and P54-ROX-100518 (400-160226-6).

Method(s) 8011: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 400-416188 and analytical batch 400-416023 recovered outside control limits for the following analytes: 1,2-Dibromo-3-Chloropropane and 1,2-Dibromoethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data has been reported.

Method(s) 8011: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 400-415996 and analytical batch 400-416023 were outside control limits. Sample matrix interference is suspected.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160226-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-160226-1	TB-ROX-100518-8011	Water	10/05/18 00:01	10/06/18 08:31
400-160226-2	TB-ROX-100518-8260	Water	10/05/18 00:01	10/06/18 08:31
400-160226-3	MW3-ROX-100518	Water	10/05/18 09:00	10/06/18 08:31
400-160226-4	MW16-ROX-100518	Water	10/05/18 09:55	10/06/18 08:31
400-160226-5	MW24-ROX-100518	Water	10/05/18 10:35	10/06/18 08:31
400-160226-6	P54-ROX-100518	Water	10/05/18 11:40	10/06/18 08:31

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160226-1

Client Sample ID: TB-ROX-100518-8011 — Lab Sample ID: 400-160226-1

No Detections.

Client Sample ID: TB-ROX-100518-8260 — Lab Sample ID: 400-160226-2

No Detections.

Client Sample ID: MW3-ROX-100518 — Lab Sample ID: 400-160226-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Isopropylbenzene	2.2		1.0	0.53	ug/L	1		8260B	Total/NA
Methyl tert-butyl ether	1.9		1.0	0.74	ug/L	1		8260B	Total/NA
N-Propylbenzene	6.6		1.0	0.69	ug/L	1		8260B	Total/NA
Dibenz(a,h)anthracene	0.062	J	0.20	0.039	ug/L	1		8270D LL	Total/NA
Indeno[1,2,3-cd]pyrene	0.056	J	0.20	0.039	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene	0.58		0.20	0.020	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	0.099	J	0.20	0.020	ug/L	1		8270D LL	Total/NA

Client Sample ID: MW16-ROX-100518 — Lab Sample ID: 400-160226-4

No Detections.

Client Sample ID: MW24-ROX-100518 — Lab Sample ID: 400-160226-5

No Detections.

Client Sample ID: P54-ROX-100518 — Lab Sample ID: 400-160226-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	0.022	J	0.20	0.020	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene	0.028	J	0.20	0.020	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	0.032	J	0.20	0.020	ug/L	1		8270D LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160226-1

Client Sample ID: TB-ROX-100518-8011
Date Collected: 10/05/18 00:01
Date Received: 10/06/18 08:31

Lab Sample ID: 400-160226-1
Matrix: Water

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.031	0.0056	ug/L		10/18/18 14:46	10/19/18 10:29	1
1,2-Dibromoethane	ND		0.020	0.0051	ug/L		10/18/18 14:46	10/19/18 10:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*109*	*p*	*51 - 149*	*10/18/18 14:46*	*10/19/18 10:29*	*1*

Client Sample ID: TB-ROX-100518-8260
Date Collected: 10/05/18 00:01
Date Received: 10/06/18 08:31

Lab Sample ID: 400-160226-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/16/18 19:20	1
Acrolein	ND		20	10	ug/L			10/16/18 19:20	1
Acrylonitrile	ND		10	2.8	ug/L			10/16/18 19:20	1
Benzene	ND		1.0	0.38	ug/L			10/16/18 19:20	1
Bromobenzene	ND		1.0	0.54	ug/L			10/16/18 19:20	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/16/18 19:20	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/16/18 19:20	1
Bromoform	ND		5.0	0.71	ug/L			10/16/18 19:20	1
Bromomethane	ND		1.0	0.98	ug/L			10/16/18 19:20	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/16/18 19:20	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/16/18 19:20	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/16/18 19:20	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/16/18 19:20	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/16/18 19:20	1
Chloroethane	ND		1.0	0.76	ug/L			10/16/18 19:20	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/16/18 19:20	1
Chloroform	ND		1.0	0.60	ug/L			10/16/18 19:20	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/16/18 19:20	1
Chloromethane	ND		1.0	0.83	ug/L			10/16/18 19:20	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/16/18 19:20	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/16/18 19:20	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/16/18 19:20	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/16/18 19:20	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/16/18 19:20	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/16/18 19:20	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/16/18 19:20	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/16/18 19:20	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/16/18 19:20	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/16/18 19:20	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/16/18 19:20	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/16/18 19:20	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/16/18 19:20	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/16/18 19:20	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/16/18 19:20	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/16/18 19:20	1
2-Hexanone	ND		25	3.1	ug/L			10/16/18 19:20	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/16/18 19:20	1
Methylene bromide	ND		5.0	0.59	ug/L			10/16/18 19:20	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/16/18 19:20	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/16/18 19:20	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/16/18 19:20	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/16/18 19:20	1
Naphthalene	ND		1.0	1.0	ug/L			10/16/18 19:20	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/16/18 19:20	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/16/18 19:20	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/16/18 19:20	1
o-Xylene	ND		5.0	0.60	ug/L			10/16/18 19:20	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/16/18 19:20	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/16/18 19:20	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160226-1

Client Sample ID: TB-ROX-100518-8260
Date Collected: 10/05/18 00:01
Date Received: 10/06/18 08:31

Lab Sample ID: 400-160226-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/16/18 19:20	1
Styrene	ND		1.0	1.0	ug/L			10/16/18 19:20	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/16/18 19:20	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/16/18 19:20	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/16/18 19:20	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/16/18 19:20	1
Toluene	ND		1.0	0.70	ug/L			10/16/18 19:20	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/16/18 19:20	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/16/18 19:20	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/16/18 19:20	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/16/18 19:20	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/16/18 19:20	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/16/18 19:20	1
Trichloroethene	ND		1.0	0.50	ug/L			10/16/18 19:20	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/16/18 19:20	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/16/18 19:20	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/16/18 19:20	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/16/18 19:20	1
Vinyl acetate	ND		25	2.0	ug/L			10/16/18 19:20	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/16/18 19:20	1
Xylenes, Total	ND		10	1.6	ug/L			10/16/18 19:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*78 - 118*		*10/16/18 19:20*	*1*
Dibromofluoromethane	*99*		*81 - 121*		*10/16/18 19:20*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*10/16/18 19:20*	*1*

Client Sample ID: MW3-ROX-100518
Date Collected: 10/05/18 09:00
Date Received: 10/06/18 08:31

Lab Sample ID: 400-160226-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/16/18 19:44	1
Acrolein	ND		20	10	ug/L			10/16/18 19:44	1
Acrylonitrile	ND		10	2.8	ug/L			10/16/18 19:44	1
Benzene	ND		1.0	0.38	ug/L			10/16/18 19:44	1
Bromobenzene	ND		1.0	0.54	ug/L			10/16/18 19:44	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/16/18 19:44	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/16/18 19:44	1
Bromoform	ND		5.0	0.71	ug/L			10/16/18 19:44	1
Bromomethane	ND		1.0	0.98	ug/L			10/16/18 19:44	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/16/18 19:44	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/16/18 19:44	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/16/18 19:44	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/16/18 19:44	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/16/18 19:44	1
Chloroethane	ND		1.0	0.76	ug/L			10/16/18 19:44	1
2-Chloroethyl vinyl ether	ND	F1 UJ	5.0	2.0	ug/L			10/16/18 19:44	1
Chloroform	ND		1.0	0.60	ug/L			10/16/18 19:44	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/16/18 19:44	1
Chloromethane	ND		1.0	0.83	ug/L			10/16/18 19:44	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/16/18 19:44	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/16/18 19:44	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/16/18 19:44	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/16/18 19:44	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/16/18 19:44	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/16/18 19:44	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/16/18 19:44	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/16/18 19:44	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/16/18 19:44	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/16/18 19:44	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/16/18 19:44	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/16/18 19:44	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/16/18 19:44	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/16/18 19:44	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/16/18 19:44	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/16/18 19:44	1
2-Hexanone	ND		25	3.1	ug/L			10/16/18 19:44	1
Isopropylbenzene	2.2		1.0	0.53	ug/L			10/16/18 19:44	1
Methylene bromide	ND		5.0	0.59	ug/L			10/16/18 19:44	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/16/18 19:44	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/16/18 19:44	1
Methyl tert-butyl ether	1.9		1.0	0.74	ug/L			10/16/18 19:44	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/16/18 19:44	1
Naphthalene	ND		1.0	1.0	ug/L			10/16/18 19:44	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/16/18 19:44	1
N-Propylbenzene	6.6		1.0	0.69	ug/L			10/16/18 19:44	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/16/18 19:44	1
o-Xylene	ND		5.0	0.60	ug/L			10/16/18 19:44	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/16/18 19:44	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/16/18 19:44	1

Client Sample ID: MW3-ROX-100518

Lab Sample ID: 400-160226-3
Matrix: Water

Date Collected: 10/05/18 09:00
Date Received: 10/06/18 08:31

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/16/18 19:44	1
Styrene	ND		1.0	1.0	ug/L			10/16/18 19:44	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/16/18 19:44	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/16/18 19:44	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/16/18 19:44	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/16/18 19:44	1
Toluene	ND		1.0	0.70	ug/L			10/16/18 19:44	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/16/18 19:44	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/16/18 19:44	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/16/18 19:44	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/16/18 19:44	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/16/18 19:44	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/16/18 19:44	1
Trichloroethene	ND		1.0	0.50	ug/L			10/16/18 19:44	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/16/18 19:44	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/16/18 19:44	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/16/18 19:44	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/16/18 19:44	1
Vinyl acetate	ND		25	2.0	ug/L			10/16/18 19:44	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/16/18 19:44	1
Xylenes, Total	ND		10	1.6	ug/L			10/16/18 19:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*78 - 118*		*10/16/18 19:44*	*1*
Dibromofluoromethane	*100*		*81 - 121*		*10/16/18 19:44*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*10/16/18 19:44*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 21:52	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 21:52	1
Anthracene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 21:52	1
Benzo[a]anthracene	ND		0.20	0.039	ug/L		10/09/18 12:28	10/11/18 21:52	1
Benzo[a]pyrene	ND		0.20	0.039	ug/L		10/09/18 12:28	10/11/18 21:52	1
Benzo[b]fluoranthene	ND		0.20	0.039	ug/L		10/09/18 12:28	10/11/18 21:52	1
Benzo[g,h,i]perylene	ND		0.20	0.039	ug/L		10/09/18 12:28	10/11/18 21:52	1
Benzo[k]fluoranthene	ND		0.20	0.039	ug/L		10/09/18 12:28	10/11/18 21:52	1
Chrysene	ND		0.20	0.039	ug/L		10/09/18 12:28	10/11/18 21:52	1
Dibenz(a,h)anthracene	0.062	J	0.20	0.039	ug/L		10/09/18 12:28	10/11/18 21:52	1
Fluoranthene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 21:52	1
Fluorene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 21:52	1
Indeno[1,2,3-cd]pyrene	0.056	J	0.20	0.039	ug/L		10/09/18 12:28	10/11/18 21:52	1
Phenanthrene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 21:52	1
Pyrene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 21:52	1
1-Methylnaphthalene	0.58		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 21:52	1
2-Methylnaphthalene	0.099	J	0.20	0.020	ug/L		10/09/18 12:28	10/11/18 21:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*51*		*33 - 138*	*10/09/18 12:28*	*10/11/18 21:52*	*1*
2-Fluorobiphenyl	*40*		*15 - 122*	*10/09/18 12:28*	*10/11/18 21:52*	*1*

Client Sample ID: MW3-ROX-100518

Lab Sample ID: 400-160226-3
Matrix: Water

Date Collected: 10/05/18 09:00
Date Received: 10/06/18 08:31

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	46		19 - 130	10/09/18 12:28	10/11/18 21:52	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.8	3.7	ug/L		10/09/18 12:28	10/11/18 20:39	1
Benzenethiol	ND	* UJ	9.8	1.7	ug/L		10/09/18 12:28	10/11/18 20:39	1
Benzoic acid	ND		29	7.1	ug/L		10/09/18 12:28	10/11/18 20:39	1
Benzyl alcohol	ND		9.8	2.0	ug/L		10/09/18 12:28	10/11/18 20:39	1
Bis(2-chloroethoxy)methane	ND		9.8	0.67	ug/L		10/09/18 12:28	10/11/18 20:39	1
Bis(2-chloroethyl)ether	ND		9.8	0.72	ug/L		10/09/18 12:28	10/11/18 20:39	1
bis (2-chloroisopropyl) ether	ND		9.8	0.79	ug/L		10/09/18 12:28	10/11/18 20:39	1
Bis(2-ethylhexyl) phthalate	ND		9.8	2.2	ug/L		10/09/18 12:28	10/11/18 20:39	1
4-Bromophenyl phenyl ether	ND		9.8	0.31	ug/L		10/09/18 12:28	10/11/18 20:39	1
Butyl benzyl phthalate	ND		9.8	0.67	ug/L		10/09/18 12:28	10/11/18 20:39	1
4-Chloroaniline	ND		9.8	3.3	ug/L		10/09/18 12:28	10/11/18 20:39	1
4-Chloro-3-methylphenol	ND		9.8	3.7	ug/L		10/09/18 12:28	10/11/18 20:39	1
2-Chloronaphthalene	ND		9.8	0.51	ug/L		10/09/18 12:28	10/11/18 20:39	1
2-Chlorophenol	ND		9.8	2.1	ug/L		10/09/18 12:28	10/11/18 20:39	1
4-Chlorophenyl phenyl ether	ND		9.8	2.0	ug/L		10/09/18 12:28	10/11/18 20:39	1
Dibenz[a,h]acridine	ND		9.8	2.9	ug/L		10/09/18 12:28	10/11/18 20:39	1
Dibenzofuran	ND		9.8	0.51	ug/L		10/09/18 12:28	10/11/18 20:39	1
3,3'-Dichlorobenzidine	ND	F1 UJ	9.8	2.5	ug/L		10/09/18 12:28	10/11/18 20:39	1
2,4-Dichlorophenol	ND		9.8	2.9	ug/L		10/09/18 12:28	10/11/18 20:39	1
Diethyl phthalate	ND		9.8	0.68	ug/L		10/09/18 12:28	10/11/18 20:39	1
2,4-Dimethylphenol	ND		9.8	3.4	ug/L		10/09/18 12:28	10/11/18 20:39	1
Dimethyl phthalate	ND		9.8	0.59	ug/L		10/09/18 12:28	10/11/18 20:39	1
Di-n-butyl phthalate	ND		9.8	2.6	ug/L		10/09/18 12:28	10/11/18 20:39	1
4,6-Dinitro-ortho-cresol	ND		9.8	2.0	ug/L		10/09/18 12:28	10/11/18 20:39	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		10/09/18 12:28	10/11/18 20:39	1
2,4-Dinitrotoluene	ND		9.8	1.9	ug/L		10/09/18 12:28	10/11/18 20:39	1
2,6-Dinitrotoluene	ND		9.8	1.9	ug/L		10/09/18 12:28	10/11/18 20:39	1
Di-n-octyl phthalate	ND		9.8	0.43	ug/L		10/09/18 12:28	10/11/18 20:39	1
1,4-Dioxane	ND		9.8	0.98	ug/L		10/09/18 12:28	10/11/18 20:39	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.8	0.98	ug/L		10/09/18 12:28	10/11/18 20:39	1
Hexachlorobenzene	ND		9.8	0.24	ug/L		10/09/18 12:28	10/11/18 20:39	1
Hexachlorocyclopentadiene	ND		20	2.5	ug/L		10/09/18 12:28	10/11/18 20:39	1
Hexachloroethane	ND		9.8	4.1	ug/L		10/09/18 12:28	10/11/18 20:39	1
Indene	ND		9.8	0.98	ug/L		10/09/18 12:28	10/11/18 20:39	1
Isophorone	ND		9.8	0.56	ug/L		10/09/18 12:28	10/11/18 20:39	1
2-Methylphenol	ND		9.8	1.8	ug/L		10/09/18 12:28	10/11/18 20:39	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/09/18 12:28	10/11/18 20:39	1
2-Nitroaniline	ND		9.8	2.1	ug/L		10/09/18 12:28	10/11/18 20:39	1
3-Nitroaniline	ND		9.8	1.8	ug/L		10/09/18 12:28	10/11/18 20:39	1
4-Nitroaniline	ND		9.8	2.4	ug/L		10/09/18 12:28	10/11/18 20:39	1
Nitrobenzene	ND		9.8	0.54	ug/L		10/09/18 12:28	10/11/18 20:39	1
2-Nitrophenol	ND		9.8	0.63	ug/L		10/09/18 12:28	10/11/18 20:39	1
4-Nitrophenol	ND		9.8	2.0	ug/L		10/09/18 12:28	10/11/18 20:39	1
N-Nitrosodimethylamine	ND		9.8	3.4	ug/L		10/09/18 12:28	10/11/18 20:39	1

Client Sample ID: MW3-ROX-100518

Lab Sample ID: 400-160226-3

Date Collected: 10/05/18 09:00
Date Received: 10/06/18 08:31

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.8	3.2	ug/L		10/09/18 12:28	10/11/18 20:39	1
N-Nitrosodiphenylamine	ND		9.8	0.46	ug/L		10/09/18 12:28	10/11/18 20:39	1
Pentachlorophenol	ND		20	1.8	ug/L		10/09/18 12:28	10/11/18 20:39	1
Phenol	ND		9.8	2.5	ug/L		10/09/18 12:28	10/11/18 20:39	1
Pyridine	ND		9.8	3.1	ug/L		10/09/18 12:28	10/11/18 20:39	1
Quinoline	ND	F2	9.8	5.9	ug/L		10/09/18 12:28	10/11/18 20:39	1
2,4,5-Trichlorophenol	ND		9.8	3.6	ug/L		10/09/18 12:28	10/11/18 20:39	1
2,4,6-Trichlorophenol	ND		9.8	3.4	ug/L		10/09/18 12:28	10/11/18 20:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*40*		*34 - 120*	*10/09/18 12:28*	*10/11/18 20:39*	*1*
2-Fluorophenol	*23*		*10 - 120*	*10/09/18 12:28*	*10/11/18 20:39*	*1*
Nitrobenzene-d5	*43*		*27 - 120*	*10/09/18 12:28*	*10/11/18 20:39*	*1*
Phenol-d5	*36*		*10 - 120*	*10/09/18 12:28*	*10/11/18 20:39*	*1*
Terphenyl-d14	*40*	*X*	*53 - 125*	*10/09/18 12:28*	*10/11/18 20:39*	*1*
2,4,6-Tribromophenol	*46*		*15 - 135*	*10/09/18 12:28*	*10/11/18 20:39*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND	F1	0.030	0.0055	ug/L		10/18/18 14:46	10/19/18 10:59	1
1,2-Dibromoethane	ND	F1	0.020	0.0050	ug/L		10/18/18 14:46	10/19/18 10:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*120*	*p*	*51 - 149*	*10/18/18 14:46*	*10/19/18 10:59*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160226-1

Client Sample ID: MW16-ROX-100518
Date Collected: 10/05/18 09:55
Date Received: 10/06/18 08:31

Lab Sample ID: 400-160226-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/16/18 21:20	1
Acrolein	ND		20	10	ug/L			10/16/18 21:20	1
Acrylonitrile	ND		10	2.8	ug/L			10/16/18 21:20	1
Benzene	ND		1.0	0.38	ug/L			10/16/18 21:20	1
Bromobenzene	ND		1.0	0.54	ug/L			10/16/18 21:20	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/16/18 21:20	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/16/18 21:20	1
Bromoform	ND		5.0	0.71	ug/L			10/16/18 21:20	1
Bromomethane	ND		1.0	0.98	ug/L			10/16/18 21:20	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/16/18 21:20	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/16/18 21:20	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/16/18 21:20	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/16/18 21:20	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/16/18 21:20	1
Chloroethane	ND		1.0	0.76	ug/L			10/16/18 21:20	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/16/18 21:20	1
Chloroform	ND		1.0	0.60	ug/L			10/16/18 21:20	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/16/18 21:20	1
Chloromethane	ND		1.0	0.83	ug/L			10/16/18 21:20	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/16/18 21:20	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/16/18 21:20	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/16/18 21:20	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/16/18 21:20	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/16/18 21:20	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/16/18 21:20	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/16/18 21:20	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/16/18 21:20	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/16/18 21:20	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/16/18 21:20	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/16/18 21:20	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/16/18 21:20	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/16/18 21:20	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/16/18 21:20	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/16/18 21:20	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/16/18 21:20	1
2-Hexanone	ND		25	3.1	ug/L			10/16/18 21:20	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/16/18 21:20	1
Methylene bromide	ND		5.0	0.59	ug/L			10/16/18 21:20	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/16/18 21:20	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/16/18 21:20	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/16/18 21:20	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/16/18 21:20	1
Naphthalene	ND		1.0	1.0	ug/L			10/16/18 21:20	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/16/18 21:20	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/16/18 21:20	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/16/18 21:20	1
o-Xylene	ND		5.0	0.60	ug/L			10/16/18 21:20	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/16/18 21:20	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/16/18 21:20	1

Client Sample ID: MW16-ROX-100518

Lab Sample ID: 400-160226-4

Date Collected: 10/05/18 09:55
Date Received: 10/06/18 08:31

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/16/18 21:20	1
Styrene	ND		1.0	1.0	ug/L			10/16/18 21:20	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/16/18 21:20	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/16/18 21:20	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/16/18 21:20	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/16/18 21:20	1
Toluene	ND		1.0	0.70	ug/L			10/16/18 21:20	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/16/18 21:20	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/16/18 21:20	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/16/18 21:20	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/16/18 21:20	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/16/18 21:20	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/16/18 21:20	1
Trichloroethene	ND		1.0	0.50	ug/L			10/16/18 21:20	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/16/18 21:20	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/16/18 21:20	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/16/18 21:20	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/16/18 21:20	1
Vinyl acetate	ND		25	2.0	ug/L			10/16/18 21:20	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/16/18 21:20	1
Xylenes, Total	ND		10	1.6	ug/L			10/16/18 21:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*78 - 118*		*10/16/18 21:20*	*1*
Dibromofluoromethane	*98*		*81 - 121*		*10/16/18 21:20*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*10/16/18 21:20*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 22:09	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 22:09	1
Anthracene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 22:09	1
Benzo[a]anthracene	ND		0.20	0.039	ug/L		10/09/18 12:28	10/11/18 22:09	1
Benzo[a]pyrene	ND		0.20	0.039	ug/L		10/09/18 12:28	10/11/18 22:09	1
Benzo[b]fluoranthene	ND		0.20	0.039	ug/L		10/09/18 12:28	10/11/18 22:09	1
Benzo[g,h,i]perylene	ND		0.20	0.039	ug/L		10/09/18 12:28	10/11/18 22:09	1
Benzo[k]fluoranthene	ND		0.20	0.039	ug/L		10/09/18 12:28	10/11/18 22:09	1
Chrysene	ND		0.20	0.039	ug/L		10/09/18 12:28	10/11/18 22:09	1
Dibenz(a,h)anthracene	ND		0.20	0.039	ug/L		10/09/18 12:28	10/11/18 22:09	1
Fluoranthene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 22:09	1
Fluorene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 22:09	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.039	ug/L		10/09/18 12:28	10/11/18 22:09	1
Phenanthrene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 22:09	1
Pyrene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 22:09	1
1-Methylnaphthalene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 22:09	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 22:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*55*		*33 - 138*	*10/09/18 12:28*	*10/11/18 22:09*	*1*
2-Fluorobiphenyl	*42*		*15 - 122*	*10/09/18 12:28*	*10/11/18 22:09*	*1*

Client Sample ID: MW16-ROX-100518

Lab Sample ID: 400-160226-4
Matrix: Water

Date Collected: 10/05/18 09:55
Date Received: 10/06/18 08:31

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	*49*		*19 - 130*	*10/09/18 12:28*	*10/11/18 22:09*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.8	3.7	ug/L		10/09/18 12:28	10/11/18 21:00	1
Benzenethiol	ND	* UJ	9.8	1.7	ug/L		10/09/18 12:28	10/11/18 21:00	1
Benzoic acid	ND		29	7.1	ug/L		10/09/18 12:28	10/11/18 21:00	1
Benzyl alcohol	ND		9.8	2.0	ug/L		10/09/18 12:28	10/11/18 21:00	1
Bis(2-chloroethoxy)methane	ND		9.8	0.67	ug/L		10/09/18 12:28	10/11/18 21:00	1
Bis(2-chloroethyl)ether	ND		9.8	0.72	ug/L		10/09/18 12:28	10/11/18 21:00	1
bis (2-chloroisopropyl) ether	ND		9.8	0.79	ug/L		10/09/18 12:28	10/11/18 21:00	1
Bis(2-ethylhexyl) phthalate	ND		9.8	2.2	ug/L		10/09/18 12:28	10/11/18 21:00	1
4-Bromophenyl phenyl ether	ND		9.8	0.31	ug/L		10/09/18 12:28	10/11/18 21:00	1
Butyl benzyl phthalate	ND		9.8	0.67	ug/L		10/09/18 12:28	10/11/18 21:00	1
4-Chloroaniline	ND		9.8	3.3	ug/L		10/09/18 12:28	10/11/18 21:00	1
4-Chloro-3-methylphenol	ND		9.8	3.7	ug/L		10/09/18 12:28	10/11/18 21:00	1
2-Chloronaphthalene	ND		9.8	0.51	ug/L		10/09/18 12:28	10/11/18 21:00	1
2-Chlorophenol	ND		9.8	2.1	ug/L		10/09/18 12:28	10/11/18 21:00	1
4-Chlorophenyl phenyl ether	ND		9.8	2.0	ug/L		10/09/18 12:28	10/11/18 21:00	1
Dibenz[a,h]acridine	ND		9.8	2.9	ug/L		10/09/18 12:28	10/11/18 21:00	1
Dibenzofuran	ND		9.8	0.51	ug/L		10/09/18 12:28	10/11/18 21:00	1
3,3'-Dichlorobenzidine	ND		9.8	2.5	ug/L		10/09/18 12:28	10/11/18 21:00	1
2,4-Dichlorophenol	ND		9.8	2.9	ug/L		10/09/18 12:28	10/11/18 21:00	1
Diethyl phthalate	ND		9.8	0.68	ug/L		10/09/18 12:28	10/11/18 21:00	1
2,4-Dimethylphenol	ND		9.8	3.4	ug/L		10/09/18 12:28	10/11/18 21:00	1
Dimethyl phthalate	ND		9.8	0.59	ug/L		10/09/18 12:28	10/11/18 21:00	1
Di-n-butyl phthalate	ND		9.8	2.6	ug/L		10/09/18 12:28	10/11/18 21:00	1
4,6-Dinitro-ortho-cresol	ND		9.8	2.0	ug/L		10/09/18 12:28	10/11/18 21:00	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		10/09/18 12:28	10/11/18 21:00	1
2,4-Dinitrotoluene	ND		9.8	1.9	ug/L		10/09/18 12:28	10/11/18 21:00	1
2,6-Dinitrotoluene	ND		9.8	1.9	ug/L		10/09/18 12:28	10/11/18 21:00	1
Di-n-octyl phthalate	ND		9.8	0.43	ug/L		10/09/18 12:28	10/11/18 21:00	1
1,4-Dioxane	ND		9.8	0.98	ug/L		10/09/18 12:28	10/11/18 21:00	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.8	0.98	ug/L		10/09/18 12:28	10/11/18 21:00	1
Hexachlorobenzene	ND		9.8	0.24	ug/L		10/09/18 12:28	10/11/18 21:00	1
Hexachlorocyclopentadiene	ND		20	2.5	ug/L		10/09/18 12:28	10/11/18 21:00	1
Hexachloroethane	ND		9.8	4.1	ug/L		10/09/18 12:28	10/11/18 21:00	1
Indene	ND		9.8	0.98	ug/L		10/09/18 12:28	10/11/18 21:00	1
Isophorone	ND		9.8	0.56	ug/L		10/09/18 12:28	10/11/18 21:00	1
2-Methylphenol	ND		9.8	1.8	ug/L		10/09/18 12:28	10/11/18 21:00	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/09/18 12:28	10/11/18 21:00	1
2-Nitroaniline	ND		9.8	2.1	ug/L		10/09/18 12:28	10/11/18 21:00	1
3-Nitroaniline	ND		9.8	1.8	ug/L		10/09/18 12:28	10/11/18 21:00	1
4-Nitroaniline	ND		9.8	2.4	ug/L		10/09/18 12:28	10/11/18 21:00	1
Nitrobenzene	ND		9.8	0.54	ug/L		10/09/18 12:28	10/11/18 21:00	1
2-Nitrophenol	ND		9.8	0.63	ug/L		10/09/18 12:28	10/11/18 21:00	1
4-Nitrophenol	ND		9.8	2.0	ug/L		10/09/18 12:28	10/11/18 21:00	1
N-Nitrosodimethylamine	ND		9.8	3.4	ug/L		10/09/18 12:28	10/11/18 21:00	1

Client Sample ID: MW16-ROX-100518
Date Collected: 10/05/18 09:55
Date Received: 10/06/18 08:31

Lab Sample ID: 400-160226-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.8	3.2	ug/L		10/09/18 12:28	10/11/18 21:00	1
N-Nitrosodiphenylamine	ND		9.8	0.46	ug/L		10/09/18 12:28	10/11/18 21:00	1
Pentachlorophenol	ND		20	1.8	ug/L		10/09/18 12:28	10/11/18 21:00	1
Phenol	ND		9.8	2.5	ug/L		10/09/18 12:28	10/11/18 21:00	1
Pyridine	ND		9.8	3.1	ug/L		10/09/18 12:28	10/11/18 21:00	1
Quinoline	ND		9.8	5.9	ug/L		10/09/18 12:28	10/11/18 21:00	1
2,4,5-Trichlorophenol	ND		9.8	3.6	ug/L		10/09/18 12:28	10/11/18 21:00	1
2,4,6-Trichlorophenol	ND		9.8	3.4	ug/L		10/09/18 12:28	10/11/18 21:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*48*		*34 - 120*	*10/09/18 12:28*	*10/11/18 21:00*	*1*
2-Fluorophenol	*42*		*10 - 120*	*10/09/18 12:28*	*10/11/18 21:00*	*1*
Nitrobenzene-d5	*50*		*27 - 120*	*10/09/18 12:28*	*10/11/18 21:00*	*1*
Phenol-d5	*50*		*10 - 120*	*10/09/18 12:28*	*10/11/18 21:00*	*1*
Terphenyl-d14	*51*	*X*	*53 - 125*	*10/09/18 12:28*	*10/11/18 21:00*	*1*
2,4,6-Tribromophenol	*49*		*15 - 135*	*10/09/18 12:28*	*10/11/18 21:00*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.031	0.0056	ug/L		10/18/18 14:46	10/19/18 19:00	1
1,2-Dibromoethane	ND		0.020	0.0051	ug/L		10/18/18 14:46	10/19/18 19:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*106*	*p*	*51 - 149*	*10/18/18 14:46*	*10/19/18 19:00*	*1*

Client Sample ID: MW24-ROX-100518
Date Collected: 10/05/18 10:35
Date Received: 10/06/18 08:31

Lab Sample ID: 400-160226-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/16/18 21:44	1
Acrolein	ND		20	10	ug/L			10/16/18 21:44	1
Acrylonitrile	ND		10	2.8	ug/L			10/16/18 21:44	1
Benzene	ND		1.0	0.38	ug/L			10/16/18 21:44	1
Bromobenzene	ND		1.0	0.54	ug/L			10/16/18 21:44	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/16/18 21:44	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/16/18 21:44	1
Bromoform	ND		5.0	0.71	ug/L			10/16/18 21:44	1
Bromomethane	ND		1.0	0.98	ug/L			10/16/18 21:44	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/16/18 21:44	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/16/18 21:44	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/16/18 21:44	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/16/18 21:44	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/16/18 21:44	1
Chloroethane	ND		1.0	0.76	ug/L			10/16/18 21:44	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/16/18 21:44	1
Chloroform	ND		1.0	0.60	ug/L			10/16/18 21:44	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/16/18 21:44	1
Chloromethane	ND		1.0	0.83	ug/L			10/16/18 21:44	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/16/18 21:44	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/16/18 21:44	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/16/18 21:44	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/16/18 21:44	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/16/18 21:44	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/16/18 21:44	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/16/18 21:44	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/16/18 21:44	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/16/18 21:44	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/16/18 21:44	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/16/18 21:44	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/16/18 21:44	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/16/18 21:44	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/16/18 21:44	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/16/18 21:44	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/16/18 21:44	1
2-Hexanone	ND		25	3.1	ug/L			10/16/18 21:44	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/16/18 21:44	1
Methylene bromide	ND		5.0	0.59	ug/L			10/16/18 21:44	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/16/18 21:44	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/16/18 21:44	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/16/18 21:44	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/16/18 21:44	1
Naphthalene	ND		1.0	1.0	ug/L			10/16/18 21:44	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/16/18 21:44	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/16/18 21:44	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/16/18 21:44	1
o-Xylene	ND		5.0	0.60	ug/L			10/16/18 21:44	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/16/18 21:44	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/16/18 21:44	1

Client Sample ID: MW24-ROX-100518

Lab Sample ID: 400-160226-5
Matrix: Water

Date Collected: 10/05/18 10:35
Date Received: 10/06/18 08:31

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/16/18 21:44	1
Styrene	ND		1.0	1.0	ug/L			10/16/18 21:44	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/16/18 21:44	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/16/18 21:44	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/16/18 21:44	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/16/18 21:44	1
Toluene	ND		1.0	0.70	ug/L			10/16/18 21:44	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/16/18 21:44	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/16/18 21:44	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/16/18 21:44	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/16/18 21:44	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/16/18 21:44	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/16/18 21:44	1
Trichloroethene	ND		1.0	0.50	ug/L			10/16/18 21:44	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/16/18 21:44	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/16/18 21:44	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/16/18 21:44	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/16/18 21:44	1
Vinyl acetate	ND		25	2.0	ug/L			10/16/18 21:44	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/16/18 21:44	1
Xylenes, Total	ND		10	1.6	ug/L			10/16/18 21:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*78 - 118*		*10/16/18 21:44*	*1*
Dibromofluoromethane	*100*		*81 - 121*		*10/16/18 21:44*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*10/16/18 21:44*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.19	0.019	ug/L		10/09/18 12:28	10/11/18 22:26	1
Acenaphthylene	ND		0.19	0.019	ug/L		10/09/18 12:28	10/11/18 22:26	1
Anthracene	ND		0.19	0.019	ug/L		10/09/18 12:28	10/11/18 22:26	1
Benzo[a]anthracene	ND		0.19	0.039	ug/L		10/09/18 12:28	10/11/18 22:26	1
Benzo[a]pyrene	ND		0.19	0.039	ug/L		10/09/18 12:28	10/11/18 22:26	1
Benzo[b]fluoranthene	ND		0.19	0.039	ug/L		10/09/18 12:28	10/11/18 22:26	1
Benzo[g,h,i]perylene	ND		0.19	0.039	ug/L		10/09/18 12:28	10/11/18 22:26	1
Benzo[k]fluoranthene	ND		0.19	0.039	ug/L		10/09/18 12:28	10/11/18 22:26	1
Chrysene	ND		0.19	0.039	ug/L		10/09/18 12:28	10/11/18 22:26	1
Dibenz(a,h)anthracene	ND		0.19	0.039	ug/L		10/09/18 12:28	10/11/18 22:26	1
Fluoranthene	ND		0.19	0.019	ug/L		10/09/18 12:28	10/11/18 22:26	1
Fluorene	ND		0.19	0.020	ug/L		10/09/18 12:28	10/11/18 22:26	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.039	ug/L		10/09/18 12:28	10/11/18 22:26	1
Phenanthrene	ND		0.19	0.019	ug/L		10/09/18 12:28	10/11/18 22:26	1
Pyrene	ND		0.19	0.019	ug/L		10/09/18 12:28	10/11/18 22:26	1
1-Methylnaphthalene	ND		0.19	0.019	ug/L		10/09/18 12:28	10/11/18 22:26	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		10/09/18 12:28	10/11/18 22:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*57*		*33 - 138*	*10/09/18 12:28*	*10/11/18 22:26*	*1*
2-Fluorobiphenyl	*46*		*15 - 122*	*10/09/18 12:28*	*10/11/18 22:26*	*1*

Client Sample ID: MW24-ROX-100518
Date Collected: 10/05/18 10:35
Date Received: 10/06/18 08:31

Lab Sample ID: 400-160226-5
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	*52*		*19 - 130*	*10/09/18 12:28*	*10/11/18 22:26*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.7	3.7	ug/L		10/09/18 12:28	10/11/18 21:22	1
Benzenethiol	ND	* UJ	9.7	1.6	ug/L		10/09/18 12:28	10/11/18 21:22	1
Benzoic acid	ND		29	7.1	ug/L		10/09/18 12:28	10/11/18 21:22	1
Benzyl alcohol	ND		9.7	1.9	ug/L		10/09/18 12:28	10/11/18 21:22	1
Bis(2-chloroethoxy)methane	ND		9.7	0.67	ug/L		10/09/18 12:28	10/11/18 21:22	1
Bis(2-chloroethyl)ether	ND		9.7	0.72	ug/L		10/09/18 12:28	10/11/18 21:22	1
bis (2-chloroisopropyl) ether	ND		9.7	0.78	ug/L		10/09/18 12:28	10/11/18 21:22	1
Bis(2-ethylhexyl) phthalate	ND		9.7	2.2	ug/L		10/09/18 12:28	10/11/18 21:22	1
4-Bromophenyl phenyl ether	ND		9.7	0.31	ug/L		10/09/18 12:28	10/11/18 21:22	1
Butyl benzyl phthalate	ND		9.7	0.67	ug/L		10/09/18 12:28	10/11/18 21:22	1
4-Chloroaniline	ND		9.7	3.3	ug/L		10/09/18 12:28	10/11/18 21:22	1
4-Chloro-3-methylphenol	ND		9.7	3.7	ug/L		10/09/18 12:28	10/11/18 21:22	1
2-Chloronaphthalene	ND		9.7	0.50	ug/L		10/09/18 12:28	10/11/18 21:22	1
2-Chlorophenol	ND		9.7	2.1	ug/L		10/09/18 12:28	10/11/18 21:22	1
4-Chlorophenyl phenyl ether	ND		9.7	1.9	ug/L		10/09/18 12:28	10/11/18 21:22	1
Dibenz[a,h]acridine	ND		9.7	2.9	ug/L		10/09/18 12:28	10/11/18 21:22	1
Dibenzofuran	ND		9.7	0.50	ug/L		10/09/18 12:28	10/11/18 21:22	1
3,3'-Dichlorobenzidine	ND		9.7	2.5	ug/L		10/09/18 12:28	10/11/18 21:22	1
2,4-Dichlorophenol	ND		9.7	2.9	ug/L		10/09/18 12:28	10/11/18 21:22	1
Diethyl phthalate	ND		9.7	0.68	ug/L		10/09/18 12:28	10/11/18 21:22	1
2,4-Dimethylphenol	ND		9.7	3.4	ug/L		10/09/18 12:28	10/11/18 21:22	1
Dimethyl phthalate	ND		9.7	0.58	ug/L		10/09/18 12:28	10/11/18 21:22	1
Di-n-butyl phthalate	ND		9.7	2.6	ug/L		10/09/18 12:28	10/11/18 21:22	1
4,6-Dinitro-ortho-cresol	ND		9.7	1.9	ug/L		10/09/18 12:28	10/11/18 21:22	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		10/09/18 12:28	10/11/18 21:22	1
2,4-Dinitrotoluene	ND		9.7	1.8	ug/L		10/09/18 12:28	10/11/18 21:22	1
2,6-Dinitrotoluene	ND		9.7	1.8	ug/L		10/09/18 12:28	10/11/18 21:22	1
Di-n-octyl phthalate	ND		9.7	0.43	ug/L		10/09/18 12:28	10/11/18 21:22	1
1,4-Dioxane	ND		9.7	0.97	ug/L		10/09/18 12:28	10/11/18 21:22	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.7	0.97	ug/L		10/09/18 12:28	10/11/18 21:22	1
Hexachlorobenzene	ND		9.7	0.24	ug/L		10/09/18 12:28	10/11/18 21:22	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		10/09/18 12:28	10/11/18 21:22	1
Hexachloroethane	ND		9.7	4.1	ug/L		10/09/18 12:28	10/11/18 21:22	1
Indene	ND		9.7	0.97	ug/L		10/09/18 12:28	10/11/18 21:22	1
Isophorone	ND		9.7	0.55	ug/L		10/09/18 12:28	10/11/18 21:22	1
2-Methylphenol	ND		9.7	1.7	ug/L		10/09/18 12:28	10/11/18 21:22	1
3 & 4 Methylphenol	ND		19	1.0	ug/L		10/09/18 12:28	10/11/18 21:22	1
2-Nitroaniline	ND		9.7	2.1	ug/L		10/09/18 12:28	10/11/18 21:22	1
3-Nitroaniline	ND		9.7	1.7	ug/L		10/09/18 12:28	10/11/18 21:22	1
4-Nitroaniline	ND		9.7	2.4	ug/L		10/09/18 12:28	10/11/18 21:22	1
Nitrobenzene	ND		9.7	0.53	ug/L		10/09/18 12:28	10/11/18 21:22	1
2-Nitrophenol	ND		9.7	0.63	ug/L		10/09/18 12:28	10/11/18 21:22	1
4-Nitrophenol	ND		9.7	2.0	ug/L		10/09/18 12:28	10/11/18 21:22	1
N-Nitrosodimethylamine	ND		9.7	3.4	ug/L		10/09/18 12:28	10/11/18 21:22	1

Client Sample ID: MW24-ROX-100518
Date Collected: 10/05/18 10:35
Date Received: 10/06/18 08:31

Lab Sample ID: 400-160226-5
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.7	3.2	ug/L		10/09/18 12:28	10/11/18 21:22	1
N-Nitrosodiphenylamine	ND		9.7	0.46	ug/L		10/09/18 12:28	10/11/18 21:22	1
Pentachlorophenol	ND		19	1.8	ug/L		10/09/18 12:28	10/11/18 21:22	1
Phenol	ND		9.7	2.5	ug/L		10/09/18 12:28	10/11/18 21:22	1
Pyridine	ND		9.7	3.1	ug/L		10/09/18 12:28	10/11/18 21:22	1
Quinoline	ND		9.7	5.8	ug/L		10/09/18 12:28	10/11/18 21:22	1
2,4,5-Trichlorophenol	ND		9.7	3.6	ug/L		10/09/18 12:28	10/11/18 21:22	1
2,4,6-Trichlorophenol	ND		9.7	3.4	ug/L		10/09/18 12:28	10/11/18 21:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*43*		*34 - 120*	*10/09/18 12:28*	*10/11/18 21:22*	*1*
2-Fluorophenol	*11*		*10 - 120*	*10/09/18 12:28*	*10/11/18 21:22*	*1*
Nitrobenzene-d5	*44*		*27 - 120*	*10/09/18 12:28*	*10/11/18 21:22*	*1*
Phenol-d5	*14*		*10 - 120*	*10/09/18 12:28*	*10/11/18 21:22*	*1*
Terphenyl-d14	*42*	*X*	*53 - 125*	*10/09/18 12:28*	*10/11/18 21:22*	*1*
2,4,6-Tribromophenol	*15*		*15 - 135*	*10/09/18 12:28*	*10/11/18 21:22*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0055	ug/L		10/18/18 14:46	10/19/18 19:33	1
1,2-Dibromoethane	ND		0.020	0.0050	ug/L		10/18/18 14:46	10/19/18 19:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*123*	*p*	*51 - 149*	*10/18/18 14:46*	*10/19/18 19:33*	*1*

Client Sample ID: P54-ROX-100518
Date Collected: 10/05/18 11:40
Date Received: 10/06/18 08:31

Lab Sample ID: 400-160226-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/16/18 22:08	1
Acrolein	ND		20	10	ug/L			10/16/18 22:08	1
Acrylonitrile	ND		10	2.8	ug/L			10/16/18 22:08	1
Benzene	ND		1.0	0.38	ug/L			10/16/18 22:08	1
Bromobenzene	ND		1.0	0.54	ug/L			10/16/18 22:08	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/16/18 22:08	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/16/18 22:08	1
Bromoform	ND		5.0	0.71	ug/L			10/16/18 22:08	1
Bromomethane	ND		1.0	0.98	ug/L			10/16/18 22:08	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/16/18 22:08	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/16/18 22:08	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/16/18 22:08	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/16/18 22:08	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/16/18 22:08	1
Chloroethane	ND		1.0	0.76	ug/L			10/16/18 22:08	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/16/18 22:08	1
Chloroform	ND		1.0	0.60	ug/L			10/16/18 22:08	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/16/18 22:08	1
Chloromethane	ND		1.0	0.83	ug/L			10/16/18 22:08	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/16/18 22:08	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/16/18 22:08	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/16/18 22:08	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/16/18 22:08	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/16/18 22:08	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/16/18 22:08	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/16/18 22:08	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/16/18 22:08	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/16/18 22:08	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/16/18 22:08	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/16/18 22:08	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/16/18 22:08	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/16/18 22:08	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/16/18 22:08	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/16/18 22:08	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/16/18 22:08	1
2-Hexanone	ND		25	3.1	ug/L			10/16/18 22:08	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/16/18 22:08	1
Methylene bromide	ND		5.0	0.59	ug/L			10/16/18 22:08	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/16/18 22:08	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/16/18 22:08	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/16/18 22:08	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/16/18 22:08	1
Naphthalene	ND		1.0	1.0	ug/L			10/16/18 22:08	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/16/18 22:08	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/16/18 22:08	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/16/18 22:08	1
o-Xylene	ND		5.0	0.60	ug/L			10/16/18 22:08	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/16/18 22:08	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/16/18 22:08	1

Client Sample ID: P54-ROX-100518

Date Collected: 10/05/18 11:40
Date Received: 10/06/18 08:31

Lab Sample ID: 400-160226-6

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/16/18 22:08	1
Styrene	ND		1.0	1.0	ug/L			10/16/18 22:08	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/16/18 22:08	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/16/18 22:08	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/16/18 22:08	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/16/18 22:08	1
Toluene	ND		1.0	0.70	ug/L			10/16/18 22:08	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/16/18 22:08	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/16/18 22:08	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/16/18 22:08	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/16/18 22:08	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/16/18 22:08	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/16/18 22:08	1
Trichloroethene	ND		1.0	0.50	ug/L			10/16/18 22:08	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/16/18 22:08	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/16/18 22:08	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/16/18 22:08	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/16/18 22:08	1
Vinyl acetate	ND		25	2.0	ug/L			10/16/18 22:08	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/16/18 22:08	1
Xylenes, Total	ND		10	1.6	ug/L			10/16/18 22:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*78 - 118*		*10/16/18 22:08*	*1*
Dibromofluoromethane	*99*		*81 - 121*		*10/16/18 22:08*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*10/16/18 22:08*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 22:43	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 22:43	1
Anthracene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 22:43	1
Benzo[a]anthracene	ND		0.20	0.039	ug/L		10/09/18 12:28	10/11/18 22:43	1
Benzo[a]pyrene	ND		0.20	0.039	ug/L		10/09/18 12:28	10/11/18 22:43	1
Benzo[b]fluoranthene	ND		0.20	0.039	ug/L		10/09/18 12:28	10/11/18 22:43	1
Benzo[g,h,i]perylene	ND		0.20	0.039	ug/L		10/09/18 12:28	10/11/18 22:43	1
Benzo[k]fluoranthene	ND		0.20	0.039	ug/L		10/09/18 12:28	10/11/18 22:43	1
Chrysene	ND		0.20	0.039	ug/L		10/09/18 12:28	10/11/18 22:43	1
Dibenz(a,h)anthracene	ND		0.20	0.039	ug/L		10/09/18 12:28	10/11/18 22:43	1
Fluoranthene	0.022	J	0.20	0.020	ug/L		10/09/18 12:28	10/11/18 22:43	1
Fluorene	ND		0.20	0.021	ug/L		10/09/18 12:28	10/11/18 22:43	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.039	ug/L		10/09/18 12:28	10/11/18 22:43	1
Phenanthrene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 22:43	1
Pyrene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 22:43	1
1-Methylnaphthalene	0.028	J	0.20	0.020	ug/L		10/09/18 12:28	10/11/18 22:43	1
2-Methylnaphthalene	0.032	J	0.20	0.020	ug/L		10/09/18 12:28	10/11/18 22:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*47*		*33 - 138*	*10/09/18 12:28*	*10/11/18 22:43*	*1*
2-Fluorobiphenyl	*39*		*15 - 122*	*10/09/18 12:28*	*10/11/18 22:43*	*1*

Client Sample ID: P54-ROX-100518
Date Collected: 10/05/18 11:40
Date Received: 10/06/18 08:31

Lab Sample ID: 400-160226-6
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	45		19 - 130	10/09/18 12:28	10/11/18 22:43	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.8	3.7	ug/L		10/09/18 12:28	10/11/18 21:43	1
Benzenethiol	ND	* UJ	9.8	1.7	ug/L		10/09/18 12:28	10/11/18 21:43	1
Benzoic acid	ND		30	7.2	ug/L		10/09/18 12:28	10/11/18 21:43	1
Benzyl alcohol	ND		9.8	2.0	ug/L		10/09/18 12:28	10/11/18 21:43	1
Bis(2-chloroethoxy)methane	ND		9.8	0.68	ug/L		10/09/18 12:28	10/11/18 21:43	1
Bis(2-chloroethyl)ether	ND		9.8	0.73	ug/L		10/09/18 12:28	10/11/18 21:43	1
bis (2-chloroisopropyl) ether	ND		9.8	0.80	ug/L		10/09/18 12:28	10/11/18 21:43	1
Bis(2-ethylhexyl) phthalate	ND		9.8	2.2	ug/L		10/09/18 12:28	10/11/18 21:43	1
4-Bromophenyl phenyl ether	ND		9.8	0.31	ug/L		10/09/18 12:28	10/11/18 21:43	1
Butyl benzyl phthalate	ND		9.8	0.68	ug/L		10/09/18 12:28	10/11/18 21:43	1
4-Chloroaniline	ND		9.8	3.3	ug/L		10/09/18 12:28	10/11/18 21:43	1
4-Chloro-3-methylphenol	ND		9.8	3.7	ug/L		10/09/18 12:28	10/11/18 21:43	1
2-Chloronaphthalene	ND		9.8	0.51	ug/L		10/09/18 12:28	10/11/18 21:43	1
2-Chlorophenol	ND		9.8	2.2	ug/L		10/09/18 12:28	10/11/18 21:43	1
4-Chlorophenyl phenyl ether	ND		9.8	2.0	ug/L		10/09/18 12:28	10/11/18 21:43	1
Dibenz[a,h]acridine	ND		9.8	3.0	ug/L		10/09/18 12:28	10/11/18 21:43	1
Dibenzofuran	ND		9.8	0.51	ug/L		10/09/18 12:28	10/11/18 21:43	1
3,3'-Dichlorobenzidine	ND		9.8	2.6	ug/L		10/09/18 12:28	10/11/18 21:43	1
2,4-Dichlorophenol	ND		9.8	3.0	ug/L		10/09/18 12:28	10/11/18 21:43	1
Diethyl phthalate	ND		9.8	0.69	ug/L		10/09/18 12:28	10/11/18 21:43	1
2,4-Dimethylphenol	ND		9.8	3.4	ug/L		10/09/18 12:28	10/11/18 21:43	1
Dimethyl phthalate	ND		9.8	0.59	ug/L		10/09/18 12:28	10/11/18 21:43	1
Di-n-butyl phthalate	ND		9.8	2.7	ug/L		10/09/18 12:28	10/11/18 21:43	1
4,6-Dinitro-ortho-cresol	ND		9.8	2.0	ug/L		10/09/18 12:28	10/11/18 21:43	1
2,4-Dinitrophenol	ND		30	3.3	ug/L		10/09/18 12:28	10/11/18 21:43	1
2,4-Dinitrotoluene	ND		9.8	1.9	ug/L		10/09/18 12:28	10/11/18 21:43	1
2,6-Dinitrotoluene	ND		9.8	1.9	ug/L		10/09/18 12:28	10/11/18 21:43	1
Di-n-octyl phthalate	ND		9.8	0.43	ug/L		10/09/18 12:28	10/11/18 21:43	1
1,4-Dioxane	ND		9.8	0.98	ug/L		10/09/18 12:28	10/11/18 21:43	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.8	0.98	ug/L		10/09/18 12:28	10/11/18 21:43	1
Hexachlorobenzene	ND		9.8	0.25	ug/L		10/09/18 12:28	10/11/18 21:43	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		10/09/18 12:28	10/11/18 21:43	1
Hexachloroethane	ND		9.8	4.1	ug/L		10/09/18 12:28	10/11/18 21:43	1
Indene	ND		9.8	0.98	ug/L		10/09/18 12:28	10/11/18 21:43	1
Isophorone	ND		9.8	0.56	ug/L		10/09/18 12:28	10/11/18 21:43	1
2-Methylphenol	ND		9.8	1.8	ug/L		10/09/18 12:28	10/11/18 21:43	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/09/18 12:28	10/11/18 21:43	1
2-Nitroaniline	ND		9.8	2.2	ug/L		10/09/18 12:28	10/11/18 21:43	1
3-Nitroaniline	ND		9.8	1.8	ug/L		10/09/18 12:28	10/11/18 21:43	1
4-Nitroaniline	ND		9.8	2.4	ug/L		10/09/18 12:28	10/11/18 21:43	1
Nitrobenzene	ND		9.8	0.54	ug/L		10/09/18 12:28	10/11/18 21:43	1
2-Nitrophenol	ND		9.8	0.64	ug/L		10/09/18 12:28	10/11/18 21:43	1
4-Nitrophenol	ND		9.8	2.1	ug/L		10/09/18 12:28	10/11/18 21:43	1
N-Nitrosodimethylamine	ND		9.8	3.4	ug/L		10/09/18 12:28	10/11/18 21:43	1

Client Sample ID: P54-ROX-100518
Date Collected: 10/05/18 11:40
Date Received: 10/06/18 08:31

Lab Sample ID: 400-160226-6
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.8	3.2	ug/L		10/09/18 12:28	10/11/18 21:43	1
N-Nitrosodiphenylamine	ND		9.8	0.46	ug/L		10/09/18 12:28	10/11/18 21:43	1
Pentachlorophenol	ND		20	1.8	ug/L		10/09/18 12:28	10/11/18 21:43	1
Phenol	ND		9.8	2.6	ug/L		10/09/18 12:28	10/11/18 21:43	1
Pyridine	ND		9.8	3.1	ug/L		10/09/18 12:28	10/11/18 21:43	1
Quinoline	ND		9.8	5.9	ug/L		10/09/18 12:28	10/11/18 21:43	1
2,4,5-Trichlorophenol	ND		9.8	3.6	ug/L		10/09/18 12:28	10/11/18 21:43	1
2,4,6-Trichlorophenol	ND		9.8	3.4	ug/L		10/09/18 12:28	10/11/18 21:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*35*		*34 - 120*	*10/09/18 12:28*	*10/11/18 21:43*	*1*
2-Fluorophenol	*29*		*10 - 120*	*10/09/18 12:28*	*10/11/18 21:43*	*1*
Nitrobenzene-d5	*38*		*27 - 120*	*10/09/18 12:28*	*10/11/18 21:43*	*1*
Phenol-d5	*32*		*10 - 120*	*10/09/18 12:28*	*10/11/18 21:43*	*1*
Terphenyl-d14	*32*	*X*	*53 - 125*	*10/09/18 12:28*	*10/11/18 21:43*	*1*
2,4,6-Tribromophenol	*29*		*15 - 135*	*10/09/18 12:28*	*10/11/18 21:43*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND	*	0.030	0.0054	ug/L		10/19/18 17:50	10/19/18 22:52	1
1,2-Dibromoethane	ND	*	0.020	0.0049	ug/L		10/19/18 17:50	10/19/18 22:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*	*p*	*51 - 149*	*10/19/18 17:50*	*10/19/18 22:52*	*1*

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
*	LCS or LCSD is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
F1	MS and/or MSD Recovery is outside acceptance limits.
*	LCS or LCSD is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160226-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(78-118)	(81-121)	(80-120)
400-160226-2	TB-ROX-100518-8260	95	99	96
400-160226-3	MW3-ROX-100518	95	100	97
400-160226-3 MS	MW3-ROX-100518	96	100	97
400-160226-3 MSD	MW3-ROX-100518	96	103	96
400-160226-4	MW16-ROX-100518	94	98	96
400-160226-5	MW24-ROX-100518	94	100	96
400-160226-6	P54-ROX-100518	94	99	95
LCS 400-415685/1002	Lab Control Sample	94	101	94
MB 400-415685/5	Method Blank	92	100	96

Surrogate Legend

BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPHL	TBP
Lab Sample ID	Client Sample ID	(34-120)	(10-120)	(27-120)	(10-120)	(53-125)	(15-135)
400-160226-3	MW3-ROX-100518	40	23	43	36	40 X	46
400-160226-3 MS	MW3-ROX-100518	43	33	48	42	34 X	50
400-160226-3 MSD	MW3-ROX-100518	45	37	49	46	46 X	55
400-160226-4	MW16-ROX-100518	48	42	50	50	51 X	49
400-160226-5	MW24-ROX-100518	43	11	44	14	42 X	15
400-160226-6	P54-ROX-100518	35	29	38	32	32 X	29
LCS 400-414706/2-A	Lab Control Sample	34	32	38	35	33 X	38
LCS 400-414706/3-A	Lab Control Sample	42	33	45	44	43 X	45
LCSD 400-414706/4-A	Lab Control Sample Dup	42	34	46	44	42 X	42
MB 400-414706/1-A	Method Blank	40	33	44	42	39 X	43

Surrogate Legend

FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPHL = Terphenyl-d14
TBP = 2,4,6-Tribromophenol

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		TPHL	FBP	NBZ
Lab Sample ID	Client Sample ID	(33-138)	(15-122)	(19-130)
400-160226-3	MW3-ROX-100518	51	40	46
400-160226-3 MS	MW3-ROX-100518	44	50	325 X
400-160226-3 MSD	MW3-ROX-100518	56	52	313 X
400-160226-4	MW16-ROX-100518	55	42	49

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160226-1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	TPHL (33-138)	FBP (15-122)	NBZ (19-130)
400-160226-5	MW24-ROX-100518	57	46	52
400-160226-6	P54-ROX-100518	47	39	45
LCS 400-414706/2-A	Lab Control Sample	50	42	271 X
MB 400-414706/1-A	Method Blank	53	41	50

Surrogate Legend

TPHL = Terphenyl-d14
FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5

Method: 8011 - EDB and DBCP in Water by Microextraction

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	BFB2 (51-149)
400-160226-1	TB-ROX-100518-8011	109 p
400-160226-3	MW3-ROX-100518	120 p
400-160226-3 MS	MW3-ROX-100518	122 p
400-160226-3 MSD	MW3-ROX-100518	114 p
400-160226-4	MW16-ROX-100518	106 p
400-160226-5	MW24-ROX-100518	123 p
400-160226-6	P54-ROX-100518	93 p
LCS 400-415996/2-A	Lab Control Sample	110
LCS 400-416188/2-A	Lab Control Sample	105
LCSD 400-415996/3-A	Lab Control Sample Dup	115
LCSD 400-416188/3-A	Lab Control Sample Dup	116
MB 400-415996/1-A	Method Blank	96
MB 400-416188/1-A	Method Blank	98

Surrogate Legend

BFB = 4-Bromofluorobenzene

Method Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160226-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL PEN
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	TAL PEN
8011	EDB and DBCP in Water by Microextraction	EPA	TAL PEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL PEN
5030B	Purge and Trap	SW846	TAL PEN
8011	Microextraction	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160226-1

Client Sample ID: TB-ROX-100518-8011

Lab Sample ID: 400-160226-1
Matrix: Water

Date Collected: 10/05/18 00:01
Date Received: 10/06/18 08:31

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			34.4 mL	35 mL	415996	10/18/18 14:46	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 10:29	DS	TAL PEN

Client Sample ID: TB-ROX-100518-8260

Lab Sample ID: 400-160226-2
Matrix: Water

Date Collected: 10/05/18 00:01
Date Received: 10/06/18 08:31

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	415685	10/16/18 19:20	CAR	TAL PEN

Client Sample ID: MW3-ROX-100518

Lab Sample ID: 400-160226-3
Matrix: Water

Date Collected: 10/05/18 09:00
Date Received: 10/06/18 08:31

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	415685	10/16/18 19:44	CAR	TAL PEN
Total/NA	Prep	3520C			1025.4 mL	1.0 mL	414706	10/09/18 12:28	JJA	TAL PEN
Total/NA	Analysis	8270D		1	0.4 mL	1.0 mL	415020	10/11/18 20:39	VC1	TAL PEN
Total/NA	Prep	3520C			1025.4 mL	1.0 mL	414706	10/09/18 12:28	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			415046	10/11/18 21:52	RM	TAL PEN
Total/NA	Prep	8011			35.1 mL	35 mL	415996	10/18/18 14:46	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 10:59	DS	TAL PEN

Client Sample ID: MW16-ROX-100518

Lab Sample ID: 400-160226-4
Matrix: Water

Date Collected: 10/05/18 09:55
Date Received: 10/06/18 08:31

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	415685	10/16/18 21:20	CAR	TAL PEN
Total/NA	Prep	3520C			1025.2 mL	1.0 mL	414706	10/09/18 12:28	JJA	TAL PEN
Total/NA	Analysis	8270D		1			415020	10/11/18 21:00	VC1	TAL PEN
Total/NA	Prep	3520C			1025.2 mL	1.0 mL	414706	10/09/18 12:28	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			415046	10/11/18 22:09	RM	TAL PEN
Total/NA	Prep	8011			34.4 mL	35 mL	415996	10/18/18 14:46	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 19:00	DS	TAL PEN

Client Sample ID: MW24-ROX-100518

Lab Sample ID: 400-160226-5
Matrix: Water

Date Collected: 10/05/18 10:35
Date Received: 10/06/18 08:31

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	415685	10/16/18 21:44	CAR	TAL PEN

Client Sample ID: MW24-ROX-100518

Lab Sample ID: 400-160226-5
Matrix: Water

Date Collected: 10/05/18 10:35
Date Received: 10/06/18 08:31

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1032.8 mL	1.0 mL	414706	10/09/18 12:28	JJA	TAL PEN
Total/NA	Analysis	8270D		1			415020	10/11/18 21:22	VC1	TAL PEN
Total/NA	Prep	3520C			1032.8 mL	1.0 mL	414706	10/09/18 12:28	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			415046	10/11/18 22:26	RM	TAL PEN
Total/NA	Prep	8011			35 mL	35 mL	415996	10/18/18 14:46	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 19:33	DS	TAL PEN

Client Sample ID: P54-ROX-100518

Lab Sample ID: 400-160226-6
Matrix: Water

Date Collected: 10/05/18 11:40
Date Received: 10/06/18 08:31

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	415685	10/16/18 22:08	CAR	TAL PEN
Total/NA	Prep	3520C			1016.4 mL	1.0 mL	414706	10/09/18 12:28	JJA	TAL PEN
Total/NA	Analysis	8270D		1			415020	10/11/18 21:43	VC1	TAL PEN
Total/NA	Prep	3520C			1016.4 mL	1.0 mL	414706	10/09/18 12:28	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			415046	10/11/18 22:43	RM	TAL PEN
Total/NA	Prep	8011			35.4 mL	35 mL	416188	10/19/18 17:50	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 22:52	DS	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-414706/1-A
Matrix: Water

Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	414706	10/09/18 12:28	JJA	TAL PEN
Total/NA	Analysis	8270D		1			415020	10/11/18 18:29	VC1	TAL PEN
Total/NA	Prep	3520C			1000 mL	1.0 mL	414706	10/09/18 12:28	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			415046	10/11/18 20:43	RM	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-415685/5
Matrix: Water

Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	415685	10/16/18 18:56	CAR	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-415996/1-A
Matrix: Water

Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	415996	10/18/18 14:46	DS	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-415996/1-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8011		1			416023	10/19/18 07:07	DS	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-416188/1-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	416188	10/19/18 17:50	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 21:13	DS	TAL PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-414706/2-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	414706	10/09/18 12:28	JJA	TAL PEN
Total/NA	Analysis	8270D		1			415020	10/11/18 19:34	VC1	TAL PEN
Total/NA	Prep	3520C			1000 mL	1.0 mL	414706	10/09/18 12:28	JJA	TAL PEN
Total/NA	Analysis	8270D LL		5			415046	10/11/18 21:00	RM	TAL PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-414706/3-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	414706	10/09/18 12:28	JJA	TAL PEN
Total/NA	Analysis	8270D		1			415020	10/11/18 18:51	VC1	TAL PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-415685/1002

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	415685	10/16/18 17:11	CAR	TAL PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-415996/2-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	415996	10/18/18 14:46	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 07:38	DS	TAL PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-416188/2-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	416188	10/19/18 17:50	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 21:46	DS	TAL PEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 400-414706/4-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	414706	10/09/18 12:28	JJA	TAL PEN
Total/NA	Analysis	8270D		1			415020	10/11/18 19:12	VC1	TAL PEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 400-415996/3-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	415996	10/18/18 14:46	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 08:10	DS	TAL PEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 400-416188/3-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	416188	10/19/18 17:50	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 22:20	DS	TAL PEN

Client Sample ID: MW3-ROX-100518

Lab Sample ID: 400-160226-3 MS

Date Collected: 10/05/18 09:00
Date Received: 10/06/18 08:31

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	415685	10/16/18 20:08	CAR	TAL PEN
Total/NA	Prep	3520C			1027 mL	1.0 mL	414706	10/09/18 12:28	JJA	TAL PEN
Total/NA	Analysis	8270D		1	0.4 mL	1.0 mL	415020	10/11/18 19:55	VC1	TAL PEN
Total/NA	Prep	3520C			1027 mL	1.0 mL	414706	10/09/18 12:28	JJA	TAL PEN
Total/NA	Analysis	8270D LL		5			415046	10/11/18 21:18	RM	TAL PEN
Total/NA	Prep	8011			35.2 mL	35 mL	415996	10/18/18 14:46	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 11:29	DS	TAL PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160226-1

Client Sample ID: MW3-ROX-100518
Date Collected: 10/05/18 09:00
Date Received: 10/06/18 08:31

Lab Sample ID: 400-160226-3 MSD
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	415685	10/16/18 20:32	CAR	TAL PEN
Total/NA	Prep	3520C			1040.3 mL	1.0 mL	414706	10/09/18 12:28	JJA	TAL PEN
Total/NA	Analysis	8270D		1	0.4 mL	1.0 mL	415020	10/11/18 20:17	VC1	TAL PEN
Total/NA	Prep	3520C			1040.3 mL	1.0 mL	414706	10/09/18 12:28	JJA	TAL PEN
Total/NA	Analysis	8270D LL		5			415046	10/11/18 21:35	RM	TAL PEN
Total/NA	Prep	8011			35.6 mL	35 mL	415996	10/18/18 14:46	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 12:00	DS	TAL PEN

Laboratory References:
TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

GC/MS VOA

Analysis Batch: 415685

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160226-2	TB-ROX-100518-8260	Total/NA	Water	8260B	
400-160226-3	MW3-ROX-100518	Total/NA	Water	8260B	
400-160226-4	MW16-ROX-100518	Total/NA	Water	8260B	
400-160226-5	MW24-ROX-100518	Total/NA	Water	8260B	
400-160226-6	P54-ROX-100518	Total/NA	Water	8260B	
MB 400-415685/5	Method Blank	Total/NA	Water	8260B	
LCS 400-415685/1002	Lab Control Sample	Total/NA	Water	8260B	
400-160226-3 MS	MW3-ROX-100518	Total/NA	Water	8260B	
400-160226-3 MSD	MW3-ROX-100518	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 414706

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160226-3	MW3-ROX-100518	Total/NA	Water	3520C	
400-160226-4	MW16-ROX-100518	Total/NA	Water	3520C	
400-160226-5	MW24-ROX-100518	Total/NA	Water	3520C	
400-160226-6	P54-ROX-100518	Total/NA	Water	3520C	
MB 400-414706/1-A	Method Blank	Total/NA	Water	3520C	
LCS 400-414706/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 400-414706/3-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-414706/4-A	Lab Control Sample Dup	Total/NA	Water	3520C	
400-160226-3 MS	MW3-ROX-100518	Total/NA	Water	3520C	
400-160226-3 MSD	MW3-ROX-100518	Total/NA	Water	3520C	

Analysis Batch: 415020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160226-3	MW3-ROX-100518	Total/NA	Water	8270D	414706
400-160226-4	MW16-ROX-100518	Total/NA	Water	8270D	414706
400-160226-5	MW24-ROX-100518	Total/NA	Water	8270D	414706
400-160226-6	P54-ROX-100518	Total/NA	Water	8270D	414706
MB 400-414706/1-A	Method Blank	Total/NA	Water	8270D	414706
LCS 400-414706/2-A	Lab Control Sample	Total/NA	Water	8270D	414706
LCS 400-414706/3-A	Lab Control Sample	Total/NA	Water	8270D	414706
LCSD 400-414706/4-A	Lab Control Sample Dup	Total/NA	Water	8270D	414706
400-160226-3 MS	MW3-ROX-100518	Total/NA	Water	8270D	414706
400-160226-3 MSD	MW3-ROX-100518	Total/NA	Water	8270D	414706

Analysis Batch: 415046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160226-3	MW3-ROX-100518	Total/NA	Water	8270D LL	414706
400-160226-4	MW16-ROX-100518	Total/NA	Water	8270D LL	414706
400-160226-5	MW24-ROX-100518	Total/NA	Water	8270D LL	414706
400-160226-6	P54-ROX-100518	Total/NA	Water	8270D LL	414706
MB 400-414706/1-A	Method Blank	Total/NA	Water	8270D LL	414706
LCS 400-414706/2-A	Lab Control Sample	Total/NA	Water	8270D LL	414706
400-160226-3 MS	MW3-ROX-100518	Total/NA	Water	8270D LL	414706
400-160226-3 MSD	MW3-ROX-100518	Total/NA	Water	8270D LL	414706

GC Semi VOA

Prep Batch: 415996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160226-1	TB-ROX-100518-8011	Total/NA	Water	8011	
400-160226-3	MW3-ROX-100518	Total/NA	Water	8011	
400-160226-4	MW16-ROX-100518	Total/NA	Water	8011	
400-160226-5	MW24-ROX-100518	Total/NA	Water	8011	
MB 400-415996/1-A	Method Blank	Total/NA	Water	8011	
LCS 400-415996/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 400-415996/3-A	Lab Control Sample Dup	Total/NA	Water	8011	
400-160226-3 MS	MW3-ROX-100518	Total/NA	Water	8011	
400-160226-3 MSD	MW3-ROX-100518	Total/NA	Water	8011	

Analysis Batch: 416023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160226-1	TB-ROX-100518-8011	Total/NA	Water	8011	415996
400-160226-3	MW3-ROX-100518	Total/NA	Water	8011	415996
400-160226-4	MW16-ROX-100518	Total/NA	Water	8011	415996
400-160226-5	MW24-ROX-100518	Total/NA	Water	8011	415996
400-160226-6	P54-ROX-100518	Total/NA	Water	8011	416188
MB 400-415996/1-A	Method Blank	Total/NA	Water	8011	415996
MB 400-416188/1-A	Method Blank	Total/NA	Water	8011	416188
LCS 400-415996/2-A	Lab Control Sample	Total/NA	Water	8011	415996
LCS 400-416188/2-A	Lab Control Sample	Total/NA	Water	8011	416188
LCSD 400-415996/3-A	Lab Control Sample Dup	Total/NA	Water	8011	415996
LCSD 400-416188/3-A	Lab Control Sample Dup	Total/NA	Water	8011	416188
400-160226-3 MS	MW3-ROX-100518	Total/NA	Water	8011	415996
400-160226-3 MSD	MW3-ROX-100518	Total/NA	Water	8011	415996

Prep Batch: 416188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160226-6	P54-ROX-100518	Total/NA	Water	8011	
MB 400-416188/1-A	Method Blank	Total/NA	Water	8011	
LCS 400-416188/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 400-416188/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-415685/5
Matrix: Water
Analysis Batch: 415685

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/16/18 18:56	1
Acrolein	ND		20	10	ug/L			10/16/18 18:56	1
Acrylonitrile	ND		10	2.8	ug/L			10/16/18 18:56	1
Benzene	ND		1.0	0.38	ug/L			10/16/18 18:56	1
Bromobenzene	ND		1.0	0.54	ug/L			10/16/18 18:56	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/16/18 18:56	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/16/18 18:56	1
Bromoform	ND		5.0	0.71	ug/L			10/16/18 18:56	1
Bromomethane	ND		1.0	0.98	ug/L			10/16/18 18:56	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/16/18 18:56	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/16/18 18:56	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/16/18 18:56	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/16/18 18:56	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/16/18 18:56	1
Chloroethane	ND		1.0	0.76	ug/L			10/16/18 18:56	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/16/18 18:56	1
Chloroform	ND		1.0	0.60	ug/L			10/16/18 18:56	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/16/18 18:56	1
Chloromethane	ND		1.0	0.83	ug/L			10/16/18 18:56	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/16/18 18:56	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/16/18 18:56	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/16/18 18:56	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/16/18 18:56	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/16/18 18:56	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/16/18 18:56	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/16/18 18:56	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/16/18 18:56	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/16/18 18:56	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/16/18 18:56	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/16/18 18:56	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/16/18 18:56	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/16/18 18:56	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/16/18 18:56	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/16/18 18:56	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/16/18 18:56	1
2-Hexanone	ND		25	3.1	ug/L			10/16/18 18:56	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/16/18 18:56	1
Methylene bromide	ND		5.0	0.59	ug/L			10/16/18 18:56	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/16/18 18:56	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/16/18 18:56	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/16/18 18:56	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/16/18 18:56	1
Naphthalene	ND		1.0	1.0	ug/L			10/16/18 18:56	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/16/18 18:56	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/16/18 18:56	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/16/18 18:56	1
o-Xylene	ND		5.0	0.60	ug/L			10/16/18 18:56	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/16/18 18:56	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-415685/5
Matrix: Water
Analysis Batch: 415685

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/16/18 18:56	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/16/18 18:56	1
Styrene	ND		1.0	1.0	ug/L			10/16/18 18:56	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/16/18 18:56	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/16/18 18:56	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/16/18 18:56	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/16/18 18:56	1
Toluene	ND		1.0	0.70	ug/L			10/16/18 18:56	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/16/18 18:56	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/16/18 18:56	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/16/18 18:56	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/16/18 18:56	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/16/18 18:56	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/16/18 18:56	1
Trichloroethene	ND		1.0	0.50	ug/L			10/16/18 18:56	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/16/18 18:56	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/16/18 18:56	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/16/18 18:56	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/16/18 18:56	1
Vinyl acetate	ND		25	2.0	ug/L			10/16/18 18:56	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/16/18 18:56	1
Xylenes, Total	ND		10	1.6	ug/L			10/16/18 18:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*92*		*78 - 118*		*10/16/18 18:56*	*1*
Dibromofluoromethane	*100*		*81 - 121*		*10/16/18 18:56*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*10/16/18 18:56*	*1*

Lab Sample ID: LCS 400-415685/1002
Matrix: Water
Analysis Batch: 415685

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	200	209		ug/L		105	43 - 160
Acrolein	500	405		ug/L		81	38 - 160
Acrylonitrile	500	515		ug/L		103	64 - 142
Benzene	50.0	52.1		ug/L		104	70 - 130
Bromobenzene	50.0	57.1		ug/L		114	70 - 132
Bromochloromethane	50.0	59.6		ug/L		119	70 - 130
Bromodichloromethane	50.0	51.7		ug/L		103	67 - 133
Bromoform	50.0	49.9		ug/L		100	57 - 140
Bromomethane	50.0	53.4		ug/L		107	10 - 160
2-Butanone (MEK)	200	211		ug/L		105	61 - 145
Carbon disulfide	50.0	50.1		ug/L		100	61 - 137
Carbon tetrachloride	50.0	52.6		ug/L		105	61 - 137
Chlorobenzene	50.0	54.0		ug/L		108	70 - 130
Dibromochloromethane	50.0	51.2		ug/L		102	67 - 135
Chloroethane	50.0	47.7		ug/L		95	55 - 141

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-415685/1002
Matrix: Water
Analysis Batch: 415685

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloroethyl vinyl ether	50.0	47.0		ug/L		94	10 - 160
Chloroform	50.0	53.9		ug/L		108	69 - 130
1-Chlorohexane	50.0	45.3		ug/L		91	69 - 130
Chloromethane	50.0	49.9		ug/L		100	58 - 137
cis-1,2-Dichloroethene	50.0	49.2		ug/L		98	68 - 130
cis-1,3-Dichloropropene	50.0	47.9		ug/L		96	69 - 132
1,2-Dichlorobenzene	50.0	56.8		ug/L		114	67 - 130
1,3-Dichlorobenzene	50.0	57.2		ug/L		114	70 - 130
1,4-Dichlorobenzene	50.0	57.2		ug/L		114	70 - 130
Dichlorodifluoromethane	50.0	59.3		ug/L		119	41 - 146
1,1-Dichloroethane	50.0	49.9		ug/L		100	70 - 130
1,2-Dichloroethane	50.0	53.3		ug/L		107	69 - 130
1,1-Dichloroethene	50.0	53.1		ug/L		106	63 - 134
1,2-Dichloropropane	50.0	49.8		ug/L		100	70 - 130
1,3-Dichloropropane	50.0	50.7		ug/L		101	70 - 130
2,2-Dichloropropane	50.0	40.5		ug/L		81	52 - 135
1,1-Dichloropropene	50.0	52.9		ug/L		106	70 - 130
Ethylbenzene	50.0	52.4		ug/L		105	70 - 130
Ethyl methacrylate	50.0	48.6		ug/L		97	68 - 130
Hexachlorobutadiene	50.0	59.6		ug/L		119	53 - 140
2-Hexanone	200	186		ug/L		93	65 - 137
Isopropylbenzene	50.0	53.6		ug/L		107	70 - 130
Methylene bromide	50.0	54.5		ug/L		109	70 - 130
Methylene Chloride	50.0	55.3		ug/L		111	66 - 135
4-Methyl-2-pentanone (MIBK)	200	182		ug/L		91	69 - 138
Methyl tert-butyl ether	50.0	47.5		ug/L		95	66 - 130
m-Xylene & p-Xylene	50.0	52.0		ug/L		104	70 - 130
Naphthalene	50.0	51.9		ug/L		104	47 - 149
n-Butylbenzene	50.0	54.8		ug/L		110	67 - 130
N-Propylbenzene	50.0	55.5		ug/L		111	70 - 130
o-Chlorotoluene	50.0	53.1		ug/L		106	70 - 130
o-Xylene	50.0	52.6		ug/L		105	70 - 130
p-Chlorotoluene	50.0	54.0		ug/L		108	70 - 130
p-Isopropyltoluene	50.0	56.4		ug/L		113	65 - 130
sec-Butylbenzene	50.0	54.5		ug/L		109	66 - 130
Styrene	50.0	51.7		ug/L		103	70 - 130
tert-Butylbenzene	50.0	52.2		ug/L		104	64 - 139
1,1,1,2-Tetrachloroethane	50.0	52.1		ug/L		104	67 - 131
1,1,2,2-Tetrachloroethane	50.0	53.3		ug/L		107	70 - 131
Tetrachloroethene	50.0	52.4		ug/L		105	65 - 130
Toluene	50.0	50.2		ug/L		100	70 - 130
trans-1,2-Dichloroethene	50.0	54.0		ug/L		108	70 - 130
trans-1,3-Dichloropropene	50.0	43.4		ug/L		87	63 - 130
1,2,3-Trichlorobenzene	50.0	57.8		ug/L		116	60 - 138
1,2,4-Trichlorobenzene	50.0	57.9		ug/L		116	60 - 140
1,1,1-Trichloroethane	50.0	52.3		ug/L		105	68 - 130
1,1,2-Trichloroethane	50.0	51.0		ug/L		102	70 - 130
Trichloroethene	50.0	55.8		ug/L		112	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-415685/1002
Matrix: Water
Analysis Batch: 415685

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	50.0	56.2		ug/L		112	65 - 138
1,2,3-Trichloropropane	50.0	56.3		ug/L		113	70 - 130
1,2,4-Trimethylbenzene	50.0	55.7		ug/L		111	70 - 130
1,3,5-Trimethylbenzene	50.0	54.9		ug/L		110	69 - 130
Vinyl acetate	100	102		ug/L		102	26 - 160
Vinyl chloride	50.0	46.5		ug/L		93	59 - 136
Xylenes, Total	100	105		ug/L		105	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*94*		*78 - 118*
Dibromofluoromethane	*101*		*81 - 121*
Toluene-d8 (Surr)	*94*		*80 - 120*

Lab Sample ID: 400-160226-3 MS
Matrix: Water
Analysis Batch: 415685

Client Sample ID: MW3-ROX-100518
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	ND		200	196		ug/L		98	43 - 150
Acrolein	ND		500	365		ug/L		73	38 - 150
Acrylonitrile	ND		500	476		ug/L		95	62 - 149
Benzene	ND		50.0	52.0		ug/L		104	56 - 142
Bromobenzene	ND		50.0	55.6		ug/L		111	59 - 136
Bromochloromethane	ND		50.0	57.5		ug/L		115	64 - 140
Bromodichloromethane	ND		50.0	50.3		ug/L		101	59 - 143
Bromoform	ND		50.0	47.2		ug/L		94	50 - 140
Bromomethane	ND		50.0	57.2		ug/L		114	10 - 150
2-Butanone (MEK)	ND		200	183		ug/L		92	55 - 150
Carbon disulfide	ND		50.0	51.3		ug/L		103	48 - 150
Carbon tetrachloride	ND		50.0	53.9		ug/L		108	55 - 145
Chlorobenzene	ND		50.0	52.5		ug/L		105	64 - 130
Dibromochloromethane	ND		50.0	48.6		ug/L		97	56 - 143
Chloroethane	ND		50.0	47.1		ug/L		94	50 - 150
2-Chloroethyl vinyl ether	ND	F1	50.0	ND	F1	ug/L		0	10 - 150
Chloroform	ND		50.0	53.9		ug/L		108	60 - 141
1-Chlorohexane	ND		50.0	45.7		ug/L		91	56 - 136
Chloromethane	ND		50.0	47.4		ug/L		95	49 - 148
cis-1,2-Dichloroethene	ND		50.0	48.8		ug/L		98	59 - 143
cis-1,3-Dichloropropene	ND		50.0	45.9		ug/L		92	57 - 140
1,2-Dichlorobenzene	ND		50.0	53.8		ug/L		108	52 - 137
1,3-Dichlorobenzene	ND		50.0	53.9		ug/L		108	54 - 135
1,4-Dichlorobenzene	ND		50.0	53.7		ug/L		107	53 - 135
Dichlorodifluoromethane	ND		50.0	60.2		ug/L		120	16 - 150
1,1-Dichloroethane	ND		50.0	50.3		ug/L		101	61 - 144
1,2-Dichloroethane	ND		50.0	51.0		ug/L		102	60 - 141
1,1-Dichloroethene	ND		50.0	55.3		ug/L		111	54 - 147
1,2-Dichloropropane	ND		50.0	48.3		ug/L		97	66 - 137
1,3-Dichloropropane	ND		50.0	48.6		ug/L		97	66 - 133

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-160226-3 MS
Matrix: Water
Analysis Batch: 415685

Client Sample ID: MW3-ROX-100518
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,2-Dichloropropane	ND		50.0	40.6		ug/L		81	42 - 144
1,1-Dichloropropene	ND		50.0	53.2		ug/L		106	65 - 136
Ethylbenzene	ND		50.0	51.6		ug/L		103	58 - 131
Ethyl methacrylate	ND		50.0	45.4		ug/L		91	64 - 130
Hexachlorobutadiene	ND		50.0	54.1		ug/L		108	31 - 149
2-Hexanone	ND		200	171		ug/L		85	65 - 140
Isopropylbenzene	2.2		50.0	54.9		ug/L		105	56 - 133
Methylene bromide	ND		50.0	51.7		ug/L		103	63 - 138
Methylene Chloride	ND		50.0	53.5		ug/L		107	60 - 146
4-Methyl-2-pentanone (MIBK)	ND		200	166		ug/L		83	63 - 146
Methyl tert-butyl ether	1.9		50.0	46.7		ug/L		90	59 - 137
m-Xylene & p-Xylene	ND		50.0	51.7		ug/L		103	57 - 130
Naphthalene	ND		50.0	45.9		ug/L		92	25 - 150
n-Butylbenzene	ND		50.0	52.2		ug/L		104	41 - 142
N-Propylbenzene	6.6		50.0	62.4		ug/L		112	51 - 138
o-Chlorotoluene	ND		50.0	52.2		ug/L		104	53 - 134
o-Xylene	ND		50.0	50.9		ug/L		102	61 - 130
p-Chlorotoluene	ND		50.0	52.1		ug/L		104	54 - 133
p-Isopropyltoluene	ND		50.0	54.6		ug/L		109	48 - 139
sec-Butylbenzene	ND		50.0	54.2		ug/L		108	50 - 138
Styrene	ND		50.0	49.2		ug/L		98	58 - 131
tert-Butylbenzene	ND		50.0	52.7		ug/L		105	54 - 146
1,1,1,2-Tetrachloroethane	ND		50.0	51.5		ug/L		103	59 - 137
1,1,2,2-Tetrachloroethane	ND		50.0	50.4		ug/L		101	66 - 135
Tetrachloroethene	ND		50.0	52.0		ug/L		104	52 - 133
Toluene	ND		50.0	50.9		ug/L		102	65 - 130
trans-1,2-Dichloroethene	ND		50.0	55.6		ug/L		111	61 - 143
trans-1,3-Dichloropropene	ND		50.0	41.6		ug/L		83	53 - 133
1,2,3-Trichlorobenzene	ND		50.0	50.6		ug/L		101	43 - 145
1,2,4-Trichlorobenzene	ND		50.0	51.4		ug/L		103	39 - 148
1,1,1-Trichloroethane	ND		50.0	52.8		ug/L		106	57 - 142
1,1,2-Trichloroethane	ND		50.0	50.0		ug/L		100	66 - 131
Trichloroethene	ND		50.0	56.2		ug/L		112	64 - 136
Trichlorofluoromethane	ND		50.0	59.1		ug/L		118	54 - 150
1,2,3-Trichloropropane	ND		50.0	53.1		ug/L		106	65 - 133
1,2,4-Trimethylbenzene	ND		50.0	52.9		ug/L		106	50 - 139
1,3,5-Trimethylbenzene	ND		50.0	53.5		ug/L		107	52 - 135
Vinyl acetate	ND		100	95.4		ug/L		95	26 - 150
Vinyl chloride	ND		50.0	46.0		ug/L		92	46 - 150
Xylenes, Total	ND		100	103		ug/L		103	59 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*96*		*78 - 118*
Dibromofluoromethane	*100*		*81 - 121*
Toluene-d8 (Surr)	*97*		*80 - 120*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-160226-3 MSD
Matrix: Water
Analysis Batch: 415685

Client Sample ID: MW3-ROX-100518
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	ND		200	224		ug/L		112	43 - 150	13	30
Acrolein	ND		500	405		ug/L		81	38 - 150	10	31
Acrylonitrile	ND		500	522		ug/L		104	62 - 149	9	30
Benzene	ND		50.0	52.9		ug/L		106	56 - 142	2	30
Bromobenzene	ND		50.0	57.5		ug/L		115	59 - 136	3	30
Bromochloromethane	ND		50.0	59.5		ug/L		119	64 - 140	3	30
Bromodichloromethane	ND		50.0	53.4		ug/L		107	59 - 143	6	30
Bromoform	ND		50.0	51.5		ug/L		103	50 - 140	9	30
Bromomethane	ND		50.0	55.5		ug/L		111	10 - 150	3	50
2-Butanone (MEK)	ND		200	213		ug/L		106	55 - 150	15	30
Carbon disulfide	ND		50.0	52.1		ug/L		104	48 - 150	2	30
Carbon tetrachloride	ND		50.0	54.0		ug/L		108	55 - 145	0	30
Chlorobenzene	ND		50.0	54.2		ug/L		108	64 - 130	3	30
Dibromochloromethane	ND		50.0	52.3		ug/L		105	56 - 143	7	30
Chloroethane	ND		50.0	48.4		ug/L		97	50 - 150	3	30
2-Chloroethyl vinyl ether	ND	F1	50.0	ND	F1	ug/L		0	10 - 150	NC	50
Chloroform	ND		50.0	55.7		ug/L		111	60 - 141	3	30
1-Chlorohexane	ND		50.0	46.1		ug/L		92	56 - 136	1	30
Chloromethane	ND		50.0	48.3		ug/L		97	49 - 148	2	31
cis-1,2-Dichloroethene	ND		50.0	50.4		ug/L		101	59 - 143	3	30
cis-1,3-Dichloropropene	ND		50.0	49.0		ug/L		98	57 - 140	7	30
1,2-Dichlorobenzene	ND		50.0	55.8		ug/L		112	52 - 137	4	30
1,3-Dichlorobenzene	ND		50.0	55.4		ug/L		111	54 - 135	3	30
1,4-Dichlorobenzene	ND		50.0	55.4		ug/L		111	53 - 135	3	30
Dichlorodifluoromethane	ND		50.0	57.7		ug/L		115	16 - 150	4	31
1,1-Dichloroethane	ND		50.0	51.2		ug/L		102	61 - 144	2	30
1,2-Dichloroethane	ND		50.0	54.4		ug/L		109	60 - 141	6	30
1,1-Dichloroethene	ND		50.0	55.6		ug/L		111	54 - 147	1	30
1,2-Dichloropropane	ND		50.0	50.7		ug/L		101	66 - 137	5	30
1,3-Dichloropropane	ND		50.0	51.9		ug/L		104	66 - 133	6	30
2,2-Dichloropropane	ND		50.0	42.8		ug/L		86	42 - 144	5	31
1,1-Dichloropropene	ND		50.0	54.0		ug/L		108	65 - 136	1	30
Ethylbenzene	ND		50.0	52.5		ug/L		105	58 - 131	2	30
Ethyl methacrylate	ND		50.0	50.8		ug/L		102	64 - 130	11	30
Hexachlorobutadiene	ND		50.0	56.0		ug/L		112	31 - 149	3	36
2-Hexanone	ND		200	198		ug/L		99	65 - 140	15	30
Isopropylbenzene	2.2		50.0	55.7		ug/L		107	56 - 133	1	30
Methylene bromide	ND		50.0	55.8		ug/L		112	63 - 138	8	30
Methylene Chloride	ND		50.0	55.5		ug/L		111	60 - 146	4	32
4-Methyl-2-pentanone (MIBK)	ND		200	190		ug/L		95	63 - 146	13	30
Methyl tert-butyl ether	1.9		50.0	51.5		ug/L		99	59 - 137	10	30
m-Xylene & p-Xylene	ND		50.0	52.7		ug/L		105	57 - 130	2	30
Naphthalene	ND		50.0	53.1		ug/L		106	25 - 150	14	30
n-Butylbenzene	ND		50.0	52.9		ug/L		106	41 - 142	1	31
N-Propylbenzene	6.6		50.0	62.9		ug/L		113	51 - 138	1	30
o-Chlorotoluene	ND		50.0	53.5		ug/L		107	53 - 134	2	30
o-Xylene	ND		50.0	52.4		ug/L		105	61 - 130	3	30
p-Chlorotoluene	ND		50.0	53.5		ug/L		107	54 - 133	3	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-160226-3 MSD
Matrix: Water
Analysis Batch: 415685

Client Sample ID: MW3-ROX-100518
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
p-Isopropyltoluene	ND		50.0	55.3		ug/L		111	48 - 139	1	30
sec-Butylbenzene	ND		50.0	54.7		ug/L		109	50 - 138	1	30
Styrene	ND		50.0	51.2		ug/L		102	58 - 131	4	30
tert-Butylbenzene	ND		50.0	52.9		ug/L		106	54 - 146	0	30
1,1,1,2-Tetrachloroethane	ND		50.0	53.6		ug/L		107	59 - 137	4	30
1,1,2,2-Tetrachloroethane	ND		50.0	55.2		ug/L		110	66 - 135	9	30
Tetrachloroethene	ND		50.0	53.0		ug/L		106	52 - 133	2	30
Toluene	ND		50.0	52.0		ug/L		104	65 - 130	2	30
trans-1,2-Dichloroethene	ND		50.0	55.0		ug/L		110	61 - 143	1	30
trans-1,3-Dichloropropene	ND		50.0	45.4		ug/L		91	53 - 133	9	30
1,2,3-Trichlorobenzene	ND		50.0	55.3		ug/L		111	43 - 145	9	30
1,2,4-Trichlorobenzene	ND		50.0	55.8		ug/L		112	39 - 148	8	30
1,1,1-Trichloroethane	ND		50.0	54.0		ug/L		108	57 - 142	2	30
1,1,2-Trichloroethane	ND		50.0	52.8		ug/L		106	66 - 131	5	30
Trichloroethene	ND		50.0	56.4		ug/L		113	64 - 136	0	30
Trichlorofluoromethane	ND		50.0	56.7		ug/L		113	54 - 150	4	30
1,2,3-Trichloropropane	ND		50.0	58.4		ug/L		117	65 - 133	9	30
1,2,4-Trimethylbenzene	ND		50.0	54.8		ug/L		110	50 - 139	4	30
1,3,5-Trimethylbenzene	ND		50.0	54.4		ug/L		109	52 - 135	2	30
Vinyl acetate	ND		100	101		ug/L		101	26 - 150	5	33
Vinyl chloride	ND		50.0	45.1		ug/L		90	46 - 150	2	30
Xylenes, Total	ND		100	105		ug/L		105	59 - 130	2	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*96*		*78 - 118*
Dibromofluoromethane	*103*		*81 - 121*
Toluene-d8 (Surr)	*96*		*80 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-414706/1-A
Matrix: Water
Analysis Batch: 415020

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 414706

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.8	ug/L		10/09/18 12:28	10/11/18 18:29	1
Benzenethiol	ND		10	1.7	ug/L		10/09/18 12:28	10/11/18 18:29	1
Benzoic acid	ND		30	7.3	ug/L		10/09/18 12:28	10/11/18 18:29	1
Benzyl alcohol	ND		10	2.0	ug/L		10/09/18 12:28	10/11/18 18:29	1
Bis(2-chloroethoxy)methane	ND		10	0.69	ug/L		10/09/18 12:28	10/11/18 18:29	1
Bis(2-chloroethyl)ether	ND		10	0.74	ug/L		10/09/18 12:28	10/11/18 18:29	1
bis (2-chloroisopropyl) ether	ND		10	0.81	ug/L		10/09/18 12:28	10/11/18 18:29	1
Bis(2-ethylhexyl) phthalate	ND		10	2.3	ug/L		10/09/18 12:28	10/11/18 18:29	1
4-Bromophenyl phenyl ether	ND		10	0.32	ug/L		10/09/18 12:28	10/11/18 18:29	1
Butyl benzyl phthalate	ND		10	0.69	ug/L		10/09/18 12:28	10/11/18 18:29	1
4-Chloroaniline	ND		10	3.4	ug/L		10/09/18 12:28	10/11/18 18:29	1
4-Chloro-3-methylphenol	ND		10	3.8	ug/L		10/09/18 12:28	10/11/18 18:29	1
2-Chloronaphthalene	ND		10	0.52	ug/L		10/09/18 12:28	10/11/18 18:29	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-414706/1-A
Matrix: Water
Analysis Batch: 415020

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 414706

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	ND		10	2.2	ug/L		10/09/18 12:28	10/11/18 18:29	1
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		10/09/18 12:28	10/11/18 18:29	1
Dibenz[a,h]acridine	ND		10	3.0	ug/L		10/09/18 12:28	10/11/18 18:29	1
Dibenzofuran	ND		10	0.52	ug/L		10/09/18 12:28	10/11/18 18:29	1
3,3'-Dichlorobenzidine	ND		10	2.6	ug/L		10/09/18 12:28	10/11/18 18:29	1
2,4-Dichlorophenol	ND		10	3.0	ug/L		10/09/18 12:28	10/11/18 18:29	1
Diethyl phthalate	ND		10	0.70	ug/L		10/09/18 12:28	10/11/18 18:29	1
2,4-Dimethylphenol	ND		10	3.5	ug/L		10/09/18 12:28	10/11/18 18:29	1
Dimethyl phthalate	ND		10	0.60	ug/L		10/09/18 12:28	10/11/18 18:29	1
Di-n-butyl phthalate	ND		10	2.7	ug/L		10/09/18 12:28	10/11/18 18:29	1
4,6-Dinitro-ortho-cresol	ND		10	2.0	ug/L		10/09/18 12:28	10/11/18 18:29	1
2,4-Dinitrophenol	ND		30	3.4	ug/L		10/09/18 12:28	10/11/18 18:29	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		10/09/18 12:28	10/11/18 18:29	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		10/09/18 12:28	10/11/18 18:29	1
Di-n-octyl phthalate	ND		10	0.44	ug/L		10/09/18 12:28	10/11/18 18:29	1
1,4-Dioxane	ND		10	1.0	ug/L		10/09/18 12:28	10/11/18 18:29	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		10/09/18 12:28	10/11/18 18:29	1
Hexachlorobenzene	ND		10	0.25	ug/L		10/09/18 12:28	10/11/18 18:29	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		10/09/18 12:28	10/11/18 18:29	1
Hexachloroethane	ND		10	4.2	ug/L		10/09/18 12:28	10/11/18 18:29	1
Indene	ND		10	1.0	ug/L		10/09/18 12:28	10/11/18 18:29	1
Isophorone	ND		10	0.57	ug/L		10/09/18 12:28	10/11/18 18:29	1
2-Methylphenol	ND		10	1.8	ug/L		10/09/18 12:28	10/11/18 18:29	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/09/18 12:28	10/11/18 18:29	1
2-Nitroaniline	ND		10	2.2	ug/L		10/09/18 12:28	10/11/18 18:29	1
3-Nitroaniline	ND		10	1.8	ug/L		10/09/18 12:28	10/11/18 18:29	1
4-Nitroaniline	ND		10	2.5	ug/L		10/09/18 12:28	10/11/18 18:29	1
Nitrobenzene	ND		10	0.55	ug/L		10/09/18 12:28	10/11/18 18:29	1
2-Nitrophenol	ND		10	0.65	ug/L		10/09/18 12:28	10/11/18 18:29	1
4-Nitrophenol	ND		10	2.1	ug/L		10/09/18 12:28	10/11/18 18:29	1
N-Nitrosodimethylamine	ND		10	3.5	ug/L		10/09/18 12:28	10/11/18 18:29	1
N-Nitrosodi-n-propylamine	ND		10	3.3	ug/L		10/09/18 12:28	10/11/18 18:29	1
N-Nitrosodiphenylamine	ND		10	0.47	ug/L		10/09/18 12:28	10/11/18 18:29	1
Pentachlorophenol	ND		20	1.8	ug/L		10/09/18 12:28	10/11/18 18:29	1
Phenol	ND		10	2.6	ug/L		10/09/18 12:28	10/11/18 18:29	1
Pyridine	ND		10	3.2	ug/L		10/09/18 12:28	10/11/18 18:29	1
Quinoline	ND		10	6.0	ug/L		10/09/18 12:28	10/11/18 18:29	1
2,4,5-Trichlorophenol	ND		10	3.7	ug/L		10/09/18 12:28	10/11/18 18:29	1
2,4,6-Trichlorophenol	ND		10	3.5	ug/L		10/09/18 12:28	10/11/18 18:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*40*		*34 - 120*	*10/09/18 12:28*	*10/11/18 18:29*	*1*
2-Fluorophenol	*33*		*10 - 120*	*10/09/18 12:28*	*10/11/18 18:29*	*1*
Nitrobenzene-d5	*44*		*27 - 120*	*10/09/18 12:28*	*10/11/18 18:29*	*1*
Phenol-d5	*42*		*10 - 120*	*10/09/18 12:28*	*10/11/18 18:29*	*1*
Terphenyl-d14	*39*	*X*	*53 - 125*	*10/09/18 12:28*	*10/11/18 18:29*	*1*
2,4,6-Tribromophenol	*43*		*15 - 135*	*10/09/18 12:28*	*10/11/18 18:29*	*1*

Lab Sample ID: LCS 400-414706/2-A
Matrix: Water
Analysis Batch: 415020

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 414706

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aniline	30.0	12.2		ug/L		41	29 - 120
Benzoic acid	118	78.2		ug/L		66	10 - 150
Benzyl alcohol	30.0	18.1		ug/L		60	19 - 125
Bis(2-chloroethoxy)methane	30.0	17.8		ug/L		59	45 - 120
Bis(2-chloroethyl)ether	30.0	17.2		ug/L		57	48 - 120
bis (2-chloroisopropyl) ether	30.0	16.2		ug/L		54	30 - 125
Bis(2-ethylhexyl) phthalate	30.0	20.6		ug/L		69	48 - 150
4-Bromophenyl phenyl ether	30.0	20.8		ug/L		69	55 - 122
Butyl benzyl phthalate	30.0	18.8		ug/L		63	46 - 145
4-Chloroaniline	30.0	11.9		ug/L		40	30 - 120
4-Chloro-3-methylphenol	30.0	19.6		ug/L		65	39 - 140
2-Chloronaphthalene	30.0	18.0		ug/L		60	52 - 120
2-Chlorophenol	30.0	18.1		ug/L		60	34 - 120
4-Chlorophenyl phenyl ether	30.0	20.2		ug/L		67	58 - 124
Dibenz[a,h]acridine	30.0	18.4		ug/L		61	46 - 149
Dibenzofuran	30.0	17.6		ug/L		59	58 - 123
3,3'-Dichlorobenzidine	40.0	25.1		ug/L		63	39 - 135
2,4-Dichlorophenol	30.0	19.2		ug/L		64	39 - 128
Diethyl phthalate	30.0	19.0		ug/L		63	44 - 146
2,4-Dimethylphenol	30.0	17.4		ug/L		58	44 - 120
Dimethyl phthalate	30.0	19.5		ug/L		65	50 - 131
Di-n-butyl phthalate	30.0	21.5		ug/L		72	55 - 131
4,6-Dinitro-ortho-cresol	60.0	41.0		ug/L		68	10 - 150
2,4-Dinitrophenol	60.0	50.1		ug/L		83	10 - 150
2,4-Dinitrotoluene	30.0	20.4		ug/L		68	58 - 140
2,6-Dinitrotoluene	30.0	20.0		ug/L		67	57 - 130
Di-n-octyl phthalate	30.0	21.9		ug/L		73	50 - 150
1,4-Dioxane	30.0	14.0		ug/L		47	25 - 120
1,2-Diphenylhydrazine (as Azobenzene)	30.0	18.3		ug/L		61	47 - 123
Hexachlorobenzene	30.0	21.7		ug/L		72	52 - 131
Hexachlorocyclopentadiene	30.0	4.27	J	ug/L		14	10 - 129
Hexachloroethane	30.0	13.1		ug/L		44	41 - 120
Indene	30.0	19.1		ug/L		64	47 - 120
Isophorone	30.0	17.6		ug/L		59	49 - 120
2-Methylphenol	30.0	18.2		ug/L		61	39 - 123
3 & 4 Methylphenol	30.0	17.4	J	ug/L		58	38 - 121
2-Nitroaniline	30.0	20.7		ug/L		69	47 - 150
3-Nitroaniline	30.0	16.7		ug/L		56	34 - 132
4-Nitroaniline	30.0	18.8		ug/L		63	41 - 135
Nitrobenzene	30.0	17.3		ug/L		58	47 - 120
2-Nitrophenol	30.0	20.3		ug/L		68	28 - 136
4-Nitrophenol	60.0	45.8		ug/L		76	10 - 150
N-Nitrosodimethylamine	30.0	17.5		ug/L		58	22 - 148
N-Nitrosodi-n-propylamine	30.0	16.0		ug/L		53	44 - 120
N-Nitrosodiphenylamine	29.8	19.2		ug/L		65	56 - 120
Pentachlorophenol	60.0	33.7		ug/L		56	15 - 141
Phenol	30.0	16.6		ug/L		55	33 - 120
Pyridine	60.0	21.4		ug/L		36	26 - 120
Quinoline	30.0	15.3		ug/L		51	51 - 129

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-414706/2-A
Matrix: Water
Analysis Batch: 415020

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 414706

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-Trichlorophenol	30.0	20.5		ug/L		68	38 - 147
2,4,6-Trichlorophenol	30.0	20.8		ug/L		69	36 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*34*		*34 - 120*
2-Fluorophenol	*32*		*10 - 120*
Nitrobenzene-d5	*38*		*27 - 120*
Phenol-d5	*35*		*10 - 120*
Terphenyl-d14	*33*	*X*	*53 - 125*
2,4,6-Tribromophenol	*38*		*15 - 135*

Lab Sample ID: LCS 400-414706/3-A
Matrix: Water
Analysis Batch: 415020

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 414706

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzenethiol	30.0	ND	*	ug/L		3	10 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*42*		*34 - 120*
2-Fluorophenol	*33*		*10 - 120*
Nitrobenzene-d5	*45*		*27 - 120*
Phenol-d5	*44*		*10 - 120*
Terphenyl-d14	*43*	*X*	*53 - 125*
2,4,6-Tribromophenol	*45*		*15 - 135*

Lab Sample ID: LCSD 400-414706/4-A
Matrix: Water
Analysis Batch: 415020

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 414706

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzenethiol	30.0	ND	*	ug/L		3	10 - 120	NaN	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*42*		*34 - 120*
2-Fluorophenol	*34*		*10 - 120*
Nitrobenzene-d5	*46*		*27 - 120*
Phenol-d5	*44*		*10 - 120*
Terphenyl-d14	*42*	*X*	*53 - 125*
2,4,6-Tribromophenol	*42*		*15 - 135*

Lab Sample ID: 400-160226-3 MS
Matrix: Water
Analysis Batch: 415020

Client Sample ID: MW3-ROX-100518
Prep Type: Total/NA
Prep Batch: 414706

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aniline	ND		29.2	19.0		ug/L		65	10 - 143

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-160226-3 MS
Matrix: Water
Analysis Batch: 415020

Client Sample ID: MW3-ROX-100518
Prep Type: Total/NA
Prep Batch: 414706

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzoic acid	ND		115	122		ug/L		106	10 - 134
Benzyl alcohol	ND		29.2	22.8		ug/L		78	10 - 154
Bis(2-chloroethoxy)methane	ND		29.2	21.0		ug/L		72	14 - 147
Bis(2-chloroethyl)ether	ND		29.2	21.1		ug/L		72	28 - 130
bis (2-chloroisopropyl) ether	ND		29.2	18.9		ug/L		65	10 - 141
Bis(2-ethylhexyl) phthalate	ND		29.2	22.7		ug/L		78	43 - 160
4-Bromophenyl phenyl ether	ND		29.2	25.1		ug/L		86	26 - 159
Butyl benzyl phthalate	ND		29.2	20.9		ug/L		71	43 - 151
4-Chloroaniline	ND		29.2	8.77	J	ug/L		30	10 - 152
4-Chloro-3-methylphenol	ND		29.2	23.4		ug/L		80	17 - 156
2-Chloronaphthalene	ND		29.2	23.3		ug/L		80	10 - 155
2-Chlorophenol	ND		29.2	20.4		ug/L		70	19 - 130
4-Chlorophenyl phenyl ether	ND		29.2	25.1		ug/L		86	25 - 161
Dibenz[a,h]acridine	ND		29.2	23.7		ug/L		81	42 - 147
Dibenzofuran	ND		29.2	22.5		ug/L		77	18 - 157
3,3'-Dichlorobenzidine	ND	F1	38.9	7.84	J	ug/L		20	10 - 172
2,4-Dichlorophenol	ND		29.2	22.3		ug/L		76	16 - 147
Diethyl phthalate	ND		29.2	22.5		ug/L		77	23 - 160
2,4-Dimethylphenol	ND		29.2	21.5		ug/L		74	25 - 146
Dimethyl phthalate	ND		29.2	22.7		ug/L		78	11 - 158
Di-n-butyl phthalate	ND		29.2	24.8		ug/L		85	28 - 162
4,6-Dinitro-ortho-cresol	ND		58.4	51.9		ug/L		89	10 - 168
2,4-Dinitrophenol	ND		58.4	65.2		ug/L		112	10 - 166
2,4-Dinitrotoluene	ND		29.2	25.5		ug/L		87	26 - 158
2,6-Dinitrotoluene	ND		29.2	23.4		ug/L		80	19 - 157
Di-n-octyl phthalate	ND		29.2	20.5		ug/L		70	42 - 150
1,4-Dioxane	ND		29.2	13.1		ug/L		45	10 - 130
1,2-Diphenylhydrazine (as Azobenzene)	ND		29.2	21.1		ug/L		72	19 - 162
Hexachlorobenzene	ND		29.2	25.5		ug/L		87	45 - 145
Hexachlorocyclopentadiene	ND		29.2	6.67	J	ug/L		23	10 - 151
Hexachloroethane	ND		29.2	20.7		ug/L		71	29 - 130
Indene	ND		29.2	24.3		ug/L		83	22 - 130
Isophorone	ND		29.2	21.0		ug/L		72	24 - 144
2-Methylphenol	ND		29.2	21.7		ug/L		74	22 - 130
3 & 4 Methylphenol	ND		29.2	19.9		ug/L		68	31 - 130
2-Nitroaniline	ND		29.2	23.8		ug/L		81	10 - 162
3-Nitroaniline	ND		29.2	19.0		ug/L		65	10 - 163
4-Nitroaniline	ND		29.2	22.2		ug/L		76	10 - 162
Nitrobenzene	ND		29.2	20.2		ug/L		69	34 - 135
2-Nitrophenol	ND		29.2	23.5		ug/L		80	27 - 134
4-Nitrophenol	ND		58.4	57.4		ug/L		98	10 - 175
N-Nitrosodimethylamine	ND		29.2	21.2		ug/L		73	10 - 139
N-Nitrosodi-n-propylamine	ND		29.2	19.0		ug/L		65	13 - 147
N-Nitrosodiphenylamine	ND		29.0	22.6		ug/L		78	31 - 150
Pentachlorophenol	ND		58.4	51.1		ug/L		87	10 - 180
Phenol	ND		29.2	19.1		ug/L		65	23 - 130
Pyridine	ND		58.4	30.3		ug/L		52	10 - 130

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-160226-3 MS
Matrix: Water
Analysis Batch: 415020

Client Sample ID: MW3-ROX-100518
Prep Type: Total/NA
Prep Batch: 414706

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Quinoline	ND	F2	29.2	21.9		ug/L		75	10 - 180
2,4,5-Trichlorophenol	ND		29.2	25.1		ug/L		86	43 - 137
2,4,6-Trichlorophenol	ND		29.2	24.6		ug/L		84	42 - 135

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl	*43*		*34 - 120*
2-Fluorophenol	*33*		*10 - 120*
Nitrobenzene-d5	*48*		*27 - 120*
Phenol-d5	*42*		*10 - 120*
Terphenyl-d14	*34*	*X*	*53 - 125*
2,4,6-Tribromophenol	*50*		*15 - 135*

Lab Sample ID: 400-160226-3 MSD
Matrix: Water
Analysis Batch: 415020

Client Sample ID: MW3-ROX-100518
Prep Type: Total/NA
Prep Batch: 414706

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aniline	ND		28.8	19.9		ug/L		69	10 - 143	5	63
Benzoic acid	ND		113	142		ug/L		126	10 - 134	15	49
Benzyl alcohol	ND		28.8	22.7		ug/L		79	10 - 154	0	37
Bis(2-chloroethoxy)methane	ND		28.8	21.0		ug/L		73	14 - 147	0	70
Bis(2-chloroethyl)ether	ND		28.8	21.3		ug/L		74	28 - 130	1	42
bis (2-chloroisopropyl) ether	ND		28.8	18.7		ug/L		65	10 - 141	1	41
Bis(2-ethylhexyl) phthalate	ND		28.8	24.9		ug/L		86	43 - 160	9	35
4-Bromophenyl phenyl ether	ND		28.8	27.0		ug/L		94	26 - 159	7	30
Butyl benzyl phthalate	ND		28.8	24.1		ug/L		84	43 - 151	14	32
4-Chloroaniline	ND		28.8	8.37	J	ug/L		29	10 - 152	5	94
4-Chloro-3-methylphenol	ND		28.8	24.4		ug/L		85	17 - 156	4	40
2-Chloronaphthalene	ND		28.8	24.5		ug/L		85	10 - 155	5	29
2-Chlorophenol	ND		28.8	21.9		ug/L		76	19 - 130	7	42
4-Chlorophenyl phenyl ether	ND		28.8	26.1		ug/L		91	25 - 161	4	27
Dibenz[a,h]acridine	ND		28.8	23.5		ug/L		81	42 - 147	1	40
Dibenzofuran	ND		28.8	23.0		ug/L		80	18 - 157	2	29
3,3'-Dichlorobenzidine	ND	F1	38.5	ND	F1	ug/L		0	10 - 172	NC	58
2,4-Dichlorophenol	ND		28.8	23.6		ug/L		82	16 - 147	6	43
Diethyl phthalate	ND		28.8	24.1		ug/L		84	23 - 160	7	40
2,4-Dimethylphenol	ND		28.8	22.4		ug/L		78	25 - 146	4	47
Dimethyl phthalate	ND		28.8	24.4		ug/L		85	11 - 158	7	36
Di-n-butyl phthalate	ND		28.8	26.9		ug/L		93	28 - 162	8	32
4,6-Dinitro-ortho-cresol	ND		57.7	57.5		ug/L		100	10 - 168	10	42
2,4-Dinitrophenol	ND		57.7	70.8		ug/L		123	10 - 166	8	36
2,4-Dinitrotoluene	ND		28.8	26.3		ug/L		91	26 - 158	3	28
2,6-Dinitrotoluene	ND		28.8	25.1		ug/L		87	19 - 157	7	28
Di-n-octyl phthalate	ND		28.8	26.4		ug/L		92	42 - 150	25	35
1,4-Dioxane	ND		28.8	13.5		ug/L		47	10 - 130	3	40
1,2-Diphenylhydrazine (as Azobenzene)	ND		28.8	21.6		ug/L		75	19 - 162	2	40
Hexachlorobenzene	ND		28.8	28.3		ug/L		98	45 - 145	10	33

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-160226-3 MSD
Matrix: Water
Analysis Batch: 415020

Client Sample ID: MW3-ROX-100518
Prep Type: Total/NA
Prep Batch: 414706

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hexachlorocyclopentadiene	ND		28.8	9.74	J	ug/L		34	10 - 151	37	50
Hexachloroethane	ND		28.8	22.3		ug/L		77	29 - 130	7	41
Indene	ND		28.8	24.8		ug/L		86	22 - 130	2	40
Isophorone	ND		28.8	20.3		ug/L		71	24 - 144	3	33
2-Methylphenol	ND		28.8	22.2		ug/L		77	22 - 130	2	47
3 & 4 Methylphenol	ND		28.8	21.0		ug/L		73	31 - 130	6	47
2-Nitroaniline	ND		28.8	24.4		ug/L		85	10 - 162	3	33
3-Nitroaniline	ND		28.8	18.6		ug/L		64	10 - 163	2	39
4-Nitroaniline	ND		28.8	21.6		ug/L		75	10 - 162	3	50
Nitrobenzene	ND		28.8	20.8		ug/L		72	34 - 135	3	35
2-Nitrophenol	ND		28.8	24.3		ug/L		84	27 - 134	3	43
4-Nitrophenol	ND		57.7	65.8		ug/L		114	10 - 175	14	82
N-Nitrosodimethylamine	ND		28.8	22.3		ug/L		77	10 - 139	5	62
N-Nitrosodi-n-propylamine	ND		28.8	18.8		ug/L		65	13 - 147	1	36
N-Nitrosodiphenylamine	ND		28.6	23.4		ug/L		82	31 - 150	3	34
Pentachlorophenol	ND		57.7	56.3		ug/L		98	10 - 180	10	42
Phenol	ND		28.8	21.3		ug/L		74	23 - 130	11	52
Pyridine	ND		57.7	30.8		ug/L		53	10 - 130	2	55
Quinoline	ND	F2	28.8	10.6	F2	ug/L		37	10 - 180	70	40
2,4,5-Trichlorophenol	ND		28.8	27.4		ug/L		95	43 - 137	9	42
2,4,6-Trichlorophenol	ND		28.8	27.1		ug/L		94	42 - 135	10	44

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl	*45*		*34 - 120*
2-Fluorophenol	*37*		*10 - 120*
Nitrobenzene-d5	*49*		*27 - 120*
Phenol-d5	*46*		*10 - 120*
Terphenyl-d14	*46*	*X*	*53 - 125*
2,4,6-Tribromophenol	*55*		*15 - 135*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 400-414706/1-A
Matrix: Water
Analysis Batch: 415046

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 414706

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 20:43	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 20:43	1
Anthracene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 20:43	1
Benzo[a]anthracene	ND		0.20	0.040	ug/L		10/09/18 12:28	10/11/18 20:43	1
Benzo[a]pyrene	ND		0.20	0.040	ug/L		10/09/18 12:28	10/11/18 20:43	1
Benzo[b]fluoranthene	ND		0.20	0.040	ug/L		10/09/18 12:28	10/11/18 20:43	1
Benzo[g,h,i]perylene	ND		0.20	0.040	ug/L		10/09/18 12:28	10/11/18 20:43	1
Benzo[k]fluoranthene	ND		0.20	0.040	ug/L		10/09/18 12:28	10/11/18 20:43	1
Chrysene	ND		0.20	0.040	ug/L		10/09/18 12:28	10/11/18 20:43	1
Dibenz(a,h)anthracene	ND		0.20	0.040	ug/L		10/09/18 12:28	10/11/18 20:43	1
Fluoranthene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 20:43	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: MB 400-414706/1-A
Matrix: Water
Analysis Batch: 415046

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 414706

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	ND		0.20	0.021	ug/L		10/09/18 12:28	10/11/18 20:43	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.040	ug/L		10/09/18 12:28	10/11/18 20:43	1
Phenanthrene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 20:43	1
Pyrene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 20:43	1
1-Methylnaphthalene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 20:43	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		10/09/18 12:28	10/11/18 20:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*53*		*33 - 138*	*10/09/18 12:28*	*10/11/18 20:43*	*1*
2-Fluorobiphenyl	*41*		*15 - 122*	*10/09/18 12:28*	*10/11/18 20:43*	*1*
Nitrobenzene-d5	*50*		*19 - 130*	*10/09/18 12:28*	*10/11/18 20:43*	*1*

Lab Sample ID: LCS 400-414706/2-A
Matrix: Water
Analysis Batch: 415046

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 414706

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	30.0	22.2		ug/L		74	41 - 120
Acenaphthylene	30.0	23.5		ug/L		78	44 - 120
Anthracene	30.0	23.3		ug/L		78	49 - 120
Benzo[a]anthracene	30.0	22.4		ug/L		75	61 - 135
Benzo[a]pyrene	30.0	22.1		ug/L		74	52 - 120
Benzo[b]fluoranthene	30.0	25.1		ug/L		84	53 - 134
Benzo[g,h,i]perylene	30.0	18.8		ug/L		63	47 - 133
Benzo[k]fluoranthene	30.0	22.5		ug/L		75	57 - 134
Chrysene	30.0	21.9		ug/L		73	55 - 122
Dibenz(a,h)anthracene	30.0	20.1		ug/L		67	48 - 146
Fluoranthene	30.0	22.4		ug/L		75	54 - 128
Fluorene	30.0	23.6		ug/L		79	45 - 125
Indeno[1,2,3-cd]pyrene	30.0	19.5		ug/L		65	43 - 142
Phenanthrene	30.0	23.0		ug/L		77	48 - 120
Pyrene	30.0	25.2		ug/L		84	48 - 132
1-Methylnaphthalene	30.0	20.5		ug/L		68	41 - 120
2-Methylnaphthalene	30.0	19.9		ug/L		66	32 - 124

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14	*50*		*33 - 138*
2-Fluorobiphenyl	*42*		*15 - 122*
Nitrobenzene-d5	*271*	*X*	*19 - 130*

Lab Sample ID: 400-160226-3 MS
Matrix: Water
Analysis Batch: 415046

Client Sample ID: MW3-ROX-100518
Prep Type: Total/NA
Prep Batch: 414706

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	ND		29.2	26.5		ug/L		91	35 - 113
Acenaphthylene	ND		29.2	27.7		ug/L		95	41 - 118
Anthracene	ND		29.2	26.7		ug/L		91	45 - 122

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: 400-160226-3 MS
Matrix: Water
Analysis Batch: 415046

Client Sample ID: MW3-ROX-100518
Prep Type: Total/NA
Prep Batch: 414706

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[a]anthracene	ND		29.2	22.6		ug/L		77	55 - 133
Benzo[a]pyrene	ND		29.2	20.7		ug/L		71	50 - 108
Benzo[b]fluoranthene	ND		29.2	25.1		ug/L		86	50 - 128
Benzo[g,h,i]perylene	ND		29.2	17.2		ug/L		59	46 - 133
Benzo[k]fluoranthene	ND		29.2	20.4		ug/L		70	52 - 128
Chrysene	ND		29.2	21.9		ug/L		75	52 - 116
Dibenz(a,h)anthracene	0.062	J	29.2	18.4		ug/L		63	52 - 143
Fluoranthene	ND		29.2	25.6		ug/L		88	32 - 150
Fluorene	ND		29.2	27.5		ug/L		94	15 - 150
Indeno[1,2,3-cd]pyrene	0.056	J	29.2	17.9		ug/L		61	41 - 141
Phenanthrene	ND		29.2	26.8		ug/L		92	36 - 125
Pyrene	ND		29.2	27.5		ug/L		94	41 - 127
1-Methylnaphthalene	0.58		29.2	28.4		ug/L		95	10 - 150
2-Methylnaphthalene	0.099	J	29.2	27.2		ug/L		93	10 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Terphenyl-d14	*44*		*33 - 138*
2-Fluorobiphenyl	*50*		*15 - 122*
Nitrobenzene-d5	*325*	*X*	*19 - 130*

Lab Sample ID: 400-160226-3 MSD
Matrix: Water
Analysis Batch: 415046

Client Sample ID: MW3-ROX-100518
Prep Type: Total/NA
Prep Batch: 414706

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	ND		28.8	27.6		ug/L		96	35 - 113	4	49
Acenaphthylene	ND		28.8	29.1		ug/L		101	41 - 118	5	48
Anthracene	ND		28.8	29.2		ug/L		101	45 - 122	9	56
Benzo[a]anthracene	ND		28.8	28.1		ug/L		97	55 - 133	22	57
Benzo[a]pyrene	ND		28.8	27.2		ug/L		94	50 - 108	27	59
Benzo[b]fluoranthene	ND		28.8	30.4		ug/L		105	50 - 128	19	62
Benzo[g,h,i]perylene	ND		28.8	24.5		ug/L		85	46 - 133	35	58
Benzo[k]fluoranthene	ND		28.8	27.7		ug/L		96	52 - 128	30	58
Chrysene	ND		28.8	26.4		ug/L		92	52 - 116	19	59
Dibenz(a,h)anthracene	0.062	J	28.8	26.6		ug/L		92	52 - 143	36	60
Fluoranthene	ND		28.8	28.1		ug/L		97	32 - 150	9	59
Fluorene	ND		28.8	28.9		ug/L		100	15 - 150	5	49
Indeno[1,2,3-cd]pyrene	0.056	J	28.8	25.7		ug/L		89	41 - 141	36	58
Phenanthrene	ND		28.8	28.5		ug/L		99	36 - 125	6	69
Pyrene	ND		28.8	29.6		ug/L		103	41 - 127	7	58
1-Methylnaphthalene	0.58		28.8	24.2		ug/L		82	10 - 150	16	66
2-Methylnaphthalene	0.099	J	28.8	24.7		ug/L		85	10 - 150	10	66

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Terphenyl-d14	*56*		*33 - 138*
2-Fluorobiphenyl	*52*		*15 - 122*
Nitrobenzene-d5	*313*	*X*	*19 - 130*

Method: 8011 - EDB and DBCP in Water by Microextraction

Lab Sample ID: MB 400-415996/1-A
Matrix: Water
Analysis Batch: 416023

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 415996

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0055	ug/L		10/18/18 14:46	10/19/18 07:07	1
1,2-Dibromoethane	ND		0.020	0.0050	ug/L		10/18/18 14:46	10/19/18 07:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*51 - 149*	*10/18/18 14:46*	*10/19/18 07:07*	*1*

Lab Sample ID: LCS 400-415996/2-A
Matrix: Water
Analysis Batch: 416023

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 415996

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	0.100	0.111		ug/L		111	60 - 140
1,2-Dibromoethane	0.100	0.134		ug/L		134	60 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*110*		*51 - 149*

Lab Sample ID: LCSD 400-415996/3-A
Matrix: Water
Analysis Batch: 416023

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 415996

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane	0.100	0.119		ug/L		119	60 - 140	7	30
1,2-Dibromoethane	0.100	0.135		ug/L		135	60 - 140	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*115*		*51 - 149*

Lab Sample ID: 400-160226-3 MS
Matrix: Water
Analysis Batch: 416023

Client Sample ID: MW3-ROX-100518
Prep Type: Total/NA
Prep Batch: 415996

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	ND	F1	0.0994	0.142	F1	ug/L		142	65 - 135
1,2-Dibromoethane	ND	F1	0.0994	0.147	F1	ug/L		148	65 - 135

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*122*	*p*	*51 - 149*

Lab Sample ID: 400-160226-3 MSD
Matrix: Water
Analysis Batch: 416023

Client Sample ID: MW3-ROX-100518
Prep Type: Total/NA
Prep Batch: 415996

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane	ND	F1	0.0983	0.133		ug/L		135	65 - 135	6	20
1,2-Dibromoethane	ND	F1	0.0983	0.146	F1	ug/L		148	65 - 135	1	20

Method: 8011 - EDB and DBCP in Water by Microextraction (Continued)

Lab Sample ID: 400-160226-3 MSD
Matrix: Water
Analysis Batch: 416023

Client Sample ID: MW3-ROX-100518
Prep Type: Total/NA
Prep Batch: 415996

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene	114	p	51 - 149

Lab Sample ID: MB 400-416188/1-A
Matrix: Water
Analysis Batch: 416023

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416188

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0055	ug/L		10/19/18 17:50	10/19/18 21:13	1
1,2-Dibromoethane	ND		0.020	0.0050	ug/L		10/19/18 17:50	10/19/18 21:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	98		51 - 149	10/19/18 17:50	10/19/18 21:13	1

Lab Sample ID: LCS 400-416188/2-A
Matrix: Water
Analysis Batch: 416023

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416188

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	0.100	0.140		ug/L		140	60 - 140
1,2-Dibromoethane	0.100	0.145	*	ug/L		145	60 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	105		51 - 149

Lab Sample ID: LCSD 400-416188/3-A
Matrix: Water
Analysis Batch: 416023

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416188

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane	0.100	0.142	*	ug/L		142	60 - 140	2	30
1,2-Dibromoethane	0.100	0.147	*	ug/L		147	60 - 140	2	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	116		51 - 149

Shell Oil Products US Chain Of Custody Record

AECOM

LAB (LOCATION)

- ☐ ACCUTEST (_____)
- ☐ CALSCIENCE (_____)
- ☑ TESTAMERICA (TestAmerica Pensacola: 3355 McLemore Dr Pensacola, FL 32514 (850-474-1001))
- ☐ Other Lab Vendor # 1364389 (TestAmerica)

Please Check Appropriate Box:

- ☐ SGW FDG
- ☐ PIPELINE
- ☐ RETAIL
- ☐ CHEMICALS
- ☐ CONSULTANT
- ☐ LUBES
- ☐ TRANSPORTATION
- ☑ OTHER _ENV. SERVICES

Print Bill To Contact Name:	PlaNet Site or Project ID
Bob Billman	25278
PO #	GSAP Project ID
60527968 - 01.03.004 / 60527968 - 01 03.0044	USPC/00114/R/02

☐ CHECK IF NO INCIDENT # APPLIES
DATE: 10 05 18
PAGE: 1 of 1

SAMPLING COMPANY: AECOM
LOG CODE:
SITE ADDRESS: Street and City: 900 South Central Ave; ROXANA
State: IL
AECOM Project / Task Number: Roxana Quarterly GW 60527968 - 01.03.004 / 60527968 - 01.03.0044
ADDRESS: 100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA
EDF DELIVERABLE TO (Name, Company, Office Location):
PHONE NO:
E-MAIL:
AECOM Offset ID:
PROJECT CONTACT (Hardcopy or PDF Report to): Elizabeth Kunkel, Bob Billman, Melissa Remiger
SAMPLER NAME(S) (Print): J. Ragatz M. Karrick
LAB USE ONLY
TELEPHONE: 314-429-0100
TAX: 314-429-0462
Bill To Contact E-MAIL: bob.billman@aecom.com; elizabeth.kunkel@aecom.com; melissa.remiger@aecom.com

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAY ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT

DELIVERABLES: ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) _EDD_____

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
* Please include "J" values on Reports
* Please provide sample receipt upon login

- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ EDD NOT NEEDED
- ☑ RECEIPT VERIFICATION REQUESTED
- ☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT	NON-UNIT COST 60527968 - 01.03.004: VOC 8260	SVOC 8270	UNIT COST 60527968 - 01.03.0044: VOC 8011	PAH 8270LL	FIELD NOTES: Container PID Readings or Laboratory Notes
	TB-ROX-100518-8011	10/5/18	0000	Water	2					2			✓		
	TB-ROX-100518-8260		0000		2					2	✓				
	MW3-ROX-100518		0900		4			2		6	✓	✓	✓	✓	
	MW3-ROX-100518-MS		0900		4			2		6	✓	✓	✓	✓	
	MW3-ROX-100518-MSD		0900		4			2		6	✓	✓	✓	✓	
	MW16-ROX-100518		0955		4			2		6	✓	✓	✓	✓	
	MW24-ROX-100518		1035		4			2		6	✓	✓	✓	✓	
	P54-ROX-100518		1140		4			2		6	✓	✓	✓	✓	

400-160226 COC

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
	Fedex: 4535 0238 9850; 4535 0238 9861; 4535 0238 9872; 4535 0238 9703	10/5/18	1530
		10.6.18	8:31

Version 14Dec15

Custody seals: 572452, 572453, 572454, 572455, 572456, 572457, 572458, 572459

4.1° IR, 0.0° IR, 4.0°, 2.6° IR

Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 400-160226-1

Login Number: 160226
List Number: 1
Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	572452, 572453, 572454, 572455,572456,572457, 572458, 572459
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.1°C, 0.0°C IR-7 , 4.0°C, 2.6°C IR-8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160226-1

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-16	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

Roxana Groundwater Quarterly – 4th Quarter 2018 Data Review

Laboratory SDG: 400-160322-1

Data Reviewer: Melissa Remiger

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 10/29/2018

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2017

Sample Identification	Sample Identification
TB-ROX-100818-8011	TB-ROX-100818-8260
MW4-ROX-100818	MW25-ROX-100818
MW8-ROX-100818	MW8-ROX-100818-Dup
MW7-ROX-100818	

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated the SVOC LCS/LCSD recoveries for benzenethiol, and several LCS/LCSD RPDs, were outside evaluation criteria. The SVOC surrogate recovery for terphenyl-d_{14} was outside criteria in several investigative and quality control samples, and the VOC by 8011 surrogate recovery for 4-bromoflourobenzene was outside criteria in MW8-ROX-100818-Dup. The PAH internal standard area recoveries for naphthalene-d_8 and chrysene-d_{12} were outside criteria in sample MW8-ROX-100818-Dup. Results for 1-methylnaphthalene in field duplicate pair MW8-ROX-100818/MW8-ROX-100818-Dup were qualified due to field duplicate RPD above evaluation criteria; therefore results were qualified as estimated (**J**/**J**). VOCs in sample MW7-ROX-100818 and field duplicate pair MW8-ROX-100818/MW8-ROX-100818-Dup were diluted to bring target analytes into calibration range of the instrument, and PAHs in sample MW8-ROX-100818-Dup were diluted due to the nature of the sample matrix. These issues are addressed further in the appropriate sections of this data review.

Three of 69 (2-chloroethyl vinyl ether, acrolein, and acrylonitrile) 8260 VOCs are acid-reactive compounds; results may be biased low due to the presence of HCl in the preservative.

The cooler receipt form did not indicate any problems.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS/LCSD ID	Parameter	Analyte	LCS/ LCSD Recovery	RPD	LCS/LCSD/ RPD Criteria
LCS/LCSD 400-415003/24-A/25-A	SVOCs	Benzenethiol	**3/2**	7	10-120/30
LCS/LCSD 400-415003/2-A/3-A	SVOCs	Aniline	66/47	**33**	29-120/30
LCS/LCSD 400-415003/2-A/3-A	SVOCs	Benzoic acid	59/31	**64**	10-150/30
LCS/LCSD 400-415003/2-A/3-A	SVOCs	4-Nitrophenol	92/63	**37**	10-150/30

Analytical data that required qualification based on LCS/LCSD data are included in the table below. Professional judgment was used to qualify, however not reject, data associated with benzenethiol in LCS/LCSD 400-415003/24-A/25-A; benzenethiol has been identified as poor performing analytes under Method 8270. Analytical data associated with RPD alone outside evaluation criteria did not require qualification.

Sample ID	Parameter	Analyte	Qualification
MW4-ROX-100818	SVOCs	Benzenethiol	**UJ**
MW25-ROX-100818	SVOCs	Benzenethiol	**UJ**
MW8-ROX-100818	SVOCs	Benzenethiol	**UJ**
MW8-ROX-100818-Dup	SVOCs	Benzenethiol	**UJ**
MW7-ROX-100818	SVOCs	Benzenethiol	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
MW4-ROX-100818	SVOCs	Terphenyl-d_{14}	**39**	53-125
MW25-ROX-100818	SVOCs	Terphenyl-d_{14}	**35**	53-125
MW8-ROX-100818	SVOCs	Terphenyl-d_{14}	**28**	53-125
MW8-ROX-100818-Dup	SVOCs	Terphenyl-d_{14}	**30**	53-125
MW8-ROX-100818-Dup	VOC by 8011	4-Bromofluorobenzene	**153**	51-149
MW7-ROX-100818	SVOCs	Terphenyl-d_{14}	**34**	53-125
MB 400-415003/1-A	SVOCs	Terphenyl-d_{14}	**38**	53-125
LCS 400-415003/24-A	SVOCs	Terphenyl-d_{14}	**42**	53-125
LCS 400-415003/2-A	SVOCs	Terphenyl-d_{14}	**42**	53-125

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
LCSD 400-415003/25-A	SVOCs	Terphenyl-d_{14}	**44**	53-125

Qualifications due to surrogate recoveries were not required if only one of three base/neutral fraction surrogate recoveries were outside evaluation criteria in the associated SVOC samples. Analytical data reported as non-detect and associated with surrogate recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Quality control samples do not require qualification. No qualification of data was required.

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

No

Sample ID	Parameter	Analyte	IS Area Recovery	IS Criteria
MW8-ROX-100818-Dup	PAHs	Naphthalene-d_8	**1750146**	390888-1563552
MW8-ROX-100818-Dup	PAHs	Chrysene-d_{12}	**1324953**	305973-1223890

Analytical data reported as non-detect and associated with internal standard recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. No qualification of data was required.

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
MW8-ROX-100818	MW8-ROX-100818-Dup

Were field duplicates within evaluation criteria?

No

Field ID	Field Duplicate ID	Parameter	Analyte	RPD	Qualification
MW8-ROX-100818	MW8-ROX-100818-Dup	PAHs	1-Methylnaphthalene	**50**	**J/J**

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; analytes were detected in samples that were diluted.

12.0 Additional Qualifications

Were additional qualifications applied?

No

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-160322-1
TestAmerica Sample Delivery Group: 60527968
Client Project/Site: ROXANA QUARTERLY

For:
AECOM Technical Services Inc.
100 N. Broadway
20th Floor
St. Louis, Missouri 63102

Attn: Elizabeth Kunkel

Authorized for release by:
10/26/2018 12:15:14 PM

Leah Klingensmith, Senior Project Manager
(615)301-5038
leah.klingensmith@testamericainc.com

LINKS

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Reviewed 10/29/18 LR

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-160322-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-160322-1

Comments
No additional comments.

Receipt
The samples were received on 10/9/2018 8:54 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 0.3° C, 1.6° C, 2.4° C and 4.4° C.

GC/MS VOA
Method(s) 8260B: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW8-ROX-100818 (400-160322-5), MW8-ROX-100818-DUP (400-160322-6) and MW7-ROX-100818 (400-160322-7). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: The preservative used in the sample containers provided is not compatible with some of the Method 8260 analytes requested. The following sample was received preserved with hydrochloric acid: TB-ROX-100818-8260 (400-160322-2), MW4-ROX-100818 (400-160322-3), MW25-ROX-100818 (400-160322-4), MW8-ROX-100818 (400-160322-5), MW8-ROX-100818-DUP (400-160322-6) and MW7-ROX-100818 (400-160322-7). The requested target analyte list includes 2-chloroethyl vinyl ether, Acrolein and Acrylonitrile, which are acid-labile compounds that degrade in an acidic medium.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270D: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 400-415003 and analytical batch 400-415197 recovered outside control limits for the following analyte: Benzenethiol. Benzenethiol has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. Batch precision also exceeded control limits for these analyte(s). These results have been reported and qualified.

Method(s) 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 400-415003 and analytical batch 400-415197 recovered outside control limits for the following analytes: 4-Nitrophenol, Benzoic acid and Aniline.

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 400-415197 recovered above the upper control limit for 4-Nitrophenol and Di-n-octyl phthalate. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW4-ROX-100818 (400-160322-3), MW25-ROX-100818 (400-160322-4), MW8-ROX-100818 (400-160322-5), MW8-ROX-100818-DUP (400-160322-6), MW7-ROX-100818 (400-160322-7) and (MB 400-415003/1-A).

Method(s) 8270D: Six surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: MW4-ROX-100818 (400-160322-3), MW25-ROX-100818 (400-160322-4), MW8-ROX-100818 (400-160322-5), MW8-ROX-100818-DUP (400-160322-6), MW7-ROX-100818 (400-160322-7), (LCS 400-415003/2-A), (LCS 400-415003/24-A), (LCSD 400-415003/25-A) and (MB 400-415003/1-A). These results have been reported and qualified.

Method(s) 8270D LL: The following sample was diluted due to the nature of the sample matrix: MW8-ROX-100818-DUP (400-160322-6). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method(s) 8011: The continuing calibration verification (CCV) associated with batch 400-416023 recovered above the upper control limit for 1,2-Dibromo-3-Chloropropane and Ethylene Dibromide. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: TB-ROX-100818-8011 (400-160322-1), MW4-ROX-100818 (400-160322-3), MW25-ROX-100818 (400-160322-4), MW8-ROX-100818 (400-160322-5), MW8-ROX-100818-DUP

Job ID: 400-160322-1 (Continued)

Laboratory: TestAmerica Pensacola (Continued)

(400-160322-6) and MW7-ROX-100818 (400-160322-7).

Method(s) 8011: Surrogate recovery for the following sample was outside the upper control limit: MW8-ROX-100818-DUP (400-160322-6). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160322-1
SDG: 60527968

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-160322-1	TB-ROX-100818-8011	Water	10/08/18 00:00	10/09/18 14:25
400-160322-2	TB-ROX-100818-8260	Water	10/08/18 00:00	10/09/18 14:25
400-160322-3	MW4-ROX-100818	Water	10/08/18 09:25	10/09/18 14:25
400-160322-4	MW25-ROX-100818	Water	10/08/18 10:35	10/09/18 14:25
400-160322-5	MW8-ROX-100818	Water	10/08/18 12:10	10/09/18 14:25
400-160322-6	MW8-ROX-100818-DUP	Water	10/08/18 12:10	10/09/18 14:25
400-160322-7	MW7-ROX-100818	Water	10/08/18 13:15	10/09/18 14:25

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160322-1
SDG: 60527968

Client Sample ID: TB-ROX-100818-8011 — Lab Sample ID: 400-160322-1

No Detections.

Client Sample ID: TB-ROX-100818-8260 — Lab Sample ID: 400-160322-2

No Detections.

Client Sample ID: MW4-ROX-100818 — Lab Sample ID: 400-160322-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	3.2		1.0	0.74	ug/L	1		8260B	Total/NA
1-Methylnaphthalene	0.078	J	0.19	0.019	ug/L	1		8270D LL	Total/NA

Client Sample ID: MW25-ROX-100818 — Lab Sample ID: 400-160322-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	7.1		1.0	0.38	ug/L	1		8260B	Total/NA

Client Sample ID: MW8-ROX-100818 — Lab Sample ID: 400-160322-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	550000		2500	950	ug/L	2500		8260B	Total/NA
Benzo[b]fluoranthene	0.061	J	0.20	0.039	ug/L	1		8270D LL	Total/NA
Benzo[g,h,i]perylene	0.046	J	0.20	0.039	ug/L	1		8270D LL	Total/NA
Benzo[k]fluoranthene	0.054	J	0.20	0.039	ug/L	1		8270D LL	Total/NA
Dibenz(a,h)anthracene	0.075	J	0.20	0.039	ug/L	1		8270D LL	Total/NA
Fluorene	0.31		0.20	0.021	ug/L	1		8270D LL	Total/NA
Indeno[1,2,3-cd]pyrene	0.057	J	0.20	0.039	ug/L	1		8270D LL	Total/NA
Phenanthrene	0.13	J	0.20	0.020	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene	5.7	J	0.20	0.020	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	2.3		0.20	0.020	ug/L	1		8270D LL	Total/NA
Bis(2-ethylhexyl) phthalate	6.2	J	9.8	2.2	ug/L	1		8270D	Total/NA
2,4-Dimethylphenol	4.8	J	9.8	3.4	ug/L	1		8270D	Total/NA
Indene	3.1	J	9.8	0.98	ug/L	1		8270D	Total/NA
Pentachlorophenol	2.4	J	20	1.8	ug/L	1		8270D	Total/NA
Phenol	85		9.8	2.5	ug/L	1		8270D	Total/NA

Client Sample ID: MW8-ROX-100818-DUP — Lab Sample ID: 400-160322-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	560000		2500	950	ug/L	2500		8260B	Total/NA
Acenaphthene	0.13	J	0.20	0.020	ug/L	1		8270D LL	Total/NA
Fluorene	0.55		0.20	0.020	ug/L	1		8270D LL	Total/NA
Phenanthrene	0.15	J	0.20	0.020	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene - DL	9.5	J	0.98	0.098	ug/L	5		8270D LL	Total/NA
2-Methylnaphthalene - DL	3.5		0.98	0.098	ug/L	5		8270D LL	Total/NA
2,4-Dimethylphenol	4.6	J	9.8	3.4	ug/L	1		8270D	Total/NA
Indene	2.7	J	9.8	0.98	ug/L	1		8270D	Total/NA
Pentachlorophenol	2.3	J	20	1.8	ug/L	1		8270D	Total/NA
Phenol	90		9.8	2.5	ug/L	1		8270D	Total/NA

Client Sample ID: MW7-ROX-100818 — Lab Sample ID: 400-160322-7

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW7-ROX-100818 (Continued)

Lab Sample ID: 400-160322-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	650000		2500	950	ug/L	2500		8260B	Total/NA
Acenaphthene	0.25		0.20	0.020	ug/L	1		8270D LL	Total/NA
Fluorene	0.21		0.20	0.021	ug/L	1		8270D LL	Total/NA
Phenanthrene	0.29		0.20	0.020	ug/L	1		8270D LL	Total/NA
Pyrene	0.058	J	0.20	0.020	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene	1.4		0.20	0.020	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	1.9		0.20	0.020	ug/L	1		8270D LL	Total/NA
3 & 4 Methylphenol	2.2	J	20	1.0	ug/L	1		8270D	Total/NA
Phenol	86		9.8	2.5	ug/L	1		8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160322-1
SDG: 60527968

Client Sample ID: TB-ROX-100818-8011
Date Collected: 10/08/18 00:00
Date Received: 10/09/18 14:25

Lab Sample ID: 400-160322-1
Matrix: Water

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0056	ug/L		10/18/18 14:46	10/19/18 15:44	1
1,2-Dibromoethane	ND		0.020	0.0051	ug/L		10/18/18 14:46	10/19/18 15:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*114*	*p*	*51 - 149*	*10/18/18 14:46*	*10/19/18 15:44*	*1*

Client Sample ID: TB-ROX-100818-8260
Date Collected: 10/08/18 00:00
Date Received: 10/09/18 14:25

Lab Sample ID: 400-160322-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/20/18 10:33	1
Acrolein	ND		20	10	ug/L			10/20/18 10:33	1
Acrylonitrile	ND		10	2.8	ug/L			10/20/18 10:33	1
Benzene	ND		1.0	0.38	ug/L			10/20/18 10:33	1
Bromobenzene	ND		1.0	0.54	ug/L			10/20/18 10:33	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/20/18 10:33	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/20/18 10:33	1
Bromoform	ND		5.0	0.71	ug/L			10/20/18 10:33	1
Bromomethane	ND		1.0	0.98	ug/L			10/20/18 10:33	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/20/18 10:33	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/20/18 10:33	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/20/18 10:33	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/20/18 10:33	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/20/18 10:33	1
Chloroethane	ND		1.0	0.76	ug/L			10/20/18 10:33	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/20/18 10:33	1
Chloroform	ND		1.0	0.60	ug/L			10/20/18 10:33	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/20/18 10:33	1
Chloromethane	ND		1.0	0.83	ug/L			10/20/18 10:33	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/20/18 10:33	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/20/18 10:33	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/20/18 10:33	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/20/18 10:33	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/20/18 10:33	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/20/18 10:33	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/20/18 10:33	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/20/18 10:33	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/20/18 10:33	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/20/18 10:33	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/20/18 10:33	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/20/18 10:33	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/20/18 10:33	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/20/18 10:33	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/20/18 10:33	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/20/18 10:33	1
2-Hexanone	ND		25	3.1	ug/L			10/20/18 10:33	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/20/18 10:33	1
Methylene bromide	ND		5.0	0.59	ug/L			10/20/18 10:33	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/20/18 10:33	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/20/18 10:33	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/20/18 10:33	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/20/18 10:33	1
Naphthalene	ND		1.0	1.0	ug/L			10/20/18 10:33	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/20/18 10:33	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/20/18 10:33	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/20/18 10:33	1
o-Xylene	ND		5.0	0.60	ug/L			10/20/18 10:33	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/20/18 10:33	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/20/18 10:33	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160322-1
SDG: 60527968

Client Sample ID: TB-ROX-100818-8260
Date Collected: 10/08/18 00:00
Date Received: 10/09/18 14:25

Lab Sample ID: 400-160322-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/20/18 10:33	1
Styrene	ND		1.0	1.0	ug/L			10/20/18 10:33	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/20/18 10:33	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/20/18 10:33	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/20/18 10:33	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/20/18 10:33	1
Toluene	ND		1.0	0.70	ug/L			10/20/18 10:33	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/20/18 10:33	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/20/18 10:33	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/20/18 10:33	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/20/18 10:33	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/20/18 10:33	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/20/18 10:33	1
Trichloroethene	ND		1.0	0.50	ug/L			10/20/18 10:33	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/20/18 10:33	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/20/18 10:33	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/20/18 10:33	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/20/18 10:33	1
Vinyl acetate	ND		25	2.0	ug/L			10/20/18 10:33	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/20/18 10:33	1
Xylenes, Total	ND		10	1.6	ug/L			10/20/18 10:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*78 - 118*		*10/20/18 10:33*	*1*
Dibromofluoromethane	*100*		*81 - 121*		*10/20/18 10:33*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*10/20/18 10:33*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160322-1
SDG: 60527968

Client Sample ID: MW4-ROX-100818
Date Collected: 10/08/18 09:25
Date Received: 10/09/18 14:25

Lab Sample ID: 400-160322-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/19/18 01:25	1
Acrolein	ND		20	10	ug/L			10/19/18 01:25	1
Acrylonitrile	ND		10	2.8	ug/L			10/19/18 01:25	1
Benzene	ND		1.0	0.38	ug/L			10/19/18 01:25	1
Bromobenzene	ND		1.0	0.54	ug/L			10/19/18 01:25	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/19/18 01:25	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/19/18 01:25	1
Bromoform	ND		5.0	0.71	ug/L			10/19/18 01:25	1
Bromomethane	ND		1.0	0.98	ug/L			10/19/18 01:25	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/19/18 01:25	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/19/18 01:25	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/19/18 01:25	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/19/18 01:25	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/19/18 01:25	1
Chloroethane	ND		1.0	0.76	ug/L			10/19/18 01:25	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/19/18 01:25	1
Chloroform	ND		1.0	0.60	ug/L			10/19/18 01:25	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/19/18 01:25	1
Chloromethane	ND		1.0	0.83	ug/L			10/19/18 01:25	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/19/18 01:25	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/19/18 01:25	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/19/18 01:25	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/19/18 01:25	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/19/18 01:25	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/19/18 01:25	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/19/18 01:25	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/19/18 01:25	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/19/18 01:25	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/19/18 01:25	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/19/18 01:25	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/19/18 01:25	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/19/18 01:25	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/19/18 01:25	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/19/18 01:25	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/19/18 01:25	1
2-Hexanone	ND		25	3.1	ug/L			10/19/18 01:25	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/19/18 01:25	1
Methylene bromide	ND		5.0	0.59	ug/L			10/19/18 01:25	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/19/18 01:25	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/19/18 01:25	1
Methyl tert-butyl ether	3.2		1.0	0.74	ug/L			10/19/18 01:25	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/19/18 01:25	1
Naphthalene	ND		1.0	1.0	ug/L			10/19/18 01:25	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/19/18 01:25	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/19/18 01:25	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/19/18 01:25	1
o-Xylene	ND		5.0	0.60	ug/L			10/19/18 01:25	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/19/18 01:25	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/19/18 01:25	1

Client Sample ID: MW4-ROX-100818

Date Collected: 10/08/18 09:25
Date Received: 10/09/18 14:25

Lab Sample ID: 400-160322-3

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/19/18 01:25	1
Styrene	ND		1.0	1.0	ug/L			10/19/18 01:25	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/19/18 01:25	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/19/18 01:25	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/19/18 01:25	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/19/18 01:25	1
Toluene	ND		1.0	0.70	ug/L			10/19/18 01:25	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/19/18 01:25	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/19/18 01:25	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/19/18 01:25	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/19/18 01:25	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/19/18 01:25	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/19/18 01:25	1
Trichloroethene	ND		1.0	0.50	ug/L			10/19/18 01:25	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/19/18 01:25	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/19/18 01:25	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/19/18 01:25	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/19/18 01:25	1
Vinyl acetate	ND		25	2.0	ug/L			10/19/18 01:25	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/19/18 01:25	1
Xylenes, Total	ND		10	1.6	ug/L			10/19/18 01:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*78 - 118*		*10/19/18 01:25*	*1*
Dibromofluoromethane	*99*		*81 - 121*		*10/19/18 01:25*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*10/19/18 01:25*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.19	0.019	ug/L		10/11/18 12:52	10/15/18 18:26	1
Acenaphthylene	ND		0.19	0.019	ug/L		10/11/18 12:52	10/15/18 18:26	1
Anthracene	ND		0.19	0.019	ug/L		10/11/18 12:52	10/15/18 18:26	1
Benzo[a]anthracene	ND		0.19	0.039	ug/L		10/11/18 12:52	10/15/18 18:26	1
Benzo[a]pyrene	ND		0.19	0.039	ug/L		10/11/18 12:52	10/15/18 18:26	1
Benzo[b]fluoranthene	ND		0.19	0.039	ug/L		10/11/18 12:52	10/15/18 18:26	1
Benzo[g,h,i]perylene	ND		0.19	0.039	ug/L		10/11/18 12:52	10/15/18 18:26	1
Benzo[k]fluoranthene	ND		0.19	0.039	ug/L		10/11/18 12:52	10/15/18 18:26	1
Chrysene	ND		0.19	0.039	ug/L		10/11/18 12:52	10/15/18 18:26	1
Dibenz(a,h)anthracene	ND		0.19	0.039	ug/L		10/11/18 12:52	10/15/18 18:26	1
Fluoranthene	ND		0.19	0.019	ug/L		10/11/18 12:52	10/15/18 18:26	1
Fluorene	ND		0.19	0.020	ug/L		10/11/18 12:52	10/15/18 18:26	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.039	ug/L		10/11/18 12:52	10/15/18 18:26	1
Phenanthrene	ND		0.19	0.019	ug/L		10/11/18 12:52	10/15/18 18:26	1
Pyrene	ND		0.19	0.019	ug/L		10/11/18 12:52	10/15/18 18:26	1
1-Methylnaphthalene	0.078	J	0.19	0.019	ug/L		10/11/18 12:52	10/15/18 18:26	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		10/11/18 12:52	10/15/18 18:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*49*		*33 - 138*	*10/11/18 12:52*	*10/15/18 18:26*	*1*
2-Fluorobiphenyl	*48*		*15 - 122*	*10/11/18 12:52*	*10/15/18 18:26*	*1*

Client Sample ID: MW4-ROX-100818

Date Collected: 10/08/18 09:25
Date Received: 10/09/18 14:25

Lab Sample ID: 400-160322-3

Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	32		19 - 130	10/11/18 12:52	10/15/18 18:26	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND	*	9.7	3.7	ug/L		10/11/18 12:52	10/12/18 18:52	1
Benzenethiol	ND	*	9.7	1.7	ug/L		10/11/18 12:52	10/12/18 18:52	1
Benzoic acid	ND	*	29	7.1	ug/L		10/11/18 12:52	10/12/18 18:52	1
Benzyl alcohol	ND		9.7	1.9	ug/L		10/11/18 12:52	10/12/18 18:52	1
Bis(2-chloroethoxy)methane	ND		9.7	0.67	ug/L		10/11/18 12:52	10/12/18 18:52	1
Bis(2-chloroethyl)ether	ND		9.7	0.72	ug/L		10/11/18 12:52	10/12/18 18:52	1
bis (2-chloroisopropyl) ether	ND		9.7	0.79	ug/L		10/11/18 12:52	10/12/18 18:52	1
Bis(2-ethylhexyl) phthalate	ND		9.7	2.2	ug/L		10/11/18 12:52	10/12/18 18:52	1
4-Bromophenyl phenyl ether	ND		9.7	0.31	ug/L		10/11/18 12:52	10/12/18 18:52	1
Butyl benzyl phthalate	ND		9.7	0.67	ug/L		10/11/18 12:52	10/12/18 18:52	1
4-Chloroaniline	ND		9.7	3.3	ug/L		10/11/18 12:52	10/12/18 18:52	1
4-Chloro-3-methylphenol	ND		9.7	3.7	ug/L		10/11/18 12:52	10/12/18 18:52	1
2-Chloronaphthalene	ND		9.7	0.51	ug/L		10/11/18 12:52	10/12/18 18:52	1
2-Chlorophenol	ND		9.7	2.1	ug/L		10/11/18 12:52	10/12/18 18:52	1
4-Chlorophenyl phenyl ether	ND		9.7	1.9	ug/L		10/11/18 12:52	10/12/18 18:52	1
Dibenz[a,h]acridine	ND		9.7	2.9	ug/L		10/11/18 12:52	10/12/18 18:52	1
Dibenzofuran	ND		9.7	0.51	ug/L		10/11/18 12:52	10/12/18 18:52	1
3,3'-Dichlorobenzidine	ND		9.7	2.5	ug/L		10/11/18 12:52	10/12/18 18:52	1
2,4-Dichlorophenol	ND		9.7	2.9	ug/L		10/11/18 12:52	10/12/18 18:52	1
Diethyl phthalate	ND		9.7	0.68	ug/L		10/11/18 12:52	10/12/18 18:52	1
2,4-Dimethylphenol	ND		9.7	3.4	ug/L		10/11/18 12:52	10/12/18 18:52	1
Dimethyl phthalate	ND		9.7	0.58	ug/L		10/11/18 12:52	10/12/18 18:52	1
Di-n-butyl phthalate	ND		9.7	2.6	ug/L		10/11/18 12:52	10/12/18 18:52	1
4,6-Dinitro-ortho-cresol	ND		9.7	1.9	ug/L		10/11/18 12:52	10/12/18 18:52	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		10/11/18 12:52	10/12/18 18:52	1
2,4-Dinitrotoluene	ND		9.7	1.9	ug/L		10/11/18 12:52	10/12/18 18:52	1
2,6-Dinitrotoluene	ND		9.7	1.9	ug/L		10/11/18 12:52	10/12/18 18:52	1
Di-n-octyl phthalate	ND		9.7	0.43	ug/L		10/11/18 12:52	10/12/18 18:52	1
1,4-Dioxane	ND		9.7	0.97	ug/L		10/11/18 12:52	10/12/18 18:52	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.7	0.97	ug/L		10/11/18 12:52	10/12/18 18:52	1
Hexachlorobenzene	ND		9.7	0.24	ug/L		10/11/18 12:52	10/12/18 18:52	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		10/11/18 12:52	10/12/18 18:52	1
Hexachloroethane	ND		9.7	4.1	ug/L		10/11/18 12:52	10/12/18 18:52	1
Indene	ND		9.7	0.97	ug/L		10/11/18 12:52	10/12/18 18:52	1
Isophorone	ND		9.7	0.56	ug/L		10/11/18 12:52	10/12/18 18:52	1
2-Methylphenol	ND		9.7	1.8	ug/L		10/11/18 12:52	10/12/18 18:52	1
3 & 4 Methylphenol	ND		19	1.0	ug/L		10/11/18 12:52	10/12/18 18:52	1
2-Nitroaniline	ND		9.7	2.1	ug/L		10/11/18 12:52	10/12/18 18:52	1
3-Nitroaniline	ND		9.7	1.8	ug/L		10/11/18 12:52	10/12/18 18:52	1
4-Nitroaniline	ND		9.7	2.4	ug/L		10/11/18 12:52	10/12/18 18:52	1
Nitrobenzene	ND		9.7	0.54	ug/L		10/11/18 12:52	10/12/18 18:52	1
2-Nitrophenol	ND		9.7	0.63	ug/L		10/11/18 12:52	10/12/18 18:52	1
4-Nitrophenol	ND	*	9.7	2.0	ug/L		10/11/18 12:52	10/12/18 18:52	1
N-Nitrosodimethylamine	ND		9.7	3.4	ug/L		10/11/18 12:52	10/12/18 18:52	1

Client Sample ID: MW4-ROX-100818

Date Collected: 10/08/18 09:25
Date Received: 10/09/18 14:25

Lab Sample ID: 400-160322-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.7	3.2	ug/L		10/11/18 12:52	10/12/18 18:52	1
N-Nitrosodiphenylamine	ND		9.7	0.46	ug/L		10/11/18 12:52	10/12/18 18:52	1
Pentachlorophenol	ND		19	1.8	ug/L		10/11/18 12:52	10/12/18 18:52	1
Phenol	ND		9.7	2.5	ug/L		10/11/18 12:52	10/12/18 18:52	1
Pyridine	ND		9.7	3.1	ug/L		10/11/18 12:52	10/12/18 18:52	1
Quinoline	ND		9.7	5.8	ug/L		10/11/18 12:52	10/12/18 18:52	1
2,4,5-Trichlorophenol	ND		9.7	3.6	ug/L		10/11/18 12:52	10/12/18 18:52	1
2,4,6-Trichlorophenol	ND		9.7	3.4	ug/L		10/11/18 12:52	10/12/18 18:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*42*		*34 - 120*	*10/11/18 12:52*	*10/12/18 18:52*	*1*
2-Fluorophenol	*25*		*10 - 120*	*10/11/18 12:52*	*10/12/18 18:52*	*1*
Nitrobenzene-d5	*41*		*27 - 120*	*10/11/18 12:52*	*10/12/18 18:52*	*1*
Phenol-d5	*38*		*10 - 120*	*10/11/18 12:52*	*10/12/18 18:52*	*1*
Terphenyl-d14	*39*	*X*	*53 - 125*	*10/11/18 12:52*	*10/12/18 18:52*	*1*
2,4,6-Tribromophenol	*48*		*15 - 135*	*10/11/18 12:52*	*10/12/18 18:52*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.031	0.0056	ug/L		10/18/18 14:46	10/19/18 16:16	1
1,2-Dibromoethane	ND		0.020	0.0051	ug/L		10/18/18 14:46	10/19/18 16:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*127*	*p*	*51 - 149*	*10/18/18 14:46*	*10/19/18 16:16*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160322-1
SDG: 60527968

Client Sample ID: MW25-ROX-100818
Date Collected: 10/08/18 10:35
Date Received: 10/09/18 14:25

Lab Sample ID: 400-160322-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/19/18 01:49	1
Acrolein	ND		20	10	ug/L			10/19/18 01:49	1
Acrylonitrile	ND		10	2.8	ug/L			10/19/18 01:49	1
Benzene	7.1		1.0	0.38	ug/L			10/19/18 01:49	1
Bromobenzene	ND		1.0	0.54	ug/L			10/19/18 01:49	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/19/18 01:49	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/19/18 01:49	1
Bromoform	ND		5.0	0.71	ug/L			10/19/18 01:49	1
Bromomethane	ND		1.0	0.98	ug/L			10/19/18 01:49	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/19/18 01:49	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/19/18 01:49	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/19/18 01:49	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/19/18 01:49	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/19/18 01:49	1
Chloroethane	ND		1.0	0.76	ug/L			10/19/18 01:49	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/19/18 01:49	1
Chloroform	ND		1.0	0.60	ug/L			10/19/18 01:49	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/19/18 01:49	1
Chloromethane	ND		1.0	0.83	ug/L			10/19/18 01:49	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/19/18 01:49	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/19/18 01:49	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/19/18 01:49	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/19/18 01:49	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/19/18 01:49	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/19/18 01:49	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/19/18 01:49	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/19/18 01:49	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/19/18 01:49	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/19/18 01:49	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/19/18 01:49	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/19/18 01:49	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/19/18 01:49	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/19/18 01:49	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/19/18 01:49	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/19/18 01:49	1
2-Hexanone	ND		25	3.1	ug/L			10/19/18 01:49	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/19/18 01:49	1
Methylene bromide	ND		5.0	0.59	ug/L			10/19/18 01:49	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/19/18 01:49	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/19/18 01:49	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/19/18 01:49	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/19/18 01:49	1
Naphthalene	ND		1.0	1.0	ug/L			10/19/18 01:49	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/19/18 01:49	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/19/18 01:49	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/19/18 01:49	1
o-Xylene	ND		5.0	0.60	ug/L			10/19/18 01:49	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/19/18 01:49	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/19/18 01:49	1

Client Sample ID: MW25-ROX-100818

Date Collected: 10/08/18 10:35
Date Received: 10/09/18 14:25

Lab Sample ID: 400-160322-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/19/18 01:49	1
Styrene	ND		1.0	1.0	ug/L			10/19/18 01:49	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/19/18 01:49	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/19/18 01:49	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/19/18 01:49	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/19/18 01:49	1
Toluene	ND		1.0	0.70	ug/L			10/19/18 01:49	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/19/18 01:49	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/19/18 01:49	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/19/18 01:49	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/19/18 01:49	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/19/18 01:49	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/19/18 01:49	1
Trichloroethene	ND		1.0	0.50	ug/L			10/19/18 01:49	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/19/18 01:49	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/19/18 01:49	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/19/18 01:49	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/19/18 01:49	1
Vinyl acetate	ND		25	2.0	ug/L			10/19/18 01:49	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/19/18 01:49	1
Xylenes, Total	ND		10	1.6	ug/L			10/19/18 01:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*78 - 118*		*10/19/18 01:49*	*1*
Dibromofluoromethane	*97*		*81 - 121*		*10/19/18 01:49*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*10/19/18 01:49*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.19	0.019	ug/L		10/11/18 12:52	10/15/18 18:42	1
Acenaphthylene	ND		0.19	0.019	ug/L		10/11/18 12:52	10/15/18 18:42	1
Anthracene	ND		0.19	0.019	ug/L		10/11/18 12:52	10/15/18 18:42	1
Benzo[a]anthracene	ND		0.19	0.039	ug/L		10/11/18 12:52	10/15/18 18:42	1
Benzo[a]pyrene	ND		0.19	0.039	ug/L		10/11/18 12:52	10/15/18 18:42	1
Benzo[b]fluoranthene	ND		0.19	0.039	ug/L		10/11/18 12:52	10/15/18 18:42	1
Benzo[g,h,i]perylene	ND		0.19	0.039	ug/L		10/11/18 12:52	10/15/18 18:42	1
Benzo[k]fluoranthene	ND		0.19	0.039	ug/L		10/11/18 12:52	10/15/18 18:42	1
Chrysene	ND		0.19	0.039	ug/L		10/11/18 12:52	10/15/18 18:42	1
Dibenz(a,h)anthracene	ND		0.19	0.039	ug/L		10/11/18 12:52	10/15/18 18:42	1
Fluoranthene	ND		0.19	0.019	ug/L		10/11/18 12:52	10/15/18 18:42	1
Fluorene	ND		0.19	0.020	ug/L		10/11/18 12:52	10/15/18 18:42	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.039	ug/L		10/11/18 12:52	10/15/18 18:42	1
Phenanthrene	ND		0.19	0.019	ug/L		10/11/18 12:52	10/15/18 18:42	1
Pyrene	ND		0.19	0.019	ug/L		10/11/18 12:52	10/15/18 18:42	1
1-Methylnaphthalene	ND		0.19	0.019	ug/L		10/11/18 12:52	10/15/18 18:42	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		10/11/18 12:52	10/15/18 18:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*55*		*33 - 138*	*10/11/18 12:52*	*10/15/18 18:42*	*1*
2-Fluorobiphenyl	*55*		*15 - 122*	*10/11/18 12:52*	*10/15/18 18:42*	*1*

Client Sample ID: MW25-ROX-100818

Date Collected: 10/08/18 10:35
Date Received: 10/09/18 14:25

Lab Sample ID: 400-160322-4
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	35		19 - 130	10/11/18 12:52	10/15/18 18:42	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND	*	9.7	3.7	ug/L		10/11/18 12:52	10/12/18 19:14	1
Benzenethiol	ND	* UJ	9.7	1.6	ug/L		10/11/18 12:52	10/12/18 19:14	1
Benzoic acid	ND	*	29	7.1	ug/L		10/11/18 12:52	10/12/18 19:14	1
Benzyl alcohol	ND		9.7	1.9	ug/L		10/11/18 12:52	10/12/18 19:14	1
Bis(2-chloroethoxy)methane	ND		9.7	0.67	ug/L		10/11/18 12:52	10/12/18 19:14	1
Bis(2-chloroethyl)ether	ND		9.7	0.72	ug/L		10/11/18 12:52	10/12/18 19:14	1
bis (2-chloroisopropyl) ether	ND		9.7	0.79	ug/L		10/11/18 12:52	10/12/18 19:14	1
Bis(2-ethylhexyl) phthalate	ND		9.7	2.2	ug/L		10/11/18 12:52	10/12/18 19:14	1
4-Bromophenyl phenyl ether	ND		9.7	0.31	ug/L		10/11/18 12:52	10/12/18 19:14	1
Butyl benzyl phthalate	ND		9.7	0.67	ug/L		10/11/18 12:52	10/12/18 19:14	1
4-Chloroaniline	ND		9.7	3.3	ug/L		10/11/18 12:52	10/12/18 19:14	1
4-Chloro-3-methylphenol	ND		9.7	3.7	ug/L		10/11/18 12:52	10/12/18 19:14	1
2-Chloronaphthalene	ND		9.7	0.50	ug/L		10/11/18 12:52	10/12/18 19:14	1
2-Chlorophenol	ND		9.7	2.1	ug/L		10/11/18 12:52	10/12/18 19:14	1
4-Chlorophenyl phenyl ether	ND		9.7	1.9	ug/L		10/11/18 12:52	10/12/18 19:14	1
Dibenz[a,h]acridine	ND		9.7	2.9	ug/L		10/11/18 12:52	10/12/18 19:14	1
Dibenzofuran	ND		9.7	0.50	ug/L		10/11/18 12:52	10/12/18 19:14	1
3,3'-Dichlorobenzidine	ND		9.7	2.5	ug/L		10/11/18 12:52	10/12/18 19:14	1
2,4-Dichlorophenol	ND		9.7	2.9	ug/L		10/11/18 12:52	10/12/18 19:14	1
Diethyl phthalate	ND		9.7	0.68	ug/L		10/11/18 12:52	10/12/18 19:14	1
2,4-Dimethylphenol	ND		9.7	3.4	ug/L		10/11/18 12:52	10/12/18 19:14	1
Dimethyl phthalate	ND		9.7	0.58	ug/L		10/11/18 12:52	10/12/18 19:14	1
Di-n-butyl phthalate	ND		9.7	2.6	ug/L		10/11/18 12:52	10/12/18 19:14	1
4,6-Dinitro-ortho-cresol	ND		9.7	1.9	ug/L		10/11/18 12:52	10/12/18 19:14	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		10/11/18 12:52	10/12/18 19:14	1
2,4-Dinitrotoluene	ND		9.7	1.8	ug/L		10/11/18 12:52	10/12/18 19:14	1
2,6-Dinitrotoluene	ND		9.7	1.8	ug/L		10/11/18 12:52	10/12/18 19:14	1
Di-n-octyl phthalate	ND		9.7	0.43	ug/L		10/11/18 12:52	10/12/18 19:14	1
1,4-Dioxane	ND		9.7	0.97	ug/L		10/11/18 12:52	10/12/18 19:14	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.7	0.97	ug/L		10/11/18 12:52	10/12/18 19:14	1
Hexachlorobenzene	ND		9.7	0.24	ug/L		10/11/18 12:52	10/12/18 19:14	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		10/11/18 12:52	10/12/18 19:14	1
Hexachloroethane	ND		9.7	4.1	ug/L		10/11/18 12:52	10/12/18 19:14	1
Indene	ND		9.7	0.97	ug/L		10/11/18 12:52	10/12/18 19:14	1
Isophorone	ND		9.7	0.55	ug/L		10/11/18 12:52	10/12/18 19:14	1
2-Methylphenol	ND		9.7	1.7	ug/L		10/11/18 12:52	10/12/18 19:14	1
3 & 4 Methylphenol	ND		19	1.0	ug/L		10/11/18 12:52	10/12/18 19:14	1
2-Nitroaniline	ND		9.7	2.1	ug/L		10/11/18 12:52	10/12/18 19:14	1
3-Nitroaniline	ND		9.7	1.7	ug/L		10/11/18 12:52	10/12/18 19:14	1
4-Nitroaniline	ND		9.7	2.4	ug/L		10/11/18 12:52	10/12/18 19:14	1
Nitrobenzene	ND		9.7	0.53	ug/L		10/11/18 12:52	10/12/18 19:14	1
2-Nitrophenol	ND		9.7	0.63	ug/L		10/11/18 12:52	10/12/18 19:14	1
4-Nitrophenol	ND	*	9.7	2.0	ug/L		10/11/18 12:52	10/12/18 19:14	1
N-Nitrosodimethylamine	ND		9.7	3.4	ug/L		10/11/18 12:52	10/12/18 19:14	1

Client Sample ID: MW25-ROX-100818

Date Collected: 10/08/18 10:35
Date Received: 10/09/18 14:25

Lab Sample ID: 400-160322-4

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.7	3.2	ug/L		10/11/18 12:52	10/12/18 19:14	1
N-Nitrosodiphenylamine	ND		9.7	0.46	ug/L		10/11/18 12:52	10/12/18 19:14	1
Pentachlorophenol	ND		19	1.8	ug/L		10/11/18 12:52	10/12/18 19:14	1
Phenol	ND		9.7	2.5	ug/L		10/11/18 12:52	10/12/18 19:14	1
Pyridine	ND		9.7	3.1	ug/L		10/11/18 12:52	10/12/18 19:14	1
Quinoline	ND		9.7	5.8	ug/L		10/11/18 12:52	10/12/18 19:14	1
2,4,5-Trichlorophenol	ND		9.7	3.6	ug/L		10/11/18 12:52	10/12/18 19:14	1
2,4,6-Trichlorophenol	ND		9.7	3.4	ug/L		10/11/18 12:52	10/12/18 19:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*43*		*34 - 120*	*10/11/18 12:52*	*10/12/18 19:14*	*1*
2-Fluorophenol	*29*		*10 - 120*	*10/11/18 12:52*	*10/12/18 19:14*	*1*
Nitrobenzene-d5	*46*		*27 - 120*	*10/11/18 12:52*	*10/12/18 19:14*	*1*
Phenol-d5	*33*		*10 - 120*	*10/11/18 12:52*	*10/12/18 19:14*	*1*
Terphenyl-d14	*35*	*X*	*53 - 125*	*10/11/18 12:52*	*10/12/18 19:14*	*1*
2,4,6-Tribromophenol	*39*		*15 - 135*	*10/11/18 12:52*	*10/12/18 19:14*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0055	ug/L		10/18/18 14:46	10/19/18 16:49	1
1,2-Dibromoethane	ND		0.020	0.0050	ug/L		10/18/18 14:46	10/19/18 16:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*119*	*p*	*51 - 149*	*10/18/18 14:46*	*10/19/18 16:49*	*1*

Client Sample ID: MW8-ROX-100818
Date Collected: 10/08/18 12:10
Date Received: 10/09/18 14:25

Lab Sample ID: 400-160322-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		63000	25000	ug/L			10/19/18 02:36	2500
Acrolein	ND		50000	25000	ug/L			10/19/18 02:36	2500
Acrylonitrile	ND		25000	7000	ug/L			10/19/18 02:36	2500
Benzene	550000		2500	950	ug/L			10/19/18 02:36	2500
Bromobenzene	ND		2500	1400	ug/L			10/19/18 02:36	2500
Bromochloromethane	ND		2500	1300	ug/L			10/19/18 02:36	2500
Bromodichloromethane	ND		2500	1300	ug/L			10/19/18 02:36	2500
Bromoform	ND		13000	1800	ug/L			10/19/18 02:36	2500
Bromomethane	ND		2500	2500	ug/L			10/19/18 02:36	2500
2-Butanone (MEK)	ND		63000	6500	ug/L			10/19/18 02:36	2500
Carbon disulfide	ND		2500	1300	ug/L			10/19/18 02:36	2500
Carbon tetrachloride	ND		2500	1300	ug/L			10/19/18 02:36	2500
Chlorobenzene	ND		2500	1300	ug/L			10/19/18 02:36	2500
Dibromochloromethane	ND		2500	1300	ug/L			10/19/18 02:36	2500
Chloroethane	ND		2500	1900	ug/L			10/19/18 02:36	2500
2-Chloroethyl vinyl ether	ND		13000	5000	ug/L			10/19/18 02:36	2500
Chloroform	ND		2500	1500	ug/L			10/19/18 02:36	2500
1-Chlorohexane	ND		2500	1800	ug/L			10/19/18 02:36	2500
Chloromethane	ND		2500	2100	ug/L			10/19/18 02:36	2500
cis-1,2-Dichloroethene	ND		2500	1300	ug/L			10/19/18 02:36	2500
cis-1,3-Dichloropropene	ND		13000	1300	ug/L			10/19/18 02:36	2500
1,2-Dichlorobenzene	ND		2500	1300	ug/L			10/19/18 02:36	2500
1,3-Dichlorobenzene	ND		2500	1400	ug/L			10/19/18 02:36	2500
1,4-Dichlorobenzene	ND		2500	1600	ug/L			10/19/18 02:36	2500
Dichlorodifluoromethane	ND		2500	2100	ug/L			10/19/18 02:36	2500
1,1-Dichloroethane	ND		2500	1300	ug/L			10/19/18 02:36	2500
1,2-Dichloroethane	ND		2500	1300	ug/L			10/19/18 02:36	2500
1,1-Dichloroethene	ND		2500	1300	ug/L			10/19/18 02:36	2500
1,2-Dichloropropane	ND		2500	1300	ug/L			10/19/18 02:36	2500
1,3-Dichloropropane	ND		2500	1300	ug/L			10/19/18 02:36	2500
2,2-Dichloropropane	ND		2500	1300	ug/L			10/19/18 02:36	2500
1,1-Dichloropropene	ND		2500	1300	ug/L			10/19/18 02:36	2500
Ethylbenzene	ND		2500	1300	ug/L			10/19/18 02:36	2500
Ethyl methacrylate	ND		2500	1500	ug/L			10/19/18 02:36	2500
Hexachlorobutadiene	ND		13000	2300	ug/L			10/19/18 02:36	2500
2-Hexanone	ND		63000	7800	ug/L			10/19/18 02:36	2500
Isopropylbenzene	ND		2500	1300	ug/L			10/19/18 02:36	2500
Methylene bromide	ND		13000	1500	ug/L			10/19/18 02:36	2500
Methylene Chloride	ND		13000	7500	ug/L			10/19/18 02:36	2500
4-Methyl-2-pentanone (MIBK)	ND		63000	4500	ug/L			10/19/18 02:36	2500
Methyl tert-butyl ether	ND		2500	1900	ug/L			10/19/18 02:36	2500
m-Xylene & p-Xylene	ND		13000	4000	ug/L			10/19/18 02:36	2500
Naphthalene	ND		2500	2500	ug/L			10/19/18 02:36	2500
n-Butylbenzene	ND		2500	1900	ug/L			10/19/18 02:36	2500
N-Propylbenzene	ND		2500	1700	ug/L			10/19/18 02:36	2500
o-Chlorotoluene	ND		2500	1400	ug/L			10/19/18 02:36	2500
o-Xylene	ND		13000	1500	ug/L			10/19/18 02:36	2500
p-Chlorotoluene	ND		2500	1400	ug/L			10/19/18 02:36	2500
p-Isopropyltoluene	ND		2500	1800	ug/L			10/19/18 02:36	2500

Client Sample ID: MW8-ROX-100818

Date Collected: 10/08/18 12:10
Date Received: 10/09/18 14:25

Lab Sample ID: 400-160322-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		2500	1800	ug/L			10/19/18 02:36	2500
Styrene	ND		2500	2500	ug/L			10/19/18 02:36	2500
tert-Butylbenzene	ND		2500	1600	ug/L			10/19/18 02:36	2500
1,1,1,2-Tetrachloroethane	ND		2500	1300	ug/L			10/19/18 02:36	2500
1,1,2,2-Tetrachloroethane	ND		2500	1300	ug/L			10/19/18 02:36	2500
Tetrachloroethene	ND		2500	1500	ug/L			10/19/18 02:36	2500
Toluene	ND		2500	1800	ug/L			10/19/18 02:36	2500
trans-1,2-Dichloroethene	ND		2500	1300	ug/L			10/19/18 02:36	2500
trans-1,3-Dichloropropene	ND		13000	1300	ug/L			10/19/18 02:36	2500
1,2,3-Trichlorobenzene	ND		2500	1800	ug/L			10/19/18 02:36	2500
1,2,4-Trichlorobenzene	ND		2500	2100	ug/L			10/19/18 02:36	2500
1,1,1-Trichloroethane	ND		2500	1300	ug/L			10/19/18 02:36	2500
1,1,2-Trichloroethane	ND		13000	1300	ug/L			10/19/18 02:36	2500
Trichloroethene	ND		2500	1300	ug/L			10/19/18 02:36	2500
Trichlorofluoromethane	ND		2500	1300	ug/L			10/19/18 02:36	2500
1,2,3-Trichloropropane	ND		13000	2100	ug/L			10/19/18 02:36	2500
1,2,4-Trimethylbenzene	ND		2500	2100	ug/L			10/19/18 02:36	2500
1,3,5-Trimethylbenzene	ND		2500	1400	ug/L			10/19/18 02:36	2500
Vinyl acetate	ND		63000	5000	ug/L			10/19/18 02:36	2500
Vinyl chloride	ND		2500	1300	ug/L			10/19/18 02:36	2500
Xylenes, Total	ND		25000	4000	ug/L			10/19/18 02:36	2500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*92*		*78 - 118*		*10/19/18 02:36*	*2500*
Dibromofluoromethane	*98*		*81 - 121*		*10/19/18 02:36*	*2500*
Toluene-d8 (Surr)	*97*		*80 - 120*		*10/19/18 02:36*	*2500*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/11/18 12:52	10/15/18 18:58	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/11/18 12:52	10/15/18 18:58	1
Anthracene	ND		0.20	0.020	ug/L		10/11/18 12:52	10/15/18 18:58	1
Benzo[a]anthracene	ND		0.20	0.039	ug/L		10/11/18 12:52	10/15/18 18:58	1
Benzo[a]pyrene	ND		0.20	0.039	ug/L		10/11/18 12:52	10/15/18 18:58	1
Benzo[b]fluoranthene	0.061	J	0.20	0.039	ug/L		10/11/18 12:52	10/15/18 18:58	1
Benzo[g,h,i]perylene	0.046	J	0.20	0.039	ug/L		10/11/18 12:52	10/15/18 18:58	1
Benzo[k]fluoranthene	0.054	J	0.20	0.039	ug/L		10/11/18 12:52	10/15/18 18:58	1
Chrysene	ND		0.20	0.039	ug/L		10/11/18 12:52	10/15/18 18:58	1
Dibenz(a,h)anthracene	0.075	J	0.20	0.039	ug/L		10/11/18 12:52	10/15/18 18:58	1
Fluoranthene	ND		0.20	0.020	ug/L		10/11/18 12:52	10/15/18 18:58	1
Fluorene	0.31		0.20	0.021	ug/L		10/11/18 12:52	10/15/18 18:58	1
Indeno[1,2,3-cd]pyrene	0.057	J	0.20	0.039	ug/L		10/11/18 12:52	10/15/18 18:58	1
Phenanthrene	0.13	J	0.20	0.020	ug/L		10/11/18 12:52	10/15/18 18:58	1
Pyrene	ND		0.20	0.020	ug/L		10/11/18 12:52	10/15/18 18:58	1
1-Methylnaphthalene	5.7	J	0.20	0.020	ug/L		10/11/18 12:52	10/15/18 18:58	1
2-Methylnaphthalene	2.3		0.20	0.020	ug/L		10/11/18 12:52	10/15/18 18:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*36*		*33 - 138*	*10/11/18 12:52*	*10/15/18 18:58*	*1*
2-Fluorobiphenyl	*37*		*15 - 122*	*10/11/18 12:52*	*10/15/18 18:58*	*1*

Client Sample ID: MW8-ROX-100818

Date Collected: 10/08/18 12:10
Date Received: 10/09/18 14:25

Lab Sample ID: 400-160322-5
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	20		19 - 130	10/11/18 12:52	10/15/18 18:58	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND	*	9.8	3.7	ug/L		10/11/18 12:52	10/12/18 19:35	1
Benzenethiol	ND	* UJ	9.8	1.7	ug/L		10/11/18 12:52	10/12/18 19:35	1
Benzoic acid	ND	*	29	7.1	ug/L		10/11/18 12:52	10/12/18 19:35	1
Benzyl alcohol	ND		9.8	2.0	ug/L		10/11/18 12:52	10/12/18 19:35	1
Bis(2-chloroethoxy)methane	ND		9.8	0.67	ug/L		10/11/18 12:52	10/12/18 19:35	1
Bis(2-chloroethyl)ether	ND		9.8	0.72	ug/L		10/11/18 12:52	10/12/18 19:35	1
bis (2-chloroisopropyl) ether	ND		9.8	0.79	ug/L		10/11/18 12:52	10/12/18 19:35	1
Bis(2-ethylhexyl) phthalate	6.2	J	9.8	2.2	ug/L		10/11/18 12:52	10/12/18 19:35	1
4-Bromophenyl phenyl ether	ND		9.8	0.31	ug/L		10/11/18 12:52	10/12/18 19:35	1
Butyl benzyl phthalate	ND		9.8	0.67	ug/L		10/11/18 12:52	10/12/18 19:35	1
4-Chloroaniline	ND		9.8	3.3	ug/L		10/11/18 12:52	10/12/18 19:35	1
4-Chloro-3-methylphenol	ND		9.8	3.7	ug/L		10/11/18 12:52	10/12/18 19:35	1
2-Chloronaphthalene	ND		9.8	0.51	ug/L		10/11/18 12:52	10/12/18 19:35	1
2-Chlorophenol	ND		9.8	2.2	ug/L		10/11/18 12:52	10/12/18 19:35	1
4-Chlorophenyl phenyl ether	ND		9.8	2.0	ug/L		10/11/18 12:52	10/12/18 19:35	1
Dibenz[a,h]acridine	ND		9.8	2.9	ug/L		10/11/18 12:52	10/12/18 19:35	1
Dibenzofuran	ND		9.8	0.51	ug/L		10/11/18 12:52	10/12/18 19:35	1
3,3'-Dichlorobenzidine	ND		9.8	2.5	ug/L		10/11/18 12:52	10/12/18 19:35	1
2,4-Dichlorophenol	ND		9.8	2.9	ug/L		10/11/18 12:52	10/12/18 19:35	1
Diethyl phthalate	ND		9.8	0.68	ug/L		10/11/18 12:52	10/12/18 19:35	1
2,4-Dimethylphenol	4.8	J	9.8	3.4	ug/L		10/11/18 12:52	10/12/18 19:35	1
Dimethyl phthalate	ND		9.8	0.59	ug/L		10/11/18 12:52	10/12/18 19:35	1
Di-n-butyl phthalate	ND		9.8	2.6	ug/L		10/11/18 12:52	10/12/18 19:35	1
4,6-Dinitro-ortho-cresol	ND		9.8	2.0	ug/L		10/11/18 12:52	10/12/18 19:35	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		10/11/18 12:52	10/12/18 19:35	1
2,4-Dinitrotoluene	ND		9.8	1.9	ug/L		10/11/18 12:52	10/12/18 19:35	1
2,6-Dinitrotoluene	ND		9.8	1.9	ug/L		10/11/18 12:52	10/12/18 19:35	1
Di-n-octyl phthalate	ND		9.8	0.43	ug/L		10/11/18 12:52	10/12/18 19:35	1
1,4-Dioxane	ND		9.8	0.98	ug/L		10/11/18 12:52	10/12/18 19:35	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.8	0.98	ug/L		10/11/18 12:52	10/12/18 19:35	1
Hexachlorobenzene	ND		9.8	0.24	ug/L		10/11/18 12:52	10/12/18 19:35	1
Hexachlorocyclopentadiene	ND		20	2.5	ug/L		10/11/18 12:52	10/12/18 19:35	1
Hexachloroethane	ND		9.8	4.1	ug/L		10/11/18 12:52	10/12/18 19:35	1
Indene	3.1	J	9.8	0.98	ug/L		10/11/18 12:52	10/12/18 19:35	1
Isophorone	ND		9.8	0.56	ug/L		10/11/18 12:52	10/12/18 19:35	1
2-Methylphenol	ND		9.8	1.8	ug/L		10/11/18 12:52	10/12/18 19:35	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/11/18 12:52	10/12/18 19:35	1
2-Nitroaniline	ND		9.8	2.2	ug/L		10/11/18 12:52	10/12/18 19:35	1
3-Nitroaniline	ND		9.8	1.8	ug/L		10/11/18 12:52	10/12/18 19:35	1
4-Nitroaniline	ND		9.8	2.4	ug/L		10/11/18 12:52	10/12/18 19:35	1
Nitrobenzene	ND		9.8	0.54	ug/L		10/11/18 12:52	10/12/18 19:35	1
2-Nitrophenol	ND		9.8	0.64	ug/L		10/11/18 12:52	10/12/18 19:35	1
4-Nitrophenol	ND	*	9.8	2.1	ug/L		10/11/18 12:52	10/12/18 19:35	1
N-Nitrosodimethylamine	ND		9.8	3.4	ug/L		10/11/18 12:52	10/12/18 19:35	1

Client Sample ID: MW8-ROX-100818
Date Collected: 10/08/18 12:10
Date Received: 10/09/18 14:25

Lab Sample ID: 400-160322-5
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.8	3.2	ug/L		10/11/18 12:52	10/12/18 19:35	1
N-Nitrosodiphenylamine	ND		9.8	0.46	ug/L		10/11/18 12:52	10/12/18 19:35	1
Pentachlorophenol	2.4	J	20	1.8	ug/L		10/11/18 12:52	10/12/18 19:35	1
Phenol	85		9.8	2.5	ug/L		10/11/18 12:52	10/12/18 19:35	1
Pyridine	ND		9.8	3.1	ug/L		10/11/18 12:52	10/12/18 19:35	1
Quinoline	ND		9.8	5.9	ug/L		10/11/18 12:52	10/12/18 19:35	1
2,4,5-Trichlorophenol	ND		9.8	3.6	ug/L		10/11/18 12:52	10/12/18 19:35	1
2,4,6-Trichlorophenol	ND		9.8	3.4	ug/L		10/11/18 12:52	10/12/18 19:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*36*		*34 - 120*	*10/11/18 12:52*	*10/12/18 19:35*	*1*
2-Fluorophenol	*20*		*10 - 120*	*10/11/18 12:52*	*10/12/18 19:35*	*1*
Nitrobenzene-d5	*31*		*27 - 120*	*10/11/18 12:52*	*10/12/18 19:35*	*1*
Phenol-d5	*31*		*10 - 120*	*10/11/18 12:52*	*10/12/18 19:35*	*1*
Terphenyl-d14	*28*	*X*	*53 - 125*	*10/11/18 12:52*	*10/12/18 19:35*	*1*
2,4,6-Tribromophenol	*52*		*15 - 135*	*10/11/18 12:52*	*10/12/18 19:35*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0056	ug/L		10/18/18 14:46	10/19/18 17:21	1
1,2-Dibromoethane	ND		0.020	0.0051	ug/L		10/18/18 14:46	10/19/18 17:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*109*	*p*	*51 - 149*	*10/18/18 14:46*	*10/19/18 17:21*	*1*

Client Sample ID: MW8-ROX-100818-DUP

Date Collected: 10/08/18 12:10
Date Received: 10/09/18 14:25

Lab Sample ID: 400-160322-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		63000	25000	ug/L			10/19/18 03:00	2500
Acrolein	ND		50000	25000	ug/L			10/19/18 03:00	2500
Acrylonitrile	ND		25000	7000	ug/L			10/19/18 03:00	2500
Benzene	560000		2500	950	ug/L			10/19/18 03:00	2500
Bromobenzene	ND		2500	1400	ug/L			10/19/18 03:00	2500
Bromochloromethane	ND		2500	1300	ug/L			10/19/18 03:00	2500
Bromodichloromethane	ND		2500	1300	ug/L			10/19/18 03:00	2500
Bromoform	ND		13000	1800	ug/L			10/19/18 03:00	2500
Bromomethane	ND		2500	2500	ug/L			10/19/18 03:00	2500
2-Butanone (MEK)	ND		63000	6500	ug/L			10/19/18 03:00	2500
Carbon disulfide	ND		2500	1300	ug/L			10/19/18 03:00	2500
Carbon tetrachloride	ND		2500	1300	ug/L			10/19/18 03:00	2500
Chlorobenzene	ND		2500	1300	ug/L			10/19/18 03:00	2500
Dibromochloromethane	ND		2500	1300	ug/L			10/19/18 03:00	2500
Chloroethane	ND		2500	1900	ug/L			10/19/18 03:00	2500
2-Chloroethyl vinyl ether	ND		13000	5000	ug/L			10/19/18 03:00	2500
Chloroform	ND		2500	1500	ug/L			10/19/18 03:00	2500
1-Chlorohexane	ND		2500	1800	ug/L			10/19/18 03:00	2500
Chloromethane	ND		2500	2100	ug/L			10/19/18 03:00	2500
cis-1,2-Dichloroethene	ND		2500	1300	ug/L			10/19/18 03:00	2500
cis-1,3-Dichloropropene	ND		13000	1300	ug/L			10/19/18 03:00	2500
1,2-Dichlorobenzene	ND		2500	1300	ug/L			10/19/18 03:00	2500
1,3-Dichlorobenzene	ND		2500	1400	ug/L			10/19/18 03:00	2500
1,4-Dichlorobenzene	ND		2500	1600	ug/L			10/19/18 03:00	2500
Dichlorodifluoromethane	ND		2500	2100	ug/L			10/19/18 03:00	2500
1,1-Dichloroethane	ND		2500	1300	ug/L			10/19/18 03:00	2500
1,2-Dichloroethane	ND		2500	1300	ug/L			10/19/18 03:00	2500
1,1-Dichloroethene	ND		2500	1300	ug/L			10/19/18 03:00	2500
1,2-Dichloropropane	ND		2500	1300	ug/L			10/19/18 03:00	2500
1,3-Dichloropropane	ND		2500	1300	ug/L			10/19/18 03:00	2500
2,2-Dichloropropane	ND		2500	1300	ug/L			10/19/18 03:00	2500
1,1-Dichloropropene	ND		2500	1300	ug/L			10/19/18 03:00	2500
Ethylbenzene	ND		2500	1300	ug/L			10/19/18 03:00	2500
Ethyl methacrylate	ND		2500	1500	ug/L			10/19/18 03:00	2500
Hexachlorobutadiene	ND		13000	2300	ug/L			10/19/18 03:00	2500
2-Hexanone	ND		63000	7800	ug/L			10/19/18 03:00	2500
Isopropylbenzene	ND		2500	1300	ug/L			10/19/18 03:00	2500
Methylene bromide	ND		13000	1500	ug/L			10/19/18 03:00	2500
Methylene Chloride	ND		13000	7500	ug/L			10/19/18 03:00	2500
4-Methyl-2-pentanone (MIBK)	ND		63000	4500	ug/L			10/19/18 03:00	2500
Methyl tert-butyl ether	ND		2500	1900	ug/L			10/19/18 03:00	2500
m-Xylene & p-Xylene	ND		13000	4000	ug/L			10/19/18 03:00	2500
Naphthalene	ND		2500	2500	ug/L			10/19/18 03:00	2500
n-Butylbenzene	ND		2500	1900	ug/L			10/19/18 03:00	2500
N-Propylbenzene	ND		2500	1700	ug/L			10/19/18 03:00	2500
o-Chlorotoluene	ND		2500	1400	ug/L			10/19/18 03:00	2500
o-Xylene	ND		13000	1500	ug/L			10/19/18 03:00	2500
p-Chlorotoluene	ND		2500	1400	ug/L			10/19/18 03:00	2500
p-Isopropyltoluene	ND		2500	1800	ug/L			10/19/18 03:00	2500

Client Sample ID: MW8-ROX-100818-DUP

Date Collected: 10/08/18 12:10
Date Received: 10/09/18 14:25

Lab Sample ID: 400-160322-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		2500	1800	ug/L			10/19/18 03:00	2500
Styrene	ND		2500	2500	ug/L			10/19/18 03:00	2500
tert-Butylbenzene	ND		2500	1600	ug/L			10/19/18 03:00	2500
1,1,1,2-Tetrachloroethane	ND		2500	1300	ug/L			10/19/18 03:00	2500
1,1,2,2-Tetrachloroethane	ND		2500	1300	ug/L			10/19/18 03:00	2500
Tetrachloroethene	ND		2500	1500	ug/L			10/19/18 03:00	2500
Toluene	ND		2500	1800	ug/L			10/19/18 03:00	2500
trans-1,2-Dichloroethene	ND		2500	1300	ug/L			10/19/18 03:00	2500
trans-1,3-Dichloropropene	ND		13000	1300	ug/L			10/19/18 03:00	2500
1,2,3-Trichlorobenzene	ND		2500	1800	ug/L			10/19/18 03:00	2500
1,2,4-Trichlorobenzene	ND		2500	2100	ug/L			10/19/18 03:00	2500
1,1,1-Trichloroethane	ND		2500	1300	ug/L			10/19/18 03:00	2500
1,1,2-Trichloroethane	ND		13000	1300	ug/L			10/19/18 03:00	2500
Trichloroethene	ND		2500	1300	ug/L			10/19/18 03:00	2500
Trichlorofluoromethane	ND		2500	1300	ug/L			10/19/18 03:00	2500
1,2,3-Trichloropropane	ND		13000	2100	ug/L			10/19/18 03:00	2500
1,2,4-Trimethylbenzene	ND		2500	2100	ug/L			10/19/18 03:00	2500
1,3,5-Trimethylbenzene	ND		2500	1400	ug/L			10/19/18 03:00	2500
Vinyl acetate	ND		63000	5000	ug/L			10/19/18 03:00	2500
Vinyl chloride	ND		2500	1300	ug/L			10/19/18 03:00	2500
Xylenes, Total	ND		25000	4000	ug/L			10/19/18 03:00	2500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*78 - 118*		*10/19/18 03:00*	*2500*
Dibromofluoromethane	*98*		*81 - 121*		*10/19/18 03:00*	*2500*
Toluene-d8 (Surr)	*95*		*80 - 120*		*10/19/18 03:00*	*2500*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.13	J	0.20	0.020	ug/L		10/11/18 12:52	10/15/18 19:14	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/11/18 12:52	10/15/18 19:14	1
Anthracene	ND		0.20	0.020	ug/L		10/11/18 12:52	10/15/18 19:14	1
Benzo[a]pyrene	ND		0.20	0.039	ug/L		10/11/18 12:52	10/15/18 19:14	1
Benzo[b]fluoranthene	ND		0.20	0.039	ug/L		10/11/18 12:52	10/15/18 19:14	1
Benzo[g,h,i]perylene	ND		0.20	0.039	ug/L		10/11/18 12:52	10/15/18 19:14	1
Benzo[k]fluoranthene	ND		0.20	0.039	ug/L		10/11/18 12:52	10/15/18 19:14	1
Dibenz(a,h)anthracene	ND		0.20	0.039	ug/L		10/11/18 12:52	10/15/18 19:14	1
Fluoranthene	ND		0.20	0.020	ug/L		10/11/18 12:52	10/15/18 19:14	1
Fluorene	0.55		0.20	0.020	ug/L		10/11/18 12:52	10/15/18 19:14	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.039	ug/L		10/11/18 12:52	10/15/18 19:14	1
Phenanthrene	0.15	J	0.20	0.020	ug/L		10/11/18 12:52	10/15/18 19:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*39*		*15 - 122*	*10/11/18 12:52*	*10/15/18 19:14*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.98	0.20	ug/L		10/11/18 12:52	10/16/18 10:16	5
Chrysene	ND		0.98	0.20	ug/L		10/11/18 12:52	10/16/18 10:16	5
Pyrene	ND		0.98	0.098	ug/L		10/11/18 12:52	10/16/18 10:16	5

Client Sample ID: MW8-ROX-100818-DUP

Date Collected: 10/08/18 12:10
Date Received: 10/09/18 14:25

Lab Sample ID: 400-160322-6
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	9.5	J	0.98	0.098	ug/L		10/11/18 12:52	10/16/18 10:16	5
2-Methylnaphthalene	3.5		0.98	0.098	ug/L		10/11/18 12:52	10/16/18 10:16	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*37*		*33 - 138*	*10/11/18 12:52*	*10/16/18 10:16*	*5*
Nitrobenzene-d5	*26*		*19 - 130*	*10/11/18 12:52*	*10/16/18 10:16*	*5*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND	*	9.8	3.7	ug/L		10/11/18 12:52	10/12/18 19:57	1
Benzenethiol	ND	* UJ	9.8	1.7	ug/L		10/11/18 12:52	10/12/18 19:57	1
Benzoic acid	ND	*	29	7.1	ug/L		10/11/18 12:52	10/12/18 19:57	1
Benzyl alcohol	ND		9.8	2.0	ug/L		10/11/18 12:52	10/12/18 19:57	1
Bis(2-chloroethoxy)methane	ND		9.8	0.67	ug/L		10/11/18 12:52	10/12/18 19:57	1
Bis(2-chloroethyl)ether	ND		9.8	0.72	ug/L		10/11/18 12:52	10/12/18 19:57	1
bis (2-chloroisopropyl) ether	ND		9.8	0.79	ug/L		10/11/18 12:52	10/12/18 19:57	1
Bis(2-ethylhexyl) phthalate	ND		9.8	2.2	ug/L		10/11/18 12:52	10/12/18 19:57	1
4-Bromophenyl phenyl ether	ND		9.8	0.31	ug/L		10/11/18 12:52	10/12/18 19:57	1
Butyl benzyl phthalate	ND		9.8	0.67	ug/L		10/11/18 12:52	10/12/18 19:57	1
4-Chloroaniline	ND		9.8	3.3	ug/L		10/11/18 12:52	10/12/18 19:57	1
4-Chloro-3-methylphenol	ND		9.8	3.7	ug/L		10/11/18 12:52	10/12/18 19:57	1
2-Chloronaphthalene	ND		9.8	0.51	ug/L		10/11/18 12:52	10/12/18 19:57	1
2-Chlorophenol	ND		9.8	2.1	ug/L		10/11/18 12:52	10/12/18 19:57	1
4-Chlorophenyl phenyl ether	ND		9.8	2.0	ug/L		10/11/18 12:52	10/12/18 19:57	1
Dibenz[a,h]acridine	ND		9.8	2.9	ug/L		10/11/18 12:52	10/12/18 19:57	1
Dibenzofuran	ND		9.8	0.51	ug/L		10/11/18 12:52	10/12/18 19:57	1
3,3'-Dichlorobenzidine	ND		9.8	2.5	ug/L		10/11/18 12:52	10/12/18 19:57	1
2,4-Dichlorophenol	ND		9.8	2.9	ug/L		10/11/18 12:52	10/12/18 19:57	1
Diethyl phthalate	ND		9.8	0.68	ug/L		10/11/18 12:52	10/12/18 19:57	1
2,4-Dimethylphenol	4.6	J	9.8	3.4	ug/L		10/11/18 12:52	10/12/18 19:57	1
Dimethyl phthalate	ND		9.8	0.59	ug/L		10/11/18 12:52	10/12/18 19:57	1
Di-n-butyl phthalate	ND		9.8	2.6	ug/L		10/11/18 12:52	10/12/18 19:57	1
4,6-Dinitro-ortho-cresol	ND		9.8	2.0	ug/L		10/11/18 12:52	10/12/18 19:57	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		10/11/18 12:52	10/12/18 19:57	1
2,4-Dinitrotoluene	ND		9.8	1.9	ug/L		10/11/18 12:52	10/12/18 19:57	1
2,6-Dinitrotoluene	ND		9.8	1.9	ug/L		10/11/18 12:52	10/12/18 19:57	1
Di-n-octyl phthalate	ND		9.8	0.43	ug/L		10/11/18 12:52	10/12/18 19:57	1
1,4-Dioxane	ND		9.8	0.98	ug/L		10/11/18 12:52	10/12/18 19:57	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.8	0.98	ug/L		10/11/18 12:52	10/12/18 19:57	1
Hexachlorobenzene	ND		9.8	0.24	ug/L		10/11/18 12:52	10/12/18 19:57	1
Hexachlorocyclopentadiene	ND		20	2.5	ug/L		10/11/18 12:52	10/12/18 19:57	1
Hexachloroethane	ND		9.8	4.1	ug/L		10/11/18 12:52	10/12/18 19:57	1
Indene	2.7	J	9.8	0.98	ug/L		10/11/18 12:52	10/12/18 19:57	1
Isophorone	ND		9.8	0.56	ug/L		10/11/18 12:52	10/12/18 19:57	1
2-Methylphenol	ND		9.8	1.8	ug/L		10/11/18 12:52	10/12/18 19:57	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/11/18 12:52	10/12/18 19:57	1
2-Nitroaniline	ND		9.8	2.1	ug/L		10/11/18 12:52	10/12/18 19:57	1
3-Nitroaniline	ND		9.8	1.8	ug/L		10/11/18 12:52	10/12/18 19:57	1
4-Nitroaniline	ND		9.8	2.4	ug/L		10/11/18 12:52	10/12/18 19:57	1

Client Sample ID: MW8-ROX-100818-DUP

Date Collected: 10/08/18 12:10
Date Received: 10/09/18 14:25

Lab Sample ID: 400-160322-6
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrobenzene	ND		9.8	0.54	ug/L		10/11/18 12:52	10/12/18 19:57	1
2-Nitrophenol	ND		9.8	0.63	ug/L		10/11/18 12:52	10/12/18 19:57	1
4-Nitrophenol	ND	*	9.8	2.0	ug/L		10/11/18 12:52	10/12/18 19:57	1
N-Nitrosodimethylamine	ND		9.8	3.4	ug/L		10/11/18 12:52	10/12/18 19:57	1
N-Nitrosodi-n-propylamine	ND		9.8	3.2	ug/L		10/11/18 12:52	10/12/18 19:57	1
N-Nitrosodiphenylamine	ND		9.8	0.46	ug/L		10/11/18 12:52	10/12/18 19:57	1
Pentachlorophenol	2.3	J	20	1.8	ug/L		10/11/18 12:52	10/12/18 19:57	1
Phenol	90		9.8	2.5	ug/L		10/11/18 12:52	10/12/18 19:57	1
Pyridine	ND		9.8	3.1	ug/L		10/11/18 12:52	10/12/18 19:57	1
Quinoline	ND		9.8	5.9	ug/L		10/11/18 12:52	10/12/18 19:57	1
2,4,5-Trichlorophenol	ND		9.8	3.6	ug/L		10/11/18 12:52	10/12/18 19:57	1
2,4,6-Trichlorophenol	ND		9.8	3.4	ug/L		10/11/18 12:52	10/12/18 19:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*37*		*34 - 120*	*10/11/18 12:52*	*10/12/18 19:57*	*1*
2-Fluorophenol	*12*		*10 - 120*	*10/11/18 12:52*	*10/12/18 19:57*	*1*
Nitrobenzene-d5	*34*		*27 - 120*	*10/11/18 12:52*	*10/12/18 19:57*	*1*
Phenol-d5	*27*		*10 - 120*	*10/11/18 12:52*	*10/12/18 19:57*	*1*
Terphenyl-d14	*30*	*X*	*53 - 125*	*10/11/18 12:52*	*10/12/18 19:57*	*1*
2,4,6-Tribromophenol	*50*		*15 - 135*	*10/11/18 12:52*	*10/12/18 19:57*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.031	0.0057	ug/L		10/18/18 14:46	10/19/18 17:54	1
1,2-Dibromoethane	ND		0.021	0.0052	ug/L		10/18/18 14:46	10/19/18 17:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*153*	*p X*	*51 - 149*	*10/18/18 14:46*	*10/19/18 17:54*	*1*

Client Sample ID: MW7-ROX-100818

Date Collected: 10/08/18 13:15
Date Received: 10/09/18 14:25

Lab Sample ID: 400-160322-7
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		63000	25000	ug/L			10/19/18 03:24	2500
Acrolein	ND		50000	25000	ug/L			10/19/18 03:24	2500
Acrylonitrile	ND		25000	7000	ug/L			10/19/18 03:24	2500
Benzene	650000		2500	950	ug/L			10/19/18 03:24	2500
Bromobenzene	ND		2500	1400	ug/L			10/19/18 03:24	2500
Bromochloromethane	ND		2500	1300	ug/L			10/19/18 03:24	2500
Bromodichloromethane	ND		2500	1300	ug/L			10/19/18 03:24	2500
Bromoform	ND		13000	1800	ug/L			10/19/18 03:24	2500
Bromomethane	ND		2500	2500	ug/L			10/19/18 03:24	2500
2-Butanone (MEK)	ND		63000	6500	ug/L			10/19/18 03:24	2500
Carbon disulfide	ND		2500	1300	ug/L			10/19/18 03:24	2500
Carbon tetrachloride	ND		2500	1300	ug/L			10/19/18 03:24	2500
Chlorobenzene	ND		2500	1300	ug/L			10/19/18 03:24	2500
Dibromochloromethane	ND		2500	1300	ug/L			10/19/18 03:24	2500
Chloroethane	ND		2500	1900	ug/L			10/19/18 03:24	2500
2-Chloroethyl vinyl ether	ND		13000	5000	ug/L			10/19/18 03:24	2500
Chloroform	ND		2500	1500	ug/L			10/19/18 03:24	2500
1-Chlorohexane	ND		2500	1800	ug/L			10/19/18 03:24	2500
Chloromethane	ND		2500	2100	ug/L			10/19/18 03:24	2500
cis-1,2-Dichloroethene	ND		2500	1300	ug/L			10/19/18 03:24	2500
cis-1,3-Dichloropropene	ND		13000	1300	ug/L			10/19/18 03:24	2500
1,2-Dichlorobenzene	ND		2500	1300	ug/L			10/19/18 03:24	2500
1,3-Dichlorobenzene	ND		2500	1400	ug/L			10/19/18 03:24	2500
1,4-Dichlorobenzene	ND		2500	1600	ug/L			10/19/18 03:24	2500
Dichlorodifluoromethane	ND		2500	2100	ug/L			10/19/18 03:24	2500
1,1-Dichloroethane	ND		2500	1300	ug/L			10/19/18 03:24	2500
1,2-Dichloroethane	ND		2500	1300	ug/L			10/19/18 03:24	2500
1,1-Dichloroethene	ND		2500	1300	ug/L			10/19/18 03:24	2500
1,2-Dichloropropane	ND		2500	1300	ug/L			10/19/18 03:24	2500
1,3-Dichloropropane	ND		2500	1300	ug/L			10/19/18 03:24	2500
2,2-Dichloropropane	ND		2500	1300	ug/L			10/19/18 03:24	2500
1,1-Dichloropropene	ND		2500	1300	ug/L			10/19/18 03:24	2500
Ethylbenzene	ND		2500	1300	ug/L			10/19/18 03:24	2500
Ethyl methacrylate	ND		2500	1500	ug/L			10/19/18 03:24	2500
Hexachlorobutadiene	ND		13000	2300	ug/L			10/19/18 03:24	2500
2-Hexanone	ND		63000	7800	ug/L			10/19/18 03:24	2500
Isopropylbenzene	ND		2500	1300	ug/L			10/19/18 03:24	2500
Methylene bromide	ND		13000	1500	ug/L			10/19/18 03:24	2500
Methylene Chloride	ND		13000	7500	ug/L			10/19/18 03:24	2500
4-Methyl-2-pentanone (MIBK)	ND		63000	4500	ug/L			10/19/18 03:24	2500
Methyl tert-butyl ether	ND		2500	1900	ug/L			10/19/18 03:24	2500
m-Xylene & p-Xylene	ND		13000	4000	ug/L			10/19/18 03:24	2500
Naphthalene	ND		2500	2500	ug/L			10/19/18 03:24	2500
n-Butylbenzene	ND		2500	1900	ug/L			10/19/18 03:24	2500
N-Propylbenzene	ND		2500	1700	ug/L			10/19/18 03:24	2500
o-Chlorotoluene	ND		2500	1400	ug/L			10/19/18 03:24	2500
o-Xylene	ND		13000	1500	ug/L			10/19/18 03:24	2500
p-Chlorotoluene	ND		2500	1400	ug/L			10/19/18 03:24	2500
p-Isopropyltoluene	ND		2500	1800	ug/L			10/19/18 03:24	2500

Client Sample ID: MW7-ROX-100818

Date Collected: 10/08/18 13:15
Date Received: 10/09/18 14:25

Lab Sample ID: 400-160322-7

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		2500	1800	ug/L			10/19/18 03:24	2500
Styrene	ND		2500	2500	ug/L			10/19/18 03:24	2500
tert-Butylbenzene	ND		2500	1600	ug/L			10/19/18 03:24	2500
1,1,1,2-Tetrachloroethane	ND		2500	1300	ug/L			10/19/18 03:24	2500
1,1,2,2-Tetrachloroethane	ND		2500	1300	ug/L			10/19/18 03:24	2500
Tetrachloroethene	ND		2500	1500	ug/L			10/19/18 03:24	2500
Toluene	ND		2500	1800	ug/L			10/19/18 03:24	2500
trans-1,2-Dichloroethene	ND		2500	1300	ug/L			10/19/18 03:24	2500
trans-1,3-Dichloropropene	ND		13000	1300	ug/L			10/19/18 03:24	2500
1,2,3-Trichlorobenzene	ND		2500	1800	ug/L			10/19/18 03:24	2500
1,2,4-Trichlorobenzene	ND		2500	2100	ug/L			10/19/18 03:24	2500
1,1,1-Trichloroethane	ND		2500	1300	ug/L			10/19/18 03:24	2500
1,1,2-Trichloroethane	ND		13000	1300	ug/L			10/19/18 03:24	2500
Trichloroethene	ND		2500	1300	ug/L			10/19/18 03:24	2500
Trichlorofluoromethane	ND		2500	1300	ug/L			10/19/18 03:24	2500
1,2,3-Trichloropropane	ND		13000	2100	ug/L			10/19/18 03:24	2500
1,2,4-Trimethylbenzene	ND		2500	2100	ug/L			10/19/18 03:24	2500
1,3,5-Trimethylbenzene	ND		2500	1400	ug/L			10/19/18 03:24	2500
Vinyl acetate	ND		63000	5000	ug/L			10/19/18 03:24	2500
Vinyl chloride	ND		2500	1300	ug/L			10/19/18 03:24	2500
Xylenes, Total	ND		25000	4000	ug/L			10/19/18 03:24	2500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*78 - 118*		*10/19/18 03:24*	*2500*
Dibromofluoromethane	*99*		*81 - 121*		*10/19/18 03:24*	*2500*
Toluene-d8 (Surr)	*96*		*80 - 120*		*10/19/18 03:24*	*2500*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.25		0.20	0.020	ug/L		10/11/18 12:52	10/15/18 19:30	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/11/18 12:52	10/15/18 19:30	1
Anthracene	ND		0.20	0.020	ug/L		10/11/18 12:52	10/15/18 19:30	1
Benzo[a]anthracene	ND		0.20	0.039	ug/L		10/11/18 12:52	10/15/18 19:30	1
Benzo[a]pyrene	ND		0.20	0.039	ug/L		10/11/18 12:52	10/15/18 19:30	1
Benzo[b]fluoranthene	ND		0.20	0.039	ug/L		10/11/18 12:52	10/15/18 19:30	1
Benzo[g,h,i]perylene	ND		0.20	0.039	ug/L		10/11/18 12:52	10/15/18 19:30	1
Benzo[k]fluoranthene	ND		0.20	0.039	ug/L		10/11/18 12:52	10/15/18 19:30	1
Chrysene	ND		0.20	0.039	ug/L		10/11/18 12:52	10/15/18 19:30	1
Dibenz(a,h)anthracene	ND		0.20	0.039	ug/L		10/11/18 12:52	10/15/18 19:30	1
Fluoranthene	ND		0.20	0.020	ug/L		10/11/18 12:52	10/15/18 19:30	1
Fluorene	0.21		0.20	0.021	ug/L		10/11/18 12:52	10/15/18 19:30	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.039	ug/L		10/11/18 12:52	10/15/18 19:30	1
Phenanthrene	0.29		0.20	0.020	ug/L		10/11/18 12:52	10/15/18 19:30	1
Pyrene	0.058	J	0.20	0.020	ug/L		10/11/18 12:52	10/15/18 19:30	1
1-Methylnaphthalene	1.4		0.20	0.020	ug/L		10/11/18 12:52	10/15/18 19:30	1
2-Methylnaphthalene	1.9		0.20	0.020	ug/L		10/11/18 12:52	10/15/18 19:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*37*		*33 - 138*	*10/11/18 12:52*	*10/15/18 19:30*	*1*
2-Fluorobiphenyl	*40*		*15 - 122*	*10/11/18 12:52*	*10/15/18 19:30*	*1*

Client Sample ID: MW7-ROX-100818

Date Collected: 10/08/18 13:15
Date Received: 10/09/18 14:25

Lab Sample ID: 400-160322-7
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	22		19 - 130	10/11/18 12:52	10/15/18 19:30	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND	*	9.8	3.7	ug/L		10/11/18 12:52	10/12/18 20:19	1
Benzenethiol	ND	* UJ	9.8	1.7	ug/L		10/11/18 12:52	10/12/18 20:19	1
Benzoic acid	ND	*	29	7.2	ug/L		10/11/18 12:52	10/12/18 20:19	1
Benzyl alcohol	ND		9.8	2.0	ug/L		10/11/18 12:52	10/12/18 20:19	1
Bis(2-chloroethoxy)methane	ND		9.8	0.68	ug/L		10/11/18 12:52	10/12/18 20:19	1
Bis(2-chloroethyl)ether	ND		9.8	0.73	ug/L		10/11/18 12:52	10/12/18 20:19	1
bis (2-chloroisopropyl) ether	ND		9.8	0.79	ug/L		10/11/18 12:52	10/12/18 20:19	1
Bis(2-ethylhexyl) phthalate	ND		9.8	2.2	ug/L		10/11/18 12:52	10/12/18 20:19	1
4-Bromophenyl phenyl ether	ND		9.8	0.31	ug/L		10/11/18 12:52	10/12/18 20:19	1
Butyl benzyl phthalate	ND		9.8	0.68	ug/L		10/11/18 12:52	10/12/18 20:19	1
4-Chloroaniline	ND		9.8	3.3	ug/L		10/11/18 12:52	10/12/18 20:19	1
4-Chloro-3-methylphenol	ND		9.8	3.7	ug/L		10/11/18 12:52	10/12/18 20:19	1
2-Chloronaphthalene	ND		9.8	0.51	ug/L		10/11/18 12:52	10/12/18 20:19	1
2-Chlorophenol	ND		9.8	2.2	ug/L		10/11/18 12:52	10/12/18 20:19	1
4-Chlorophenyl phenyl ether	ND		9.8	2.0	ug/L		10/11/18 12:52	10/12/18 20:19	1
Dibenz[a,h]acridine	ND		9.8	2.9	ug/L		10/11/18 12:52	10/12/18 20:19	1
Dibenzofuran	ND		9.8	0.51	ug/L		10/11/18 12:52	10/12/18 20:19	1
3,3'-Dichlorobenzidine	ND		9.8	2.5	ug/L		10/11/18 12:52	10/12/18 20:19	1
2,4-Dichlorophenol	ND		9.8	2.9	ug/L		10/11/18 12:52	10/12/18 20:19	1
Diethyl phthalate	ND		9.8	0.69	ug/L		10/11/18 12:52	10/12/18 20:19	1
2,4-Dimethylphenol	ND		9.8	3.4	ug/L		10/11/18 12:52	10/12/18 20:19	1
Dimethyl phthalate	ND		9.8	0.59	ug/L		10/11/18 12:52	10/12/18 20:19	1
Di-n-butyl phthalate	ND		9.8	2.6	ug/L		10/11/18 12:52	10/12/18 20:19	1
4,6-Dinitro-ortho-cresol	ND		9.8	2.0	ug/L		10/11/18 12:52	10/12/18 20:19	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		10/11/18 12:52	10/12/18 20:19	1
2,4-Dinitrotoluene	ND		9.8	1.9	ug/L		10/11/18 12:52	10/12/18 20:19	1
2,6-Dinitrotoluene	ND		9.8	1.9	ug/L		10/11/18 12:52	10/12/18 20:19	1
Di-n-octyl phthalate	ND		9.8	0.43	ug/L		10/11/18 12:52	10/12/18 20:19	1
1,4-Dioxane	ND		9.8	0.98	ug/L		10/11/18 12:52	10/12/18 20:19	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.8	0.98	ug/L		10/11/18 12:52	10/12/18 20:19	1
Hexachlorobenzene	ND		9.8	0.25	ug/L		10/11/18 12:52	10/12/18 20:19	1
Hexachlorocyclopentadiene	ND		20	2.5	ug/L		10/11/18 12:52	10/12/18 20:19	1
Hexachloroethane	ND		9.8	4.1	ug/L		10/11/18 12:52	10/12/18 20:19	1
Indene	ND		9.8	0.98	ug/L		10/11/18 12:52	10/12/18 20:19	1
Isophorone	ND		9.8	0.56	ug/L		10/11/18 12:52	10/12/18 20:19	1
2-Methylphenol	ND		9.8	1.8	ug/L		10/11/18 12:52	10/12/18 20:19	1
3 & 4 Methylphenol	2.2	J	20	1.0	ug/L		10/11/18 12:52	10/12/18 20:19	1
2-Nitroaniline	ND		9.8	2.2	ug/L		10/11/18 12:52	10/12/18 20:19	1
3-Nitroaniline	ND		9.8	1.8	ug/L		10/11/18 12:52	10/12/18 20:19	1
4-Nitroaniline	ND		9.8	2.4	ug/L		10/11/18 12:52	10/12/18 20:19	1
Nitrobenzene	ND		9.8	0.54	ug/L		10/11/18 12:52	10/12/18 20:19	1
2-Nitrophenol	ND		9.8	0.64	ug/L		10/11/18 12:52	10/12/18 20:19	1
4-Nitrophenol	ND	*	9.8	2.1	ug/L		10/11/18 12:52	10/12/18 20:19	1
N-Nitrosodimethylamine	ND		9.8	3.4	ug/L		10/11/18 12:52	10/12/18 20:19	1

Client Sample ID: MW7-ROX-100818
Date Collected: 10/08/18 13:15
Date Received: 10/09/18 14:25

Lab Sample ID: 400-160322-7
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.8	3.2	ug/L		10/11/18 12:52	10/12/18 20:19	1
N-Nitrosodiphenylamine	ND		9.8	0.46	ug/L		10/11/18 12:52	10/12/18 20:19	1
Pentachlorophenol	ND		20	1.8	ug/L		10/11/18 12:52	10/12/18 20:19	1
Phenol	86		9.8	2.5	ug/L		10/11/18 12:52	10/12/18 20:19	1
Pyridine	ND		9.8	3.1	ug/L		10/11/18 12:52	10/12/18 20:19	1
Quinoline	ND		9.8	5.9	ug/L		10/11/18 12:52	10/12/18 20:19	1
2,4,5-Trichlorophenol	ND		9.8	3.6	ug/L		10/11/18 12:52	10/12/18 20:19	1
2,4,6-Trichlorophenol	ND		9.8	3.4	ug/L		10/11/18 12:52	10/12/18 20:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*39*		*34 - 120*	*10/11/18 12:52*	*10/12/18 20:19*	*1*
2-Fluorophenol	*13*		*10 - 120*	*10/11/18 12:52*	*10/12/18 20:19*	*1*
Nitrobenzene-d5	*34*		*27 - 120*	*10/11/18 12:52*	*10/12/18 20:19*	*1*
Phenol-d5	*30*		*10 - 120*	*10/11/18 12:52*	*10/12/18 20:19*	*1*
Terphenyl-d14	*34*	*X*	*53 - 125*	*10/11/18 12:52*	*10/12/18 20:19*	*1*
2,4,6-Tribromophenol	*62*		*15 - 135*	*10/11/18 12:52*	*10/12/18 20:19*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.032	0.0058	ug/L		10/18/18 14:46	10/19/18 20:40	1
1,2-Dibromoethane	ND		0.021	0.0053	ug/L		10/18/18 14:46	10/19/18 20:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*110*	*p*	*51 - 149*	*10/18/18 14:46*	*10/19/18 20:40*	*1*

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD is outside acceptance limits.
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160322-1
SDG: 60527968

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(78-118)	(81-121)	(80-120)
400-160322-2	TB-ROX-100818-8260	94	100	96
400-160322-3	MW4-ROX-100818	96	99	97
400-160322-4	MW25-ROX-100818	94	97	97
400-160322-5	MW8-ROX-100818	92	98	97
400-160322-6	MW8-ROX-100818-DUP	95	98	95
400-160322-7	MW7-ROX-100818	94	99	96
LCS 400-416014/1002	Lab Control Sample	96	100	96
LCS 400-416215/1002	Lab Control Sample	94	103	95
MB 400-416014/5	Method Blank	94	96	96
MB 400-416215/4	Method Blank	93	99	95

Surrogate Legend

BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPHL	TBP
Lab Sample ID	Client Sample ID	(34-120)	(10-120)	(27-120)	(10-120)	(53-125)	(15-135)
400-160322-3	MW4-ROX-100818	42	25	41	38	39 X	48
400-160322-4	MW25-ROX-100818	43	29	46	33	35 X	39
400-160322-5	MW8-ROX-100818	36	20	31	31	28 X	52
400-160322-6	MW8-ROX-100818-DUP	37	12	34	27	30 X	50
400-160322-7	MW7-ROX-100818	39	13	34	30	34 X	62
LCS 400-415003/24-A	Lab Control Sample	39	24	43	38	42 X	38
LCS 400-415003/2-A	Lab Control Sample	41	16	45	34	42 X	45
LCSD 400-415003/25-A	Lab Control Sample Dup	41	28	44	42	44 X	34
LCSD 400-415003/3-A - RA	Lab Control Sample Dup	59	30	45	35	61	57
MB 400-415003/1-A	Method Blank	38	21	40	36	38 X	34

Surrogate Legend

FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPHL = Terphenyl-d14
TBP = 2,4,6-Tribromophenol

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		TPHL	FBP	NBZ
Lab Sample ID	Client Sample ID	(33-138)	(15-122)	(19-130)
400-160322-3	MW4-ROX-100818	49	48	32
400-160322-4	MW25-ROX-100818	55	55	35
400-160322-5	MW8-ROX-100818	36	37	20

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160322-1
SDG: 60527968

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	TPHL (33-138)	FBP (15-122)	NBZ (19-130)
400-160322-6	MW8-ROX-100818-DUP		39	
400-160322-6 - DL	MW8-ROX-100818-DUP	37		26
400-160322-7	MW7-ROX-100818	37	40	22
LCS 400-415003/2-A	Lab Control Sample	62	50	29
LCSD 400-415003/3-A	Lab Control Sample Dup	58	48	32
MB 400-415003/1-A	Method Blank	50	39	30

Surrogate Legend

TPHL = Terphenyl-d14
FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5

Method: 8011 - EDB and DBCP in Water by Microextraction

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	BFB2 (51-149)
400-160322-1	TB-ROX-100818-8011	114 p
400-160322-3	MW4-ROX-100818	127 p
400-160322-4	MW25-ROX-100818	119 p
400-160322-5	MW8-ROX-100818	109 p
400-160322-6	MW8-ROX-100818-DUP	153 p X
400-160322-7	MW7-ROX-100818	110 p
LCS 400-415996/2-A	Lab Control Sample	110
LCSD 400-415996/3-A	Lab Control Sample Dup	115
MB 400-415996/1-A	Method Blank	96

Surrogate Legend

BFB = 4-Bromofluorobenzene

Method Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160322-1
SDG: 60527968

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL PEN
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	TAL PEN
8011	EDB and DBCP in Water by Microextraction	EPA	TAL PEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL PEN
5030B	Purge and Trap	SW846	TAL PEN
8011	Microextraction	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Client Sample ID: TB-ROX-100818-8011

Lab Sample ID: 400-160322-1
Matrix: Water

Date Collected: 10/08/18 00:00
Date Received: 10/09/18 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			34.5 mL	35 mL	415996	10/18/18 14:46	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 15:44	DS	TAL PEN

Client Sample ID: TB-ROX-100818-8260

Lab Sample ID: 400-160322-2
Matrix: Water

Date Collected: 10/08/18 00:00
Date Received: 10/09/18 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416215	10/20/18 10:33	WPD	TAL PEN

Client Sample ID: MW4-ROX-100818

Lab Sample ID: 400-160322-3
Matrix: Water

Date Collected: 10/08/18 09:25
Date Received: 10/09/18 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416014	10/19/18 01:25	CAR	TAL PEN
Total/NA	Prep	3520C			1026 mL	1.0 mL	415003	10/11/18 12:52	JJA	TAL PEN
Total/NA	Analysis	8270D		1			415197	10/12/18 18:52	VC1	TAL PEN
Total/NA	Prep	3520C			1026 mL	1.0 mL	415003	10/11/18 12:52	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			415417	10/15/18 18:26	KJA	TAL PEN
Total/NA	Prep	8011			34.4 mL	35 mL	415996	10/18/18 14:46	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 16:16	DS	TAL PEN

Client Sample ID: MW25-ROX-100818

Lab Sample ID: 400-160322-4
Matrix: Water

Date Collected: 10/08/18 10:35
Date Received: 10/09/18 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416014	10/19/18 01:49	CAR	TAL PEN
Total/NA	Prep	3520C			1030.4 mL	1.0 mL	415003	10/11/18 12:52	JJA	TAL PEN
Total/NA	Analysis	8270D		1			415197	10/12/18 19:14	VC1	TAL PEN
Total/NA	Prep	3520C			1030.4 mL	1.0 mL	415003	10/11/18 12:52	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			415417	10/15/18 18:42	KJA	TAL PEN
Total/NA	Prep	8011			34.8 mL	35 mL	415996	10/18/18 14:46	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 16:49	DS	TAL PEN

Client Sample ID: MW8-ROX-100818

Lab Sample ID: 400-160322-5
Matrix: Water

Date Collected: 10/08/18 12:10
Date Received: 10/09/18 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2500	5 mL	5 mL	416014	10/19/18 02:36	CAR	TAL PEN

Client Sample ID: MW8-ROX-100818

Lab Sample ID: 400-160322-5
Matrix: Water

Date Collected: 10/08/18 12:10
Date Received: 10/09/18 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1022.8 mL	1.0 mL	415003	10/11/18 12:52	JJA	TAL PEN
Total/NA	Analysis	8270D		1			415197	10/12/18 19:35	VC1	TAL PEN
Total/NA	Prep	3520C			1022.8 mL	1.0 mL	415003	10/11/18 12:52	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			415417	10/15/18 18:58	KJA	TAL PEN
Total/NA	Prep	8011			34.5 mL	35 mL	415996	10/18/18 14:46	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 17:21	DS	TAL PEN

Client Sample ID: MW8-ROX-100818-DUP

Lab Sample ID: 400-160322-6
Matrix: Water

Date Collected: 10/08/18 12:10
Date Received: 10/09/18 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2500	5 mL	5 mL	416014	10/19/18 03:00	CAR	TAL PEN
Total/NA	Prep	3520C			1025 mL	1.0 mL	415003	10/11/18 12:52	JJA	TAL PEN
Total/NA	Analysis	8270D		1			415197	10/12/18 19:57	VC1	TAL PEN
Total/NA	Prep	3520C			1025 mL	1.0 mL	415003	10/11/18 12:52	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			415417	10/15/18 19:14	KJA	TAL PEN
Total/NA	Prep	3520C	DL		1025 mL	1.0 mL	415003	10/11/18 12:52	JJA	TAL PEN
Total/NA	Analysis	8270D LL	DL	5			415571	10/16/18 10:16	KJA	TAL PEN
Total/NA	Prep	8011			33.9 mL	35 mL	415996	10/18/18 14:46	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 17:54	DS	TAL PEN

Client Sample ID: MW7-ROX-100818

Lab Sample ID: 400-160322-7
Matrix: Water

Date Collected: 10/08/18 13:15
Date Received: 10/09/18 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2500	5 mL	5 mL	416014	10/19/18 03:24	CAR	TAL PEN
Total/NA	Prep	3520C			1020.4 mL	1.0 mL	415003	10/11/18 12:52	JJA	TAL PEN
Total/NA	Analysis	8270D		1			415197	10/12/18 20:19	VC1	TAL PEN
Total/NA	Prep	3520C			1020.4 mL	1.0 mL	415003	10/11/18 12:52	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			415417	10/15/18 19:30	KJA	TAL PEN
Total/NA	Prep	8011			33.3 mL	35 mL	415996	10/18/18 14:46	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 20:40	DS	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-415003/1-A
Matrix: Water

Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	415003	10/11/18 12:52	JJA	TAL PEN
Total/NA	Analysis	8270D		1			415197	10/12/18 17:04	VC1	TAL PEN
Total/NA	Prep	3520C			1000 mL	1.0 mL	415003	10/11/18 12:52	JJA	TAL PEN

Client Sample ID: Method Blank
Lab Sample ID: MB 400-415003/1-A
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270D LL		1			415110	10/12/18 18:23	KJA	TAL PEN

Client Sample ID: Method Blank
Lab Sample ID: MB 400-415996/1-A
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	415996	10/18/18 14:46	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 07:07	DS	TAL PEN

Client Sample ID: Method Blank
Lab Sample ID: MB 400-416014/5
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416014	10/18/18 19:02	CAR	TAL PEN

Client Sample ID: Method Blank
Lab Sample ID: MB 400-416215/4
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416215	10/20/18 09:48	WPD	TAL PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-415003/24-A
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	415003	10/11/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D		1			415197	10/12/18 18:09	VC1	TAL PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-415003/2-A
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	415003	10/11/18 12:52	JJA	TAL PEN
Total/NA	Analysis	8270D		1			415197	10/12/18 17:26	VC1	TAL PEN
Total/NA	Prep	3520C			1000 mL	1.0 mL	415003	10/11/18 12:52	JJA	TAL PEN
Total/NA	Analysis	8270D LL		5			415110	10/12/18 18:39	KJA	TAL PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160322-1
SDG: 60527968

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 400-415996/2-A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	415996	10/18/18 14:46	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 07:38	DS	TAL PEN

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 400-416014/1002
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416014	10/18/18 17:00	CAR	TAL PEN

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 400-416215/1002
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416215	10/20/18 09:04	WPD	TAL PEN

Client Sample ID: Lab Control Sample Dup
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCSD 400-415003/25-A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	415003	10/11/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D		1			415197	10/12/18 18:31	VC1	TAL PEN

Client Sample ID: Lab Control Sample Dup
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCSD 400-415003/3-A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	415003	10/11/18 12:52	JJA	TAL PEN
Total/NA	Analysis	8270D		1			415197	10/12/18 17:47	VC1	TAL PEN
Total/NA	Prep	3520C	RA		1000 mL	1.0 mL	415003	10/11/18 12:52	JJA	TAL PEN
Total/NA	Analysis	8270D	RA	1			415600	10/16/18 12:32	VC1	TAL PEN
Total/NA	Prep	3520C			1000 mL	1.0 mL	415003	10/11/18 12:52	JJA	TAL PEN
Total/NA	Analysis	8270D LL		5			415110	10/12/18 18:54	KJA	TAL PEN

Client Sample ID: Lab Control Sample Dup
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCSD 400-415996/3-A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	415996	10/18/18 14:46	DS	TAL PEN
Total/NA	Analysis	8011		1			416023	10/19/18 08:10	DS	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

GC/MS VOA

Analysis Batch: 416014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160322-3	MW4-ROX-100818	Total/NA	Water	8260B	
400-160322-4	MW25-ROX-100818	Total/NA	Water	8260B	
400-160322-5	MW8-ROX-100818	Total/NA	Water	8260B	
400-160322-6	MW8-ROX-100818-DUP	Total/NA	Water	8260B	
400-160322-7	MW7-ROX-100818	Total/NA	Water	8260B	
MB 400-416014/5	Method Blank	Total/NA	Water	8260B	
LCS 400-416014/1002	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 416215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160322-2	TB-ROX-100818-8260	Total/NA	Water	8260B	
MB 400-416215/4	Method Blank	Total/NA	Water	8260B	
LCS 400-416215/1002	Lab Control Sample	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 415003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160322-3	MW4-ROX-100818	Total/NA	Water	3520C	
400-160322-4	MW25-ROX-100818	Total/NA	Water	3520C	
400-160322-5	MW8-ROX-100818	Total/NA	Water	3520C	
400-160322-6	MW8-ROX-100818-DUP	Total/NA	Water	3520C	
400-160322-6 - DL	MW8-ROX-100818-DUP	Total/NA	Water	3520C	
400-160322-7	MW7-ROX-100818	Total/NA	Water	3520C	
MB 400-415003/1-A	Method Blank	Total/NA	Water	3520C	
LCS 400-415003/24-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 400-415003/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-415003/25-A	Lab Control Sample Dup	Total/NA	Water	3520C	
LCSD 400-415003/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
LCSD 400-415003/3-A - RA	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 415110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-415003/1-A	Method Blank	Total/NA	Water	8270D LL	415003
LCS 400-415003/2-A	Lab Control Sample	Total/NA	Water	8270D LL	415003
LCSD 400-415003/3-A	Lab Control Sample Dup	Total/NA	Water	8270D LL	415003

Analysis Batch: 415197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160322-3	MW4-ROX-100818	Total/NA	Water	8270D	415003
400-160322-4	MW25-ROX-100818	Total/NA	Water	8270D	415003
400-160322-5	MW8-ROX-100818	Total/NA	Water	8270D	415003
400-160322-6	MW8-ROX-100818-DUP	Total/NA	Water	8270D	415003
400-160322-7	MW7-ROX-100818	Total/NA	Water	8270D	415003
MB 400-415003/1-A	Method Blank	Total/NA	Water	8270D	415003
LCS 400-415003/24-A	Lab Control Sample	Total/NA	Water	8270D	415003
LCS 400-415003/2-A	Lab Control Sample	Total/NA	Water	8270D	415003
LCSD 400-415003/25-A	Lab Control Sample Dup	Total/NA	Water	8270D	415003
LCSD 400-415003/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	415003

GC/MS Semi VOA (Continued)

Analysis Batch: 415417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160322-3	MW4-ROX-100818	Total/NA	Water	8270D LL	415003
400-160322-4	MW25-ROX-100818	Total/NA	Water	8270D LL	415003
400-160322-5	MW8-ROX-100818	Total/NA	Water	8270D LL	415003
400-160322-6	MW8-ROX-100818-DUP	Total/NA	Water	8270D LL	415003
400-160322-7	MW7-ROX-100818	Total/NA	Water	8270D LL	415003

Analysis Batch: 415571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160322-6 - DL	MW8-ROX-100818-DUP	Total/NA	Water	8270D LL	415003

Analysis Batch: 415600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 400-415003/3-A - RA	Lab Control Sample Dup	Total/NA	Water	8270D	415003

GC Semi VOA

Prep Batch: 415996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160322-1	TB-ROX-100818-8011	Total/NA	Water	8011	
400-160322-3	MW4-ROX-100818	Total/NA	Water	8011	
400-160322-4	MW25-ROX-100818	Total/NA	Water	8011	
400-160322-5	MW8-ROX-100818	Total/NA	Water	8011	
400-160322-6	MW8-ROX-100818-DUP	Total/NA	Water	8011	
400-160322-7	MW7-ROX-100818	Total/NA	Water	8011	
MB 400-415996/1-A	Method Blank	Total/NA	Water	8011	
LCS 400-415996/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 400-415996/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 416023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160322-1	TB-ROX-100818-8011	Total/NA	Water	8011	415996
400-160322-3	MW4-ROX-100818	Total/NA	Water	8011	415996
400-160322-4	MW25-ROX-100818	Total/NA	Water	8011	415996
400-160322-5	MW8-ROX-100818	Total/NA	Water	8011	415996
400-160322-6	MW8-ROX-100818-DUP	Total/NA	Water	8011	415996
400-160322-7	MW7-ROX-100818	Total/NA	Water	8011	415996
MB 400-415996/1-A	Method Blank	Total/NA	Water	8011	415996
LCS 400-415996/2-A	Lab Control Sample	Total/NA	Water	8011	415996
LCSD 400-415996/3-A	Lab Control Sample Dup	Total/NA	Water	8011	415996

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-416014/5
Matrix: Water
Analysis Batch: 416014

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/18/18 19:02	1
Acrolein	ND		20	10	ug/L			10/18/18 19:02	1
Acrylonitrile	ND		10	2.8	ug/L			10/18/18 19:02	1
Benzene	ND		1.0	0.38	ug/L			10/18/18 19:02	1
Bromobenzene	ND		1.0	0.54	ug/L			10/18/18 19:02	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/18/18 19:02	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/18/18 19:02	1
Bromoform	ND		5.0	0.71	ug/L			10/18/18 19:02	1
Bromomethane	ND		1.0	0.98	ug/L			10/18/18 19:02	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/18/18 19:02	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/18/18 19:02	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/18/18 19:02	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/18/18 19:02	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/18/18 19:02	1
Chloroethane	ND		1.0	0.76	ug/L			10/18/18 19:02	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/18/18 19:02	1
Chloroform	ND		1.0	0.60	ug/L			10/18/18 19:02	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/18/18 19:02	1
Chloromethane	ND		1.0	0.83	ug/L			10/18/18 19:02	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/18/18 19:02	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/18/18 19:02	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/18/18 19:02	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/18/18 19:02	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/18/18 19:02	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/18/18 19:02	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/18/18 19:02	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/18/18 19:02	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/18/18 19:02	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/18/18 19:02	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/18/18 19:02	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/18/18 19:02	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/18/18 19:02	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/18/18 19:02	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/18/18 19:02	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/18/18 19:02	1
2-Hexanone	ND		25	3.1	ug/L			10/18/18 19:02	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/18/18 19:02	1
Methylene bromide	ND		5.0	0.59	ug/L			10/18/18 19:02	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/18/18 19:02	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/18/18 19:02	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/18/18 19:02	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/18/18 19:02	1
Naphthalene	ND		1.0	1.0	ug/L			10/18/18 19:02	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/18/18 19:02	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/18/18 19:02	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/18/18 19:02	1
o-Xylene	ND		5.0	0.60	ug/L			10/18/18 19:02	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/18/18 19:02	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-416014/5
Matrix: Water
Analysis Batch: 416014

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/18/18 19:02	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/18/18 19:02	1
Styrene	ND		1.0	1.0	ug/L			10/18/18 19:02	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/18/18 19:02	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/18/18 19:02	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/18/18 19:02	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/18/18 19:02	1
Toluene	ND		1.0	0.70	ug/L			10/18/18 19:02	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/18/18 19:02	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/18/18 19:02	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/18/18 19:02	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/18/18 19:02	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/18/18 19:02	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/18/18 19:02	1
Trichloroethene	ND		1.0	0.50	ug/L			10/18/18 19:02	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/18/18 19:02	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/18/18 19:02	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/18/18 19:02	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/18/18 19:02	1
Vinyl acetate	ND		25	2.0	ug/L			10/18/18 19:02	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/18/18 19:02	1
Xylenes, Total	ND		10	1.6	ug/L			10/18/18 19:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*78 - 118*		*10/18/18 19:02*	*1*
Dibromofluoromethane	*96*		*81 - 121*		*10/18/18 19:02*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*10/18/18 19:02*	*1*

Lab Sample ID: LCS 400-416014/1002
Matrix: Water
Analysis Batch: 416014

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	200	187		ug/L		94	43 - 160
Acrolein	500	381		ug/L		76	38 - 160
Acrylonitrile	500	466		ug/L		93	64 - 142
Benzene	50.0	48.3		ug/L		97	70 - 130
Bromobenzene	50.0	52.9		ug/L		106	70 - 132
Bromochloromethane	50.0	54.3		ug/L		109	70 - 130
Bromodichloromethane	50.0	47.9		ug/L		96	67 - 133
Bromoform	50.0	45.4		ug/L		91	57 - 140
Bromomethane	50.0	49.7		ug/L		99	10 - 160
2-Butanone (MEK)	200	192		ug/L		96	61 - 145
Carbon disulfide	50.0	45.6		ug/L		91	61 - 137
Carbon tetrachloride	50.0	46.4		ug/L		93	61 - 137
Chlorobenzene	50.0	50.6		ug/L		101	70 - 130
Dibromochloromethane	50.0	47.7		ug/L		95	67 - 135
Chloroethane	50.0	44.4		ug/L		89	55 - 141

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-416014/1002
Matrix: Water
Analysis Batch: 416014

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloroethyl vinyl ether	50.0	44.4		ug/L		89	10 - 160
Chloroform	50.0	49.9		ug/L		100	69 - 130
1-Chlorohexane	50.0	42.7		ug/L		85	69 - 130
Chloromethane	50.0	44.6		ug/L		89	58 - 137
cis-1,2-Dichloroethene	50.0	45.6		ug/L		91	68 - 130
cis-1,3-Dichloropropene	50.0	45.5		ug/L		91	69 - 132
1,2-Dichlorobenzene	50.0	52.1		ug/L		104	67 - 130
1,3-Dichlorobenzene	50.0	52.2		ug/L		104	70 - 130
1,4-Dichlorobenzene	50.0	52.2		ug/L		104	70 - 130
Dichlorodifluoromethane	50.0	50.8		ug/L		102	41 - 146
1,1-Dichloroethane	50.0	46.1		ug/L		92	70 - 130
1,2-Dichloroethane	50.0	48.4		ug/L		97	69 - 130
1,1-Dichloroethene	50.0	49.1		ug/L		98	63 - 134
1,2-Dichloropropane	50.0	46.7		ug/L		93	70 - 130
1,3-Dichloropropane	50.0	48.7		ug/L		97	70 - 130
2,2-Dichloropropane	50.0	37.6		ug/L		75	52 - 135
1,1-Dichloropropene	50.0	48.3		ug/L		97	70 - 130
Ethylbenzene	50.0	48.8		ug/L		98	70 - 130
Ethyl methacrylate	50.0	47.3		ug/L		95	68 - 130
Hexachlorobutadiene	50.0	51.5		ug/L		103	53 - 140
2-Hexanone	200	179		ug/L		89	65 - 137
Isopropylbenzene	50.0	49.3		ug/L		99	70 - 130
Methylene bromide	50.0	49.8		ug/L		100	70 - 130
Methylene Chloride	50.0	50.1		ug/L		100	66 - 135
4-Methyl-2-pentanone (MIBK)	200	177		ug/L		88	69 - 138
Methyl tert-butyl ether	50.0	45.8		ug/L		92	66 - 130
m-Xylene & p-Xylene	50.0	47.8		ug/L		96	70 - 130
Naphthalene	50.0	48.6		ug/L		97	47 - 149
n-Butylbenzene	50.0	49.3		ug/L		99	67 - 130
N-Propylbenzene	50.0	50.8		ug/L		102	70 - 130
o-Chlorotoluene	50.0	49.0		ug/L		98	70 - 130
o-Xylene	50.0	48.3		ug/L		97	70 - 130
p-Chlorotoluene	50.0	49.1		ug/L		98	70 - 130
p-Isopropyltoluene	50.0	51.4		ug/L		103	65 - 130
sec-Butylbenzene	50.0	50.1		ug/L		100	66 - 130
Styrene	50.0	48.0		ug/L		96	70 - 130
tert-Butylbenzene	50.0	47.5		ug/L		95	64 - 139
1,1,1,2-Tetrachloroethane	50.0	48.5		ug/L		97	67 - 131
1,1,2,2-Tetrachloroethane	50.0	50.5		ug/L		101	70 - 131
Tetrachloroethene	50.0	49.4		ug/L		99	65 - 130
Toluene	50.0	47.4		ug/L		95	70 - 130
trans-1,2-Dichloroethene	50.0	49.0		ug/L		98	70 - 130
trans-1,3-Dichloropropene	50.0	42.1		ug/L		84	63 - 130
1,2,3-Trichlorobenzene	50.0	50.3		ug/L		101	60 - 138
1,2,4-Trichlorobenzene	50.0	51.1		ug/L		102	60 - 140
1,1,1-Trichloroethane	50.0	47.6		ug/L		95	68 - 130
1,1,2-Trichloroethane	50.0	49.1		ug/L		98	70 - 130
Trichloroethene	50.0	51.6		ug/L		103	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-416014/1002
Matrix: Water
Analysis Batch: 416014

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	50.0	49.0		ug/L		98	65 - 138
1,2,3-Trichloropropane	50.0	50.7		ug/L		101	70 - 130
1,2,4-Trimethylbenzene	50.0	50.6		ug/L		101	70 - 130
1,3,5-Trimethylbenzene	50.0	50.2		ug/L		100	69 - 130
Vinyl acetate	100	97.3		ug/L		97	26 - 160
Vinyl chloride	50.0	41.8		ug/L		84	59 - 136
Xylenes, Total	100	96.1		ug/L		96	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*96*		*78 - 118*
Dibromofluoromethane	*100*		*81 - 121*
Toluene-d8 (Surr)	*96*		*80 - 120*

Lab Sample ID: MB 400-416215/4
Matrix: Water
Analysis Batch: 416215

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/20/18 09:48	1
Acrolein	ND		20	10	ug/L			10/20/18 09:48	1
Acrylonitrile	ND		10	2.8	ug/L			10/20/18 09:48	1
Benzene	ND		1.0	0.38	ug/L			10/20/18 09:48	1
Bromobenzene	ND		1.0	0.54	ug/L			10/20/18 09:48	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/20/18 09:48	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/20/18 09:48	1
Bromoform	ND		5.0	0.71	ug/L			10/20/18 09:48	1
Bromomethane	ND		1.0	0.98	ug/L			10/20/18 09:48	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/20/18 09:48	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/20/18 09:48	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/20/18 09:48	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/20/18 09:48	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/20/18 09:48	1
Chloroethane	ND		1.0	0.76	ug/L			10/20/18 09:48	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/20/18 09:48	1
Chloroform	ND		1.0	0.60	ug/L			10/20/18 09:48	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/20/18 09:48	1
Chloromethane	ND		1.0	0.83	ug/L			10/20/18 09:48	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/20/18 09:48	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/20/18 09:48	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/20/18 09:48	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/20/18 09:48	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/20/18 09:48	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/20/18 09:48	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/20/18 09:48	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/20/18 09:48	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/20/18 09:48	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/20/18 09:48	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/20/18 09:48	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-416215/4
Matrix: Water
Analysis Batch: 416215

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/20/18 09:48	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/20/18 09:48	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/20/18 09:48	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/20/18 09:48	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/20/18 09:48	1
2-Hexanone	ND		25	3.1	ug/L			10/20/18 09:48	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/20/18 09:48	1
Methylene bromide	ND		5.0	0.59	ug/L			10/20/18 09:48	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/20/18 09:48	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/20/18 09:48	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/20/18 09:48	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/20/18 09:48	1
Naphthalene	ND		1.0	1.0	ug/L			10/20/18 09:48	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/20/18 09:48	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/20/18 09:48	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/20/18 09:48	1
o-Xylene	ND		5.0	0.60	ug/L			10/20/18 09:48	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/20/18 09:48	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/20/18 09:48	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/20/18 09:48	1
Styrene	ND		1.0	1.0	ug/L			10/20/18 09:48	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/20/18 09:48	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/20/18 09:48	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/20/18 09:48	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/20/18 09:48	1
Toluene	ND		1.0	0.70	ug/L			10/20/18 09:48	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/20/18 09:48	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/20/18 09:48	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/20/18 09:48	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/20/18 09:48	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/20/18 09:48	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/20/18 09:48	1
Trichloroethene	ND		1.0	0.50	ug/L			10/20/18 09:48	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/20/18 09:48	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/20/18 09:48	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/20/18 09:48	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/20/18 09:48	1
Vinyl acetate	ND		25	2.0	ug/L			10/20/18 09:48	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/20/18 09:48	1
Xylenes, Total	ND		10	1.6	ug/L			10/20/18 09:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*78 - 118*		*10/20/18 09:48*	*1*
Dibromofluoromethane	*99*		*81 - 121*		*10/20/18 09:48*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*10/20/18 09:48*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-416215/1002
Matrix: Water
Analysis Batch: 416215

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	200	181		ug/L		91	43 - 160
Acrolein	500	376		ug/L		75	38 - 160
Acrylonitrile	500	446		ug/L		89	64 - 142
Benzene	50.0	47.3		ug/L		95	70 - 130
Bromobenzene	50.0	52.4		ug/L		105	70 - 132
Bromochloromethane	50.0	54.3		ug/L		109	70 - 130
Bromodichloromethane	50.0	48.6		ug/L		97	67 - 133
Bromoform	50.0	47.4		ug/L		95	57 - 140
Bromomethane	50.0	53.5		ug/L		107	10 - 160
2-Butanone (MEK)	200	178		ug/L		89	61 - 145
Carbon disulfide	50.0	43.7		ug/L		87	61 - 137
Carbon tetrachloride	50.0	48.6		ug/L		97	61 - 137
Chlorobenzene	50.0	49.1		ug/L		98	70 - 130
Dibromochloromethane	50.0	48.7		ug/L		97	67 - 135
Chloroethane	50.0	43.3		ug/L		87	55 - 141
2-Chloroethyl vinyl ether	50.0	42.8		ug/L		86	10 - 160
Chloroform	50.0	50.3		ug/L		101	69 - 130
1-Chlorohexane	50.0	40.5		ug/L		81	69 - 130
Chloromethane	50.0	41.3		ug/L		83	58 - 137
cis-1,2-Dichloroethene	50.0	45.1		ug/L		90	68 - 130
cis-1,3-Dichloropropene	50.0	44.4		ug/L		89	69 - 132
1,2-Dichlorobenzene	50.0	50.9		ug/L		102	67 - 130
1,3-Dichlorobenzene	50.0	51.2		ug/L		102	70 - 130
1,4-Dichlorobenzene	50.0	50.8		ug/L		102	70 - 130
Dichlorodifluoromethane	50.0	41.4		ug/L		83	41 - 146
1,1-Dichloroethane	50.0	45.2		ug/L		90	70 - 130
1,2-Dichloroethane	50.0	49.8		ug/L		100	69 - 130
1,1-Dichloroethene	50.0	47.7		ug/L		95	63 - 134
1,2-Dichloropropane	50.0	44.8		ug/L		90	70 - 130
1,3-Dichloropropane	50.0	47.2		ug/L		94	70 - 130
2,2-Dichloropropane	50.0	38.4		ug/L		77	52 - 135
1,1-Dichloropropene	50.0	48.0		ug/L		96	70 - 130
Ethylbenzene	50.0	47.0		ug/L		94	70 - 130
Ethyl methacrylate	50.0	43.6		ug/L		87	68 - 130
Hexachlorobutadiene	50.0	51.0		ug/L		102	53 - 140
2-Hexanone	200	168		ug/L		84	65 - 137
Isopropylbenzene	50.0	47.5		ug/L		95	70 - 130
Methylene bromide	50.0	50.2		ug/L		100	70 - 130
Methylene Chloride	50.0	49.9		ug/L		100	66 - 135
4-Methyl-2-pentanone (MIBK)	200	163		ug/L		81	69 - 138
Methyl tert-butyl ether	50.0	44.3		ug/L		89	66 - 130
m-Xylene & p-Xylene	50.0	45.9		ug/L		92	70 - 130
Naphthalene	50.0	43.8		ug/L		88	47 - 149
n-Butylbenzene	50.0	47.2		ug/L		94	67 - 130
N-Propylbenzene	50.0	49.4		ug/L		99	70 - 130
o-Chlorotoluene	50.0	47.7		ug/L		95	70 - 130
o-Xylene	50.0	46.7		ug/L		93	70 - 130
p-Chlorotoluene	50.0	48.5		ug/L		97	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-416215/1002
Matrix: Water
Analysis Batch: 416215

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
p-Isopropyltoluene	50.0	50.0		ug/L		100	65 - 130
sec-Butylbenzene	50.0	48.4		ug/L		97	66 - 130
Styrene	50.0	45.6		ug/L		91	70 - 130
tert-Butylbenzene	50.0	46.7		ug/L		93	64 - 139
1,1,1,2-Tetrachloroethane	50.0	49.1		ug/L		98	67 - 131
1,1,2,2-Tetrachloroethane	50.0	48.6		ug/L		97	70 - 131
Tetrachloroethene	50.0	48.1		ug/L		96	65 - 130
Toluene	50.0	46.5		ug/L		93	70 - 130
trans-1,2-Dichloroethene	50.0	48.9		ug/L		98	70 - 130
trans-1,3-Dichloropropene	50.0	41.6		ug/L		83	63 - 130
1,2,3-Trichlorobenzene	50.0	50.2		ug/L		100	60 - 138
1,2,4-Trichlorobenzene	50.0	49.9		ug/L		100	60 - 140
1,1,1-Trichloroethane	50.0	48.9		ug/L		98	68 - 130
1,1,2-Trichloroethane	50.0	47.2		ug/L		94	70 - 130
Trichloroethene	50.0	51.2		ug/L		102	70 - 130
Trichlorofluoromethane	50.0	54.0		ug/L		108	65 - 138
1,2,3-Trichloropropane	50.0	52.4		ug/L		105	70 - 130
1,2,4-Trimethylbenzene	50.0	49.9		ug/L		100	70 - 130
1,3,5-Trimethylbenzene	50.0	49.3		ug/L		99	69 - 130
Vinyl acetate	100	97.4		ug/L		97	26 - 160
Vinyl chloride	50.0	40.1		ug/L		80	59 - 136
Xylenes, Total	100	92.7		ug/L		93	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*94*		*78 - 118*
Dibromofluoromethane	*103*		*81 - 121*
Toluene-d8 (Surr)	*95*		*80 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-415003/1-A
Matrix: Water
Analysis Batch: 415197

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 415003

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.8	ug/L		10/11/18 12:52	10/12/18 17:04	1
Benzenethiol	ND		10	1.7	ug/L		10/11/18 12:52	10/12/18 17:04	1
Benzoic acid	ND		30	7.3	ug/L		10/11/18 12:52	10/12/18 17:04	1
Benzyl alcohol	ND		10	2.0	ug/L		10/11/18 12:52	10/12/18 17:04	1
Bis(2-chloroethoxy)methane	ND		10	0.69	ug/L		10/11/18 12:52	10/12/18 17:04	1
Bis(2-chloroethyl)ether	ND		10	0.74	ug/L		10/11/18 12:52	10/12/18 17:04	1
bis (2-chloroisopropyl) ether	ND		10	0.81	ug/L		10/11/18 12:52	10/12/18 17:04	1
Bis(2-ethylhexyl) phthalate	ND		10	2.3	ug/L		10/11/18 12:52	10/12/18 17:04	1
4-Bromophenyl phenyl ether	ND		10	0.32	ug/L		10/11/18 12:52	10/12/18 17:04	1
Butyl benzyl phthalate	ND		10	0.69	ug/L		10/11/18 12:52	10/12/18 17:04	1
4-Chloroaniline	ND		10	3.4	ug/L		10/11/18 12:52	10/12/18 17:04	1
4-Chloro-3-methylphenol	ND		10	3.8	ug/L		10/11/18 12:52	10/12/18 17:04	1
2-Chloronaphthalene	ND		10	0.52	ug/L		10/11/18 12:52	10/12/18 17:04	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-415003/1-A
Matrix: Water
Analysis Batch: 415197

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 415003

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	ND		10	2.2	ug/L		10/11/18 12:52	10/12/18 17:04	1
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		10/11/18 12:52	10/12/18 17:04	1
Dibenz[a,h]acridine	ND		10	3.0	ug/L		10/11/18 12:52	10/12/18 17:04	1
Dibenzofuran	ND		10	0.52	ug/L		10/11/18 12:52	10/12/18 17:04	1
3,3'-Dichlorobenzidine	ND		10	2.6	ug/L		10/11/18 12:52	10/12/18 17:04	1
2,4-Dichlorophenol	ND		10	3.0	ug/L		10/11/18 12:52	10/12/18 17:04	1
Diethyl phthalate	ND		10	0.70	ug/L		10/11/18 12:52	10/12/18 17:04	1
2,4-Dimethylphenol	ND		10	3.5	ug/L		10/11/18 12:52	10/12/18 17:04	1
Dimethyl phthalate	ND		10	0.60	ug/L		10/11/18 12:52	10/12/18 17:04	1
Di-n-butyl phthalate	ND		10	2.7	ug/L		10/11/18 12:52	10/12/18 17:04	1
4,6-Dinitro-ortho-cresol	ND		10	2.0	ug/L		10/11/18 12:52	10/12/18 17:04	1
2,4-Dinitrophenol	ND		30	3.4	ug/L		10/11/18 12:52	10/12/18 17:04	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		10/11/18 12:52	10/12/18 17:04	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		10/11/18 12:52	10/12/18 17:04	1
Di-n-octyl phthalate	ND		10	0.44	ug/L		10/11/18 12:52	10/12/18 17:04	1
1,4-Dioxane	ND		10	1.0	ug/L		10/11/18 12:52	10/12/18 17:04	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		10/11/18 12:52	10/12/18 17:04	1
Hexachlorobenzene	ND		10	0.25	ug/L		10/11/18 12:52	10/12/18 17:04	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		10/11/18 12:52	10/12/18 17:04	1
Hexachloroethane	ND		10	4.2	ug/L		10/11/18 12:52	10/12/18 17:04	1
Indene	ND		10	1.0	ug/L		10/11/18 12:52	10/12/18 17:04	1
Isophorone	ND		10	0.57	ug/L		10/11/18 12:52	10/12/18 17:04	1
2-Methylphenol	ND		10	1.8	ug/L		10/11/18 12:52	10/12/18 17:04	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/11/18 12:52	10/12/18 17:04	1
2-Nitroaniline	ND		10	2.2	ug/L		10/11/18 12:52	10/12/18 17:04	1
3-Nitroaniline	ND		10	1.8	ug/L		10/11/18 12:52	10/12/18 17:04	1
4-Nitroaniline	ND		10	2.5	ug/L		10/11/18 12:52	10/12/18 17:04	1
Nitrobenzene	ND		10	0.55	ug/L		10/11/18 12:52	10/12/18 17:04	1
2-Nitrophenol	ND		10	0.65	ug/L		10/11/18 12:52	10/12/18 17:04	1
4-Nitrophenol	ND		10	2.1	ug/L		10/11/18 12:52	10/12/18 17:04	1
N-Nitrosodimethylamine	ND		10	3.5	ug/L		10/11/18 12:52	10/12/18 17:04	1
N-Nitrosodi-n-propylamine	ND		10	3.3	ug/L		10/11/18 12:52	10/12/18 17:04	1
N-Nitrosodiphenylamine	ND		10	0.47	ug/L		10/11/18 12:52	10/12/18 17:04	1
Pentachlorophenol	ND		20	1.8	ug/L		10/11/18 12:52	10/12/18 17:04	1
Phenol	ND		10	2.6	ug/L		10/11/18 12:52	10/12/18 17:04	1
Pyridine	ND		10	3.2	ug/L		10/11/18 12:52	10/12/18 17:04	1
Quinoline	ND		10	6.0	ug/L		10/11/18 12:52	10/12/18 17:04	1
2,4,5-Trichlorophenol	ND		10	3.7	ug/L		10/11/18 12:52	10/12/18 17:04	1
2,4,6-Trichlorophenol	ND		10	3.5	ug/L		10/11/18 12:52	10/12/18 17:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*38*		*34 - 120*	*10/11/18 12:52*	*10/12/18 17:04*	*1*
2-Fluorophenol	*21*		*10 - 120*	*10/11/18 12:52*	*10/12/18 17:04*	*1*
Nitrobenzene-d5	*40*		*27 - 120*	*10/11/18 12:52*	*10/12/18 17:04*	*1*
Phenol-d5	*36*		*10 - 120*	*10/11/18 12:52*	*10/12/18 17:04*	*1*
Terphenyl-d14	*38*	*X*	*53 - 125*	*10/11/18 12:52*	*10/12/18 17:04*	*1*
2,4,6-Tribromophenol	*34*		*15 - 135*	*10/11/18 12:52*	*10/12/18 17:04*	*1*

Lab Sample ID: LCS 400-415003/24-A
Matrix: Water
Analysis Batch: 415197

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 415003

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzenethiol	30.0	ND	*	ug/L		3	10 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*39*		*34 - 120*
2-Fluorophenol	*24*		*10 - 120*
Nitrobenzene-d5	*43*		*27 - 120*
Phenol-d5	*38*		*10 - 120*
Terphenyl-d14	*42*	*X*	*53 - 125*
2,4,6-Tribromophenol	*38*		*15 - 135*

Lab Sample ID: LCS 400-415003/2-A
Matrix: Water
Analysis Batch: 415197

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 415003

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aniline	30.0	19.9		ug/L		66	29 - 120
Benzoic acid	118	69.5		ug/L		59	10 - 150
Benzyl alcohol	30.0	17.7		ug/L		59	19 - 125
Bis(2-chloroethoxy)methane	30.0	20.6		ug/L		69	45 - 120
Bis(2-chloroethyl)ether	30.0	21.2		ug/L		71	48 - 120
bis (2-chloroisopropyl) ether	30.0	17.0		ug/L		57	30 - 125
Bis(2-ethylhexyl) phthalate	30.0	22.9		ug/L		76	48 - 150
4-Bromophenyl phenyl ether	30.0	25.9		ug/L		86	55 - 122
Butyl benzyl phthalate	30.0	21.3		ug/L		71	46 - 145
4-Chloroaniline	30.0	16.8		ug/L		56	30 - 120
4-Chloro-3-methylphenol	30.0	23.3		ug/L		78	39 - 140
2-Chloronaphthalene	30.0	20.9		ug/L		70	52 - 120
2-Chlorophenol	30.0	15.3		ug/L		51	34 - 120
4-Chlorophenyl phenyl ether	30.0	23.7		ug/L		79	58 - 124
Dibenz[a,h]acridine	30.0	24.6		ug/L		82	46 - 149
Dibenzofuran	30.0	20.7		ug/L		69	58 - 123
3,3'-Dichlorobenzidine	40.0	37.0		ug/L		93	39 - 135
2,4-Dichlorophenol	30.0	20.8		ug/L		69	39 - 128
Diethyl phthalate	30.0	22.0		ug/L		73	44 - 146
2,4-Dimethylphenol	30.0	21.0		ug/L		70	44 - 120
Dimethyl phthalate	30.0	23.0		ug/L		77	50 - 131
Di-n-butyl phthalate	30.0	23.9		ug/L		80	55 - 131
4,6-Dinitro-ortho-cresol	60.0	52.9		ug/L		88	10 - 150
2,4-Dinitrophenol	60.0	58.4		ug/L		97	10 - 150
2,4-Dinitrotoluene	30.0	24.1		ug/L		80	58 - 140
2,6-Dinitrotoluene	30.0	23.4		ug/L		78	57 - 130
Di-n-octyl phthalate	30.0	25.4		ug/L		85	50 - 150
1,4-Dioxane	30.0	11.9		ug/L		40	25 - 120
1,2-Diphenylhydrazine (as Azobenzene)	30.0	21.5		ug/L		72	47 - 123
Hexachlorobenzene	30.0	26.8		ug/L		89	52 - 131
Hexachlorocyclopentadiene	30.0	9.88	J	ug/L		33	10 - 129
Hexachloroethane	30.0	14.5		ug/L		48	41 - 120
Indene	30.0	22.0		ug/L		73	47 - 120
Isophorone	30.0	20.1		ug/L		67	49 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-415003/2-A
Matrix: Water
Analysis Batch: 415197

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 415003

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylphenol	30.0	21.5		ug/L		72	39 - 123
3 & 4 Methylphenol	30.0	18.9	J	ug/L		63	38 - 121
2-Nitroaniline	30.0	23.2		ug/L		77	47 - 150
3-Nitroaniline	30.0	21.8		ug/L		73	34 - 132
4-Nitroaniline	30.0	21.5		ug/L		72	41 - 135
Nitrobenzene	30.0	20.0		ug/L		67	47 - 120
2-Nitrophenol	30.0	21.8		ug/L		73	28 - 136
4-Nitrophenol	60.0	55.3		ug/L		92	10 - 150
N-Nitrosodimethylamine	30.0	22.8		ug/L		76	22 - 148
N-Nitrosodi-n-propylamine	30.0	17.9		ug/L		60	44 - 120
N-Nitrosodiphenylamine	29.8	23.7		ug/L		80	56 - 120
Pentachlorophenol	60.0	42.0		ug/L		70	15 - 141
Phenol	30.0	15.6		ug/L		52	33 - 120
Pyridine	60.0	29.6		ug/L		49	26 - 120
Quinoline	30.0	22.2		ug/L		74	51 - 129
2,4,5-Trichlorophenol	30.0	24.1		ug/L		80	38 - 147
2,4,6-Trichlorophenol	30.0	23.2		ug/L		77	36 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*41*		*34 - 120*
2-Fluorophenol	*16*		*10 - 120*
Nitrobenzene-d5	*45*		*27 - 120*
Phenol-d5	*34*		*10 - 120*
Terphenyl-d14	*42*	*X*	*53 - 125*
2,4,6-Tribromophenol	*45*		*15 - 135*

Lab Sample ID: LCSD 400-415003/25-A
Matrix: Water
Analysis Batch: 415197

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 415003

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzenethiol	30.0	ND	*	ug/L		2	10 - 120	7	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*41*		*34 - 120*
2-Fluorophenol	*28*		*10 - 120*
Nitrobenzene-d5	*44*		*27 - 120*
Phenol-d5	*42*		*10 - 120*
Terphenyl-d14	*44*	*X*	*53 - 125*
2,4,6-Tribromophenol	*34*		*15 - 135*

Lab Sample ID: LCSD 400-415003/3-A
Matrix: Water
Analysis Batch: 415197

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 415003

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aniline	30.0	14.2	*	ug/L		47	29 - 120	33	30
Benzoic acid	118	36.0	*	ug/L		31	10 - 150	64	30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-415003/3-A
Matrix: Water
Analysis Batch: 415197

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 415003

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzyl alcohol	30.0	14.7		ug/L		49	19 - 125	18	30
Bis(2-chloroethoxy)methane	30.0	17.4		ug/L		58	45 - 120	17	30
Bis(2-chloroethyl)ether	30.0	17.4		ug/L		58	48 - 120	20	30
bis (2-chloroisopropyl) ether	30.0	15.2		ug/L		51	30 - 125	11	30
Bis(2-ethylhexyl) phthalate	30.0	19.6		ug/L		65	48 - 150	15	30
4-Bromophenyl phenyl ether	30.0	21.8		ug/L		73	55 - 122	17	30
Butyl benzyl phthalate	30.0	18.2		ug/L		61	46 - 145	16	30
4-Chloroaniline	30.0	14.4		ug/L		48	30 - 120	15	30
4-Chloro-3-methylphenol	30.0	19.1		ug/L		64	39 - 140	20	30
2-Chloronaphthalene	30.0	17.7		ug/L		59	52 - 120	17	30
2-Chlorophenol	30.0	15.6		ug/L		52	34 - 120	2	30
4-Chlorophenyl phenyl ether	30.0	20.4		ug/L		68	58 - 124	15	30
Dibenz[a,h]acridine	30.0	19.9		ug/L		66	46 - 149	21	30
Dibenzofuran	30.0	17.5		ug/L		58	58 - 123	17	30
3,3'-Dichlorobenzidine	40.0	33.0		ug/L		82	39 - 135	12	30
2,4-Dichlorophenol	30.0	17.7		ug/L		59	39 - 128	16	30
Diethyl phthalate	30.0	18.7		ug/L		62	44 - 146	16	30
2,4-Dimethylphenol	30.0	16.9		ug/L		56	44 - 120	22	30
Dimethyl phthalate	30.0	18.9		ug/L		63	50 - 131	19	30
Di-n-butyl phthalate	30.0	21.4		ug/L		71	55 - 131	11	30
4,6-Dinitro-ortho-cresol	60.0	42.3		ug/L		71	10 - 150	22	30
2,4-Dinitrophenol	60.0	46.9		ug/L		78	10 - 150	22	30
2,4-Dinitrotoluene	30.0	20.5		ug/L		68	58 - 140	16	30
2,6-Dinitrotoluene	30.0	19.5		ug/L		65	57 - 130	18	30
Di-n-octyl phthalate	30.0	21.5		ug/L		72	50 - 150	17	30
1,4-Dioxane	30.0	12.5		ug/L		42	25 - 120	5	30
1,2-Diphenylhydrazine (as Azobenzene)	30.0	17.7		ug/L		59	47 - 123	19	30
Hexachlorobenzene	30.0	22.7		ug/L		76	52 - 131	16	30
Hexachlorocyclopentadiene	30.0	8.15	J	ug/L		27	10 - 129	19	30
Hexachloroethane	30.0	12.5		ug/L		42	41 - 120	15	30
Indene	30.0	18.2		ug/L		61	47 - 120	19	30
Isophorone	30.0	17.5		ug/L		58	49 - 120	13	30
2-Methylphenol	30.0	17.9		ug/L		60	39 - 123	18	30
3 & 4 Methylphenol	30.0	15.4	J	ug/L		51	38 - 121	20	30
2-Nitroaniline	30.0	19.6		ug/L		65	47 - 150	17	30
3-Nitroaniline	30.0	18.8		ug/L		63	34 - 132	15	30
4-Nitroaniline	30.0	19.7		ug/L		66	41 - 135	9	30
Nitrobenzene	30.0	17.2		ug/L		57	47 - 120	15	30
2-Nitrophenol	30.0	19.4		ug/L		65	28 - 136	12	30
4-Nitrophenol	60.0	37.9	*	ug/L		63	10 - 150	37	30
N-Nitrosodimethylamine	30.0	17.6		ug/L		59	22 - 148	25	30
N-Nitrosodi-n-propylamine	30.0	14.8		ug/L		49	44 - 120	19	30
N-Nitrosodiphenylamine	29.8	19.0		ug/L		64	56 - 120	22	30
Pentachlorophenol	60.0	32.7		ug/L		55	15 - 141	25	30
Phenol	30.0	12.6		ug/L		42	33 - 120	21	30
Pyridine	60.0	25.0		ug/L		42	26 - 120	17	30
Quinoline	30.0	17.1		ug/L		57	51 - 129	26	30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-415003/3-A
Matrix: Water
Analysis Batch: 415197

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 415003

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-Trichlorophenol	30.0	19.4		ug/L		65	38 - 147	22	30
2,4,6-Trichlorophenol	30.0	18.7		ug/L		62	36 - 139	22	30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RA

Lab Sample ID: LCSD 400-415003/3-A
Matrix: Water
Analysis Batch: 415600

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 415003

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl - RA	*59*		*34 - 120*
2-Fluorophenol - RA	*30*		*10 - 120*
Nitrobenzene-d5 - RA	*45*		*27 - 120*
Phenol-d5 - RA	*35*		*10 - 120*
Terphenyl-d14 - RA	*61*		*53 - 125*
2,4,6-Tribromophenol - RA	*57*		*15 - 135*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 400-415003/1-A
Matrix: Water
Analysis Batch: 415110

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 415003

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/11/18 12:52	10/12/18 18:23	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/11/18 12:52	10/12/18 18:23	1
Anthracene	ND		0.20	0.020	ug/L		10/11/18 12:52	10/12/18 18:23	1
Benzo[a]anthracene	ND		0.20	0.040	ug/L		10/11/18 12:52	10/12/18 18:23	1
Benzo[a]pyrene	ND		0.20	0.040	ug/L		10/11/18 12:52	10/12/18 18:23	1
Benzo[b]fluoranthene	ND		0.20	0.040	ug/L		10/11/18 12:52	10/12/18 18:23	1
Benzo[g,h,i]perylene	ND		0.20	0.040	ug/L		10/11/18 12:52	10/12/18 18:23	1
Benzo[k]fluoranthene	ND		0.20	0.040	ug/L		10/11/18 12:52	10/12/18 18:23	1
Chrysene	ND		0.20	0.040	ug/L		10/11/18 12:52	10/12/18 18:23	1
Dibenz(a,h)anthracene	ND		0.20	0.040	ug/L		10/11/18 12:52	10/12/18 18:23	1
Fluoranthene	ND		0.20	0.020	ug/L		10/11/18 12:52	10/12/18 18:23	1
Fluorene	ND		0.20	0.021	ug/L		10/11/18 12:52	10/12/18 18:23	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.040	ug/L		10/11/18 12:52	10/12/18 18:23	1
Phenanthrene	ND		0.20	0.020	ug/L		10/11/18 12:52	10/12/18 18:23	1
Pyrene	ND		0.20	0.020	ug/L		10/11/18 12:52	10/12/18 18:23	1
1-Methylnaphthalene	ND		0.20	0.020	ug/L		10/11/18 12:52	10/12/18 18:23	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		10/11/18 12:52	10/12/18 18:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*50*		*33 - 138*	*10/11/18 12:52*	*10/12/18 18:23*	*1*
2-Fluorobiphenyl	*39*		*15 - 122*	*10/11/18 12:52*	*10/12/18 18:23*	*1*
Nitrobenzene-d5	*30*		*19 - 130*	*10/11/18 12:52*	*10/12/18 18:23*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCS 400-415003/2-A
Matrix: Water
Analysis Batch: 415110

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 415003

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	30.0	27.2		ug/L		91	41 - 120
Acenaphthylene	30.0	27.3		ug/L		91	44 - 120
Anthracene	30.0	30.0		ug/L		100	49 - 120
Benzo[a]anthracene	30.0	29.3		ug/L		98	61 - 135
Benzo[a]pyrene	30.0	28.7		ug/L		96	52 - 120
Benzo[b]fluoranthene	30.0	30.1		ug/L		100	53 - 134
Benzo[g,h,i]perylene	30.0	28.2		ug/L		94	47 - 133
Benzo[k]fluoranthene	30.0	26.7		ug/L		89	57 - 134
Chrysene	30.0	29.5		ug/L		98	55 - 122
Dibenz(a,h)anthracene	30.0	28.3		ug/L		94	48 - 146
Fluoranthene	30.0	29.4		ug/L		98	54 - 128
Fluorene	30.0	31.0		ug/L		103	45 - 125
Indeno[1,2,3-cd]pyrene	30.0	28.9		ug/L		96	43 - 142
Phenanthrene	30.0	29.0		ug/L		97	48 - 120
Pyrene	30.0	28.5		ug/L		95	48 - 132
1-Methylnaphthalene	30.0	17.2		ug/L		57	41 - 120
2-Methylnaphthalene	30.0	17.0		ug/L		57	32 - 124

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14	*62*		*33 - 138*
2-Fluorobiphenyl	*50*		*15 - 122*
Nitrobenzene-d5	*29*		*19 - 130*

Lab Sample ID: LCSD 400-415003/3-A
Matrix: Water
Analysis Batch: 415110

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 415003

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	30.0	26.1		ug/L		87	41 - 120	4	56
Acenaphthylene	30.0	26.1		ug/L		87	44 - 120	4	56
Anthracene	30.0	27.9		ug/L		93	49 - 120	7	51
Benzo[a]anthracene	30.0	28.0		ug/L		93	61 - 135	5	49
Benzo[a]pyrene	30.0	27.3		ug/L		91	52 - 120	5	50
Benzo[b]fluoranthene	30.0	27.7		ug/L		92	53 - 134	8	54
Benzo[g,h,i]perylene	30.0	27.4		ug/L		91	47 - 133	3	50
Benzo[k]fluoranthene	30.0	28.0		ug/L		93	57 - 134	5	52
Chrysene	30.0	28.2		ug/L		94	55 - 122	4	50
Dibenz(a,h)anthracene	30.0	26.2		ug/L		87	48 - 146	7	50
Fluoranthene	30.0	27.6		ug/L		92	54 - 128	6	52
Fluorene	30.0	29.5		ug/L		98	45 - 125	5	56
Indeno[1,2,3-cd]pyrene	30.0	27.6		ug/L		92	43 - 142	5	51
Phenanthrene	30.0	27.3		ug/L		91	48 - 120	6	56
Pyrene	30.0	27.4		ug/L		91	48 - 132	4	52
1-Methylnaphthalene	30.0	16.1		ug/L		54	41 - 120	6	55
2-Methylnaphthalene	30.0	15.8		ug/L		53	32 - 124	7	57

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCSD 400-415003/3-A
Matrix: Water
Analysis Batch: 415110

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 415003

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Terphenyl-d14	*58*		*33 - 138*
2-Fluorobiphenyl	*48*		*15 - 122*
Nitrobenzene-d5	*32*		*19 - 130*

Method: 8011 - EDB and DBCP in Water by Microextraction

Lab Sample ID: MB 400-415996/1-A
Matrix: Water
Analysis Batch: 416023

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 415996

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0055	ug/L		10/18/18 14:46	10/19/18 07:07	1
1,2-Dibromoethane	ND		0.020	0.0050	ug/L		10/18/18 14:46	10/19/18 07:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*51 - 149*	*10/18/18 14:46*	*10/19/18 07:07*	*1*

Lab Sample ID: LCS 400-415996/2-A
Matrix: Water
Analysis Batch: 416023

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 415996

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	0.100	0.111		ug/L		111	60 - 140
1,2-Dibromoethane	0.100	0.134		ug/L		134	60 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*110*		*51 - 149*

Lab Sample ID: LCSD 400-415996/3-A
Matrix: Water
Analysis Batch: 416023

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 415996

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane	0.100	0.119		ug/L		119	60 - 140	7	30
1,2-Dibromoethane	0.100	0.135		ug/L		135	60 - 140	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*115*		*51 - 149*

Shell Oil Products US Chain Of Custody Record

AECOM

LAB (LOCATION)

☐ ACCUTEST (_____)
☐ CALSCIENCE (_____)
☑ TESTAMERICA (TestAmerica Pensacola; 3355 McLemore Dr Pensacola, FL 32514 (850-474-1001))
☐ Other Lab Vendor # 1361580 (TestAmerica)

Please Check Appropriate Box:

☐ SGW FDG ☐ PIPELINE ☐ RETAIL
☐ CHEMICALS ☐ CONSULTANT ☐ LUBES
☐ TRANSPORTATION ☑ OTHER ENV. SERVICES

Print Bill To Contact Name: Bob Billman

PlaNet Site or Project ID: 25278

PO #: 60527968 - 01.03.004 | 60527968 - 01.03.0044

GSAP Project ID: USPC/00114/R/02

☐ CHECK IF NO INCIDENT # APPLIES
DATE: 10/08/18
PAGE: 1 of 1

SAMPLING COMPANY: AECOM
LOG CODE:
SITE ADDRESS: Street and City: 900 South Central Ave; ROXANA
State: IL
AECOM Project / Task Number: Roxana Quarterly GW 60527968 - 01.03.004 60527968 - 01.03.0044
ADDRESS: 100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA
LOT OF INTERABLE TO (Name, Company, Office Location):
PHONE NO.:
E-MAIL:
AECOM Offer ID:
PROJECT CONTACT (Hardcopy or PDF Report to): Elizabeth Kunkel, Bob Billman, Melissa Remiger
SAMPLER NAME(S) (Print): B. Howell M. Karrick
LAB USE ONLY
TELEPHONE: 314-429-0100
FAX: 314-429-0462
Info To Contact E-MAIL: bob.billman@aecom.com; elizabeth.kunkel@aecom.com; melissa.remiger@aecom.com

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAY ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ IA - RWQCB REPORT FORMAT

DELIVERABLES: ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
* Please include "J" values on Reports
* Please provide sample receipt upon login

IR8 1.6°C, 4.4°C, 0.3°C, 2.4°C

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE EDD TO:

REQUESTED ANALYSIS

NON-UNIT COST 60527968 - 01.03.004: VOC 8260, SVOC 8270
UNIT COST 60527968 - 01.03.0044: VOC 8011, PAH 8270LL

400-160322 COC

FIELD NOTES:
TEMPERATURE ON RECEIPT C°
Container PID Readings or Laboratory Notes

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VOC 8260	SVOC 8270	VOC 8011	PAH 8270LL
	TB-ROX-100818-8011	10/8/18	0000	Water	2					2			✓	
	TB-ROX-100818-8260		0000		2					2	✓			
	MW4-ROX-100818		0925		4			2		6	✓	✓	✓	✓
	MW25-ROX-100818		1035		4			2		6	✓	✓	✓	✓
	MW8-ROX-100818		1210		4			2		6	✓	✓	✓	✓
	MW8-ROX-100818-DUP		1210		4			2		6	✓	✓	✓	✓
	MW7-ROX-100818		1315		4			2		6	✓	✓	✓	✓

M. Karrick

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Megan Karrick	Fedex: 4535 0239 0729; 4535 0239 0730;	10/08/18	1500
Relinquished by: (Signature)	Received by: (Signature) 4535 0239 0740; 4535 0239 0751	Date	Time
Relinquished by: (Signature)	Received by: (Signature) Jonathan Inman	Date 10.9.18	Time 0854

Version 14Dec15

Custody Seals: 562000, 562001, 562002, 562003, 562004, 562005, 562006, 562007

Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 400-160322-1
SDG Number: 60527968

Login Number: 160322
List Number: 1
Creator: Shannon, Jonathon W

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.6°C, 4.4°C, 0.3°C, 2.4°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160322-1
SDG: 60527968

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-16	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

Roxana Groundwater Quarterly – 4th Quarter 2018 Data Review

Laboratory SDG: 400-160492-1

Data Reviewer: Melissa Remiger

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 11/1/2018

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2017

Sample Identification	Sample Identification
TB-ROX-101118-8011	TB-ROX-101118-8260
P114R-ROX-101118	P114R-ROX-101118-Dup
MW13-ROX-101118	MW11-ROX-101118
MW28-ROX-101118	

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated SVOC LCS/LCSD recoveries for benzenethiol, and several LCS/LCSD RPDs, were outside evaluation criteria. The PAH surrogate recovery for terphenyl-d_{14} was outside criteria in sample P114R-ROX-101118-Dup, and in the PAH method blank. The VOC MS/MSD recoveries, and MS/MSD RPDs, for 2-chloroethyl vinyl ether and bis(2-ethylhexyl)ether were outside evaluation criteria in sample MW28-ROX-101118. The PAH internal standard area recovery for chrysene-d_{12} were outside criteria in sample P114R-ROX-101118-Dup. PAHs in sample P114R-ROX-101118-Dup were diluted due to the nature of the sample matrix. The continuing calibration verifications for several analytes were outside evaluation criteria, biased low. These issues are addressed further in the appropriate sections of this data review.

Three of 69 (2-chloroethyl vinyl ether, acrolein, and acrylonitrile) 8260 VOCs are acid-reactive compounds; results may be biased low due to the presence of HCl in the preservative.

The cooler receipt form did not indicate any problems.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS/LCSD ID	Parameter	Analyte	LCS/ LCSD Recovery	RPD	LCS/LCSD/ RPD Criteria
LCS/LCSD 400-415994/4-A/5-A	SVOCs	Benzenethiol	**2/2**	23	10-120/30
LCS/LCSD 400-415994/2-A/3-A	SVOCs	Hexachlorocyclopentadiene	20/14	**39**	10-129/30
LCS/LCSD 400-416928/2-A/3-A	VOCs by 8011	1,2-Dibromoethane	123/106	**45**	60-140/30

Analytical data that required qualification based on LCS/LCSD data are included in the table below. Professional judgment was used to qualify, however not reject, data associated with benzenethiol in LCS/LCSD 400-415994/4-A/5-A; benzenethiol has been identified as a poor performing analyte under Method 8270. Analytical data associated with RPD alone outside evaluation criteria did not require qualification.

Sample ID	Parameter	Analyte	Qualification
P114R-ROX-101118	SVOCs	Benzenethiol	**UJ**
P114R-ROX-101118-Dup	SVOCs	Benzenethiol	**UJ**
MW13-ROX-101118	SVOCs	Benzenethiol	**UJ**
MW11-ROX-101118	SVOCs	Benzenethiol	**UJ**
MW28-ROX-101118	SVOCs	Benzenethiol	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
P114R-ROX-101118-Dup	SVOCs	Terphenyl-d_{14}	**52**	53-125
MB 400-415994/1-A	PAHs	Terphenyl-d_{14}	**151**	33-138

Qualifications due to surrogate recoveries were not required if only one of three base/neutral fraction surrogate recoveries were outside evaluation criteria in the associated SVOC samples. Quality control samples do not require qualification. No qualification of data was required.

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

Yes, sample MW28-ROX-101118 was spiked and duplicated for Method 8260 VOCs, Method 8011 VOCs, and Method 8270 SVOCs/PAHs.

Were MS/MSD recoveries within evaluation criteria?

No

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
MW28-ROX-101118	VOCs	2-Chloroethyl vinyl ether	**8/0**	**NC**	10-150/50
MW28-ROX-101118	SVOCs	bis(2-Ethylhexyl) phthalate	**35/40**	7	43-160/35

Analytical data that required qualification based on MS/MSD data are included in the table below.

Sample ID	Parameter	Analyte	Qualification
MW28-ROX-101118	VOCs	2-Chloroethyl vinyl ether	**UJ**
MW28-ROX-101118	SVOCs	bis(2-Ethylhexyl) phthalate	**J**

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

No

Sample ID	Parameter	Analyte	IS Area Recovery	IS Criteria
P114R-ROX-101118-Dup	PAHs	Chrysene-d_{12}	**844809**	207275-829098

Analytical data reported as non-detect and associated with internal standard recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. No qualification of data was required.

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
P114R-ROX-101118	P114R-ROX-101118-Dup

Were field duplicates within evaluation criteria?

Yes

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; samples analyzed did not require dilution, with the exception of PAHs in sample P114R-ROX-101118-Dup due to the nature of the sample matrix. PAHs were non-detect at a dilution factor of 2X, with a raised reporting limits of 0.39 µg/L, which is below project screening criteria. No qualification of data was required.

12.0 Additional Qualifications

Were additional qualifications applied?

Yes, the continuing calibration verification for several analytes were below acceptance criteria and are qualified as summarized in the following table.

Sample ID	Parameter	Analyte	Qualification
P114R-ROX-101118	SVOCs	Aniline	UJ
P114R-ROX-101118	SVOCs	Benzyl alcohol	UJ
P114R-ROX-101118	SVOCs	bis(2-Chloroethoxy)methane	UJ
P114R-ROX-101118	SVOCs	1,4-Dioxane	UJ
P114R-ROX-101118	SVOCs	1,2-Diphenylhydrazine (as Azobenzene)	UJ
P114R-ROX-101118	SVOCs	Isophorone	UJ
P114R-ROX-101118	SVOCs	Nitrobenzene	UJ
P114R-ROX-101118	SVOCs	n-Nitrosodi-n-propylamine	UJ
P114R-ROX-101118	SVOCs	Phenol	UJ
P114R-ROX-101118	SVOCs	Pyridine	UJ
P114R-ROX-101118-Dup	SVOCs	Aniline	UJ
P114R-ROX-101118-Dup	SVOCs	Benzyl alcohol	UJ
P114R-ROX-101118-Dup	SVOCs	bis(2-Chloroethoxy)methane	UJ
P114R-ROX-101118-Dup	SVOCs	1,4-Dioxane	UJ
P114R-ROX-101118-Dup	SVOCs	1,2-Diphenylhydrazine (as Azobenzene)	UJ
P114R-ROX-101118-Dup	SVOCs	Isophorone	UJ
P114R-ROX-101118-Dup	SVOCs	Nitrobenzene	UJ
P114R-ROX-101118-Dup	SVOCs	n-Nitrosodi-n-propylamine	UJ
P114R-ROX-101118-Dup	SVOCs	Phenol	UJ
P114R-ROX-101118-Dup	SVOCs	Pyridine	UJ
MW13-ROX-101118	SVOCs	Aniline	UJ
MW13-ROX-101118	SVOCs	Benzyl alcohol	UJ
MW13-ROX-101118	SVOCs	bis(2-Chloroethoxy)methane	UJ
MW13-ROX-101118	SVOCs	1,4-Dioxane	UJ
MW13-ROX-101118	SVOCs	1,2-Diphenylhydrazine (as Azobenzene)	UJ
MW13-ROX-101118	SVOCs	Isophorone	UJ
MW13-ROX-101118	SVOCs	Nitrobenzene	UJ
MW13-ROX-101118	SVOCs	n-Nitrosodi-n-propylamine	UJ
MW13-ROX-101118	SVOCs	Phenol	UJ
MW13-ROX-101118	SVOCs	Pyridine	UJ
MW11-ROX-101118	SVOCs	Aniline	UJ
MW11-ROX-101118	SVOCs	Benzyl alcohol	UJ
MW11-ROX-101118	SVOCs	bis(2-Chloroethoxy)methane	UJ
MW11-ROX-101118	SVOCs	1,4-Dioxane	UJ
MW11-ROX-101118	SVOCs	1,2-Diphenylhydrazine (as Azobenzene)	UJ
MW11-ROX-101118	SVOCs	Isophorone	UJ
MW11-ROX-101118	SVOCs	Nitrobenzene	UJ

Sample ID	Parameter	Analyte	Qualification
MW11-ROX-101118	SVOCs	n-Nitrosodi-n-propylamine	**UJ**
MW11-ROX-101118	SVOCs	Phenol	**UJ**
MW11-ROX-101118	SVOCs	Pyridine	**UJ**
MW28-ROX-101118	SVOCs	Aniline	**UJ**
MW28-ROX-101118	SVOCs	Benzyl alcohol	**UJ**
MW28-ROX-101118	SVOCs	bis(2-Chloroethoxy)methane	**UJ**
MW28-ROX-101118	SVOCs	1,4-Dioxane	**UJ**
MW28-ROX-101118	SVOCs	1,2-Diphenylhydrazine (as Azobenzene)	**UJ**
MW28-ROX-101118	SVOCs	Isophorone	**UJ**
MW28-ROX-101118	SVOCs	Nitrobenzene	**UJ**
MW28-ROX-101118	SVOCs	n-Nitrosodi-n-propylamine	**UJ**
MW28-ROX-101118	SVOCs	Phenol	**UJ**
MW28-ROX-101118	SVOCs	Pyridine	**UJ**

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-160492-1
Client Project/Site: ROXANA QUARTERLY

For:
AECOM Technical Services Inc.
100 N. Broadway
20th Floor
St. Louis, Missouri 63102

Attn: Elizabeth Kunkel

Authorized for release by:
10/31/2018 4:49:05 PM

Leah Klingensmith, Senior Project Manager
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Reviewed 11/1/18 LR

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-160492-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-160492-1

Comments
No additional comments.

Receipt
The samples were received on 10/12/2018 8:41 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 0.5° C, 1.3° C, 3.1° C and 3.2° C.

GC/MS VOA
Method(s) 8260B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 400-416685 were outside control limits for 2-Chloroethyl vinyl ether due to the acidic nature of the parent sample.

Method(s) 8260B: The RPD for the matrix spike / matrix spike duplicate (MS/MSD) for 2-Chloroethyl vinyl ether was not calculable for analytical batch 400-416685 because the recoveries were below the reporting limit due to the acidic nature of the parent sample.

Method(s) 8260B: The preservative used in the sample containers provided is not compatible with some of the Method 8260 analytes requested. The following samples were received preserved with hydrochloric acid: TB-ROX-101118-8260 (400-160492-2), P114R-ROX-101118 (400-160492-3), P114R-ROX-101118-DUP (400-160492-4), MW13-ROX-101118 (400-160492-5), MW11-ROX-101118 (400-160492-6) and MW28-ROX-101118 (400-160492-7). The requested target analyte list includes 2-chloroethyl vinyl ether, Acrolein and Acrylonitrile, which are acid-labile compounds that degrade in an acidic medium.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270D LL: Three surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: (MB 400-415994/1-A). These results have been reported and qualified.

Method(s) 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 400-415994 and analytical batch 400-416437 recovered outside control limits for the following analytes: Hexachlorocyclopentadiene.

Method(s) 8270D: Six surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: P114R-ROX-101118-DUP (400-160492-4). These results have been reported and qualified.

Method(s) 8270D: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 400-415994 and analytical batch 400-416437 recovered outside control limits for the following analyte(s): Benzenethiol. Benzenethiol has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. Batch precision also exceeded control limits for these analyte(s). These results have been reported and qualified.

Method(s) 8270D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 400-415994 and analytical batch 400-416437 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 400-416437 recovered above the upper control limit for Hexachlorobenzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: P114R-ROX-101118 (400-160492-3), P114R-ROX-101118-DUP (400-160492-4), MW13-ROX-101118 (400-160492-5), MW11-ROX-101118 (400-160492-6), MW28-ROX-101118 (400-160492-7) and (MB 400-415994/1-A).

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 400-416437 recovered outside acceptance criteria, low biased, for Nitrobenzene, Isophorone, N-Nitrosodi-n-propylamine, Aniline, 1,4-Dioxane, Pyridine, Phenol, Benzyl alcohol, Bis(2-chloroethoxy)methane and 1,2-Diphenylhydrazine (as Azobenzene). A reporting limit (RL) standard was analyzed, and the target

Job ID: 400-160492-1 (Continued)

Laboratory: TestAmerica Pensacola (Continued)

analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method(s) 8270D: Sample MW28-ROX-101118 (400-160492-7) was reanalyzed with concurring results for Bis(2-ethylhexyl) phthalate.

Method(s) 8270D LL: The following sample was diluted due to the nature of the sample matrix: P114R-ROX-101118-DUP (400-160492-4). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method(s) 8011: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 400-416928 and analytical batch 400-417027 recovered outside control limits for the following analytes: 1,2-Dibromoethane. Individual recoveries are passing.

Method(s) 8011: The continuing calibration verification (CCV) associated with batch 400-417027 recovered above the upper control limit for 1,2-Dibromoethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: TB-ROX-101118-8011 (400-160492-1), P114R-ROX-101118 (400-160492-3), P114R-ROX-101118-DUP (400-160492-4), MW13-ROX-101118 (400-160492-5), MW11-ROX-101118 (400-160492-6) and MW28-ROX-101118 (400-160492-7).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160492-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-160492-1	TB-ROX-101118-8011	Water	10/11/18 00:00	10/12/18 08:41
400-160492-2	TB-ROX-101118-8260	Water	10/11/18 00:00	10/12/18 08:41
400-160492-3	P114R-ROX-101118	Water	10/11/18 09:30	10/12/18 08:41
400-160492-4	P114R-ROX-101118-DUP	Water	10/11/18 09:30	10/12/18 08:41
400-160492-5	MW13-ROX-101118	Water	10/11/18 10:40	10/12/18 08:41
400-160492-6	MW11-ROX-101118	Water	10/11/18 12:15	10/12/18 08:41
400-160492-7	MW28-ROX-101118	Water	10/11/18 13:20	10/12/18 08:41

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160492-1

Client Sample ID: TB-ROX-101118-8011 — Lab Sample ID: 400-160492-1

No Detections.

Client Sample ID: TB-ROX-101118-8260 — Lab Sample ID: 400-160492-2

No Detections.

Client Sample ID: P114R-ROX-101118 — Lab Sample ID: 400-160492-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	0.82	J	1.0	0.74	ug/L	1		8260B	Total/NA

Client Sample ID: P114R-ROX-101118-DUP — Lab Sample ID: 400-160492-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	0.90	J	1.0	0.74	ug/L	1		8260B	Total/NA
Anthracene	0.055	J	0.20	0.020	ug/L	1		8270D LL	Total/NA

Client Sample ID: MW13-ROX-101118 — Lab Sample ID: 400-160492-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	3.3		1.0	0.74	ug/L	1		8260B	Total/NA

Client Sample ID: MW11-ROX-101118 — Lab Sample ID: 400-160492-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bis(2-ethylhexyl) phthalate	8.6	J	9.8	2.2	ug/L	1		8270D	Total/NA

Client Sample ID: MW28-ROX-101118 — Lab Sample ID: 400-160492-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.6		1.0	0.38	ug/L	1		8260B	Total/NA
Methyl tert-butyl ether	5.0		1.0	0.74	ug/L	1		8260B	Total/NA
1-Methylnaphthalene	0.039	J	0.20	0.020	ug/L	1		8270D LL	Total/NA
Bis(2-ethylhexyl) phthalate	10	F1 J	9.8	2.2	ug/L	1		8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160492-1

Client Sample ID: TB-ROX-101118-8011
Date Collected: 10/11/18 00:00
Date Received: 10/12/18 08:41

Lab Sample ID: 400-160492-1
Matrix: Water

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.031	0.0057	ug/L		10/25/18 11:28	10/25/18 22:11	1
1,2-Dibromoethane	ND	*	0.021	0.0052	ug/L		10/25/18 11:28	10/25/18 22:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*	*p*	*51 - 149*	*10/25/18 11:28*	*10/25/18 22:11*	*1*

Client Sample ID: TB-ROX-101118-8260
Date Collected: 10/11/18 00:00
Date Received: 10/12/18 08:41

Lab Sample ID: 400-160492-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/24/18 18:20	1
Acrolein	ND		20	10	ug/L			10/24/18 18:20	1
Acrylonitrile	ND		10	2.8	ug/L			10/24/18 18:20	1
Benzene	ND		1.0	0.38	ug/L			10/24/18 18:20	1
Bromobenzene	ND		1.0	0.54	ug/L			10/24/18 18:20	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/24/18 18:20	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/24/18 18:20	1
Bromoform	ND		5.0	0.71	ug/L			10/24/18 18:20	1
Bromomethane	ND		1.0	0.98	ug/L			10/24/18 18:20	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/24/18 18:20	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/24/18 18:20	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/24/18 18:20	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/24/18 18:20	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/24/18 18:20	1
Chloroethane	ND		1.0	0.76	ug/L			10/24/18 18:20	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/24/18 18:20	1
Chloroform	ND		1.0	0.60	ug/L			10/24/18 18:20	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/24/18 18:20	1
Chloromethane	ND		1.0	0.83	ug/L			10/24/18 18:20	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/24/18 18:20	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/24/18 18:20	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/24/18 18:20	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/24/18 18:20	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/24/18 18:20	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/24/18 18:20	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/24/18 18:20	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/24/18 18:20	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/24/18 18:20	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/24/18 18:20	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/24/18 18:20	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/24/18 18:20	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/24/18 18:20	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/24/18 18:20	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/24/18 18:20	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/24/18 18:20	1
2-Hexanone	ND		25	3.1	ug/L			10/24/18 18:20	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/24/18 18:20	1
Methylene bromide	ND		5.0	0.59	ug/L			10/24/18 18:20	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/24/18 18:20	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/24/18 18:20	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/24/18 18:20	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/24/18 18:20	1
Naphthalene	ND		1.0	1.0	ug/L			10/24/18 18:20	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/24/18 18:20	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/24/18 18:20	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/24/18 18:20	1
o-Xylene	ND		5.0	0.60	ug/L			10/24/18 18:20	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/24/18 18:20	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/24/18 18:20	1

Client Sample ID: TB-ROX-101118-8260
Date Collected: 10/11/18 00:00
Date Received: 10/12/18 08:41

Lab Sample ID: 400-160492-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/24/18 18:20	1
Styrene	ND		1.0	1.0	ug/L			10/24/18 18:20	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/24/18 18:20	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/24/18 18:20	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/24/18 18:20	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/24/18 18:20	1
Toluene	ND		1.0	0.70	ug/L			10/24/18 18:20	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/24/18 18:20	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/24/18 18:20	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/24/18 18:20	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/24/18 18:20	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/24/18 18:20	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/24/18 18:20	1
Trichloroethene	ND		1.0	0.50	ug/L			10/24/18 18:20	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/24/18 18:20	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/24/18 18:20	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/24/18 18:20	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/24/18 18:20	1
Vinyl acetate	ND		25	2.0	ug/L			10/24/18 18:20	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/24/18 18:20	1
Xylenes, Total	ND		10	1.6	ug/L			10/24/18 18:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*78 - 118*		*10/24/18 18:20*	*1*
Dibromofluoromethane	*97*		*81 - 121*		*10/24/18 18:20*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*10/24/18 18:20*	*1*

Client Sample ID: P114R-ROX-101118
Date Collected: 10/11/18 09:30
Date Received: 10/12/18 08:41

Lab Sample ID: 400-160492-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/24/18 09:52	1
Acrolein	ND		20	10	ug/L			10/24/18 09:52	1
Acrylonitrile	ND		10	2.8	ug/L			10/24/18 09:52	1
Benzene	ND		1.0	0.38	ug/L			10/24/18 09:52	1
Bromobenzene	ND		1.0	0.54	ug/L			10/24/18 09:52	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/24/18 09:52	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/24/18 09:52	1
Bromoform	ND		5.0	0.71	ug/L			10/24/18 09:52	1
Bromomethane	ND		1.0	0.98	ug/L			10/24/18 09:52	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/24/18 09:52	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/24/18 09:52	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/24/18 09:52	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/24/18 09:52	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/24/18 09:52	1
Chloroethane	ND		1.0	0.76	ug/L			10/24/18 09:52	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/24/18 09:52	1
Chloroform	ND		1.0	0.60	ug/L			10/24/18 09:52	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/24/18 09:52	1
Chloromethane	ND		1.0	0.83	ug/L			10/24/18 09:52	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/24/18 09:52	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/24/18 09:52	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/24/18 09:52	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/24/18 09:52	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/24/18 09:52	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/24/18 09:52	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/24/18 09:52	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/24/18 09:52	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/24/18 09:52	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/24/18 09:52	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/24/18 09:52	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/24/18 09:52	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/24/18 09:52	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/24/18 09:52	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/24/18 09:52	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/24/18 09:52	1
2-Hexanone	ND		25	3.1	ug/L			10/24/18 09:52	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/24/18 09:52	1
Methylene bromide	ND		5.0	0.59	ug/L			10/24/18 09:52	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/24/18 09:52	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/24/18 09:52	1
Methyl tert-butyl ether	0.82	J	1.0	0.74	ug/L			10/24/18 09:52	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/24/18 09:52	1
Naphthalene	ND		1.0	1.0	ug/L			10/24/18 09:52	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/24/18 09:52	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/24/18 09:52	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/24/18 09:52	1
o-Xylene	ND		5.0	0.60	ug/L			10/24/18 09:52	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/24/18 09:52	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/24/18 09:52	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160492-1

Client Sample ID: P114R-ROX-101118
Date Collected: 10/11/18 09:30
Date Received: 10/12/18 08:41

Lab Sample ID: 400-160492-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/24/18 09:52	1
Styrene	ND		1.0	1.0	ug/L			10/24/18 09:52	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/24/18 09:52	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/24/18 09:52	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/24/18 09:52	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/24/18 09:52	1
Toluene	ND		1.0	0.70	ug/L			10/24/18 09:52	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/24/18 09:52	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/24/18 09:52	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/24/18 09:52	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/24/18 09:52	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/24/18 09:52	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/24/18 09:52	1
Trichloroethene	ND		1.0	0.50	ug/L			10/24/18 09:52	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/24/18 09:52	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/24/18 09:52	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/24/18 09:52	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/24/18 09:52	1
Vinyl acetate	ND		25	2.0	ug/L			10/24/18 09:52	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/24/18 09:52	1
Xylenes, Total	ND		10	1.6	ug/L			10/24/18 09:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*		*78 - 118*		*10/24/18 09:52*	*1*
Dibromofluoromethane	*95*		*81 - 121*		*10/24/18 09:52*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*10/24/18 09:52*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/18/18 17:11	10/23/18 01:25	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/18/18 17:11	10/23/18 01:25	1
Anthracene	ND		0.20	0.020	ug/L		10/18/18 17:11	10/23/18 01:25	1
Benzo[a]anthracene	ND		0.20	0.039	ug/L		10/18/18 17:11	10/23/18 01:25	1
Benzo[a]pyrene	ND		0.20	0.039	ug/L		10/18/18 17:11	10/23/18 01:25	1
Benzo[b]fluoranthene	ND		0.20	0.039	ug/L		10/18/18 17:11	10/23/18 01:25	1
Benzo[g,h,i]perylene	ND		0.20	0.039	ug/L		10/18/18 17:11	10/23/18 01:25	1
Benzo[k]fluoranthene	ND		0.20	0.039	ug/L		10/18/18 17:11	10/23/18 01:25	1
Chrysene	ND		0.20	0.039	ug/L		10/18/18 17:11	10/23/18 01:25	1
Dibenz(a,h)anthracene	ND		0.20	0.039	ug/L		10/18/18 17:11	10/23/18 01:25	1
Fluoranthene	ND		0.20	0.020	ug/L		10/18/18 17:11	10/23/18 01:25	1
Fluorene	ND		0.20	0.021	ug/L		10/18/18 17:11	10/23/18 01:25	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.039	ug/L		10/18/18 17:11	10/23/18 01:25	1
Phenanthrene	ND		0.20	0.020	ug/L		10/18/18 17:11	10/23/18 01:25	1
Pyrene	ND		0.20	0.020	ug/L		10/18/18 17:11	10/23/18 01:25	1
1-Methylnaphthalene	ND		0.20	0.020	ug/L		10/18/18 17:11	10/23/18 01:25	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		10/18/18 17:11	10/23/18 01:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*84*		*33 - 138*	*10/18/18 17:11*	*10/23/18 01:25*	*1*
2-Fluorobiphenyl	*73*		*15 - 122*	*10/18/18 17:11*	*10/23/18 01:25*	*1*

Client Sample ID: P114R-ROX-101118

Date Collected: 10/11/18 09:30
Date Received: 10/12/18 08:41

Lab Sample ID: 400-160492-3
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	69		19 - 130	10/18/18 17:11	10/23/18 01:25	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND	UJ	9.8	3.7	ug/L		10/18/18 17:11	10/22/18 19:23	1
Benzenethiol	ND	* UJ	9.8	1.7	ug/L		10/18/18 17:11	10/22/18 19:23	1
Benzoic acid	ND		30	7.2	ug/L		10/18/18 17:11	10/22/18 19:23	1
Benzyl alcohol	ND	UJ	9.8	2.0	ug/L		10/18/18 17:11	10/22/18 19:23	1
Bis(2-chloroethoxy)methane	ND	UJ	9.8	0.68	ug/L		10/18/18 17:11	10/22/18 19:23	1
Bis(2-chloroethyl)ether	ND		9.8	0.73	ug/L		10/18/18 17:11	10/22/18 19:23	1
bis (2-chloroisopropyl) ether	ND		9.8	0.80	ug/L		10/18/18 17:11	10/22/18 19:23	1
Bis(2-ethylhexyl) phthalate	ND		9.8	2.2	ug/L		10/18/18 17:11	10/22/18 19:23	1
4-Bromophenyl phenyl ether	ND		9.8	0.31	ug/L		10/18/18 17:11	10/22/18 19:23	1
Butyl benzyl phthalate	ND		9.8	0.68	ug/L		10/18/18 17:11	10/22/18 19:23	1
4-Chloroaniline	ND		9.8	3.3	ug/L		10/18/18 17:11	10/22/18 19:23	1
4-Chloro-3-methylphenol	ND		9.8	3.7	ug/L		10/18/18 17:11	10/22/18 19:23	1
2-Chloronaphthalene	ND		9.8	0.51	ug/L		10/18/18 17:11	10/22/18 19:23	1
2-Chlorophenol	ND		9.8	2.2	ug/L		10/18/18 17:11	10/22/18 19:23	1
4-Chlorophenyl phenyl ether	ND		9.8	2.0	ug/L		10/18/18 17:11	10/22/18 19:23	1
Dibenz[a,h]acridine	ND		9.8	3.0	ug/L		10/18/18 17:11	10/22/18 19:23	1
Dibenzofuran	ND		9.8	0.51	ug/L		10/18/18 17:11	10/22/18 19:23	1
3,3'-Dichlorobenzidine	ND		9.8	2.6	ug/L		10/18/18 17:11	10/22/18 19:23	1
2,4-Dichlorophenol	ND		9.8	3.0	ug/L		10/18/18 17:11	10/22/18 19:23	1
Diethyl phthalate	ND		9.8	0.69	ug/L		10/18/18 17:11	10/22/18 19:23	1
2,4-Dimethylphenol	ND		9.8	3.4	ug/L		10/18/18 17:11	10/22/18 19:23	1
Dimethyl phthalate	ND		9.8	0.59	ug/L		10/18/18 17:11	10/22/18 19:23	1
Di-n-butyl phthalate	ND		9.8	2.7	ug/L		10/18/18 17:11	10/22/18 19:23	1
4,6-Dinitro-ortho-cresol	ND		9.8	2.0	ug/L		10/18/18 17:11	10/22/18 19:23	1
2,4-Dinitrophenol	ND		30	3.3	ug/L		10/18/18 17:11	10/22/18 19:23	1
2,4-Dinitrotoluene	ND		9.8	1.9	ug/L		10/18/18 17:11	10/22/18 19:23	1
2,6-Dinitrotoluene	ND		9.8	1.9	ug/L		10/18/18 17:11	10/22/18 19:23	1
Di-n-octyl phthalate	ND		9.8	0.43	ug/L		10/18/18 17:11	10/22/18 19:23	1
1,4-Dioxane	ND	UJ	9.8	0.98	ug/L		10/18/18 17:11	10/22/18 19:23	1
1,2-Diphenylhydrazine (as Azobenzene)	ND	UJ	9.8	0.98	ug/L		10/18/18 17:11	10/22/18 19:23	1
Hexachlorobenzene	ND		9.8	0.25	ug/L		10/18/18 17:11	10/22/18 19:23	1
Hexachlorocyclopentadiene	ND	*	20	2.6	ug/L		10/18/18 17:11	10/22/18 19:23	1
Hexachloroethane	ND		9.8	4.1	ug/L		10/18/18 17:11	10/22/18 19:23	1
Indene	ND		9.8	0.98	ug/L		10/18/18 17:11	10/22/18 19:23	1
Isophorone	ND	UJ	9.8	0.56	ug/L		10/18/18 17:11	10/22/18 19:23	1
2-Methylphenol	ND		9.8	1.8	ug/L		10/18/18 17:11	10/22/18 19:23	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/18/18 17:11	10/22/18 19:23	1
2-Nitroaniline	ND		9.8	2.2	ug/L		10/18/18 17:11	10/22/18 19:23	1
3-Nitroaniline	ND		9.8	1.8	ug/L		10/18/18 17:11	10/22/18 19:23	1
4-Nitroaniline	ND		9.8	2.4	ug/L		10/18/18 17:11	10/22/18 19:23	1
Nitrobenzene	ND	UJ	9.8	0.54	ug/L		10/18/18 17:11	10/22/18 19:23	1
2-Nitrophenol	ND		9.8	0.64	ug/L		10/18/18 17:11	10/22/18 19:23	1
4-Nitrophenol	ND		9.8	2.1	ug/L		10/18/18 17:11	10/22/18 19:23	1
N-Nitrosodimethylamine	ND		9.8	3.4	ug/L		10/18/18 17:11	10/22/18 19:23	1

Client Sample ID: P114R-ROX-101118

Lab Sample ID: 400-160492-3

Date Collected: 10/11/18 09:30
Date Received: 10/12/18 08:41

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND	UJ	9.8	3.2	ug/L		10/18/18 17:11	10/22/18 19:23	1
N-Nitrosodiphenylamine	ND		9.8	0.46	ug/L		10/18/18 17:11	10/22/18 19:23	1
Pentachlorophenol	ND		20	1.8	ug/L		10/18/18 17:11	10/22/18 19:23	1
Phenol	ND	UJ	9.8	2.6	ug/L		10/18/18 17:11	10/22/18 19:23	1
Pyridine	ND	UJ	9.8	3.1	ug/L		10/18/18 17:11	10/22/18 19:23	1
Quinoline	ND		9.8	5.9	ug/L		10/18/18 17:11	10/22/18 19:23	1
2,4,5-Trichlorophenol	ND		9.8	3.6	ug/L		10/18/18 17:11	10/22/18 19:23	1
2,4,6-Trichlorophenol	ND		9.8	3.4	ug/L		10/18/18 17:11	10/22/18 19:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*51*		*34 - 120*	*10/18/18 17:11*	*10/22/18 19:23*	*1*
2-Fluorophenol	*41*		*10 - 120*	*10/18/18 17:11*	*10/22/18 19:23*	*1*
Nitrobenzene-d5	*48*		*27 - 120*	*10/18/18 17:11*	*10/22/18 19:23*	*1*
Phenol-d5	*48*		*10 - 120*	*10/18/18 17:11*	*10/22/18 19:23*	*1*
Terphenyl-d14	*53*		*53 - 125*	*10/18/18 17:11*	*10/22/18 19:23*	*1*
2,4,6-Tribromophenol	*96*		*15 - 135*	*10/18/18 17:11*	*10/22/18 19:23*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.031	0.0056	ug/L		10/25/18 11:28	10/25/18 22:42	1
1,2-Dibromoethane	ND	*	0.020	0.0051	ug/L		10/25/18 11:28	10/25/18 22:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*113*	*p*	*51 - 149*	*10/25/18 11:28*	*10/25/18 22:42*	*1*

Client Sample ID: P114R-ROX-101118-DUP
Date Collected: 10/11/18 09:30
Date Received: 10/12/18 08:41

Lab Sample ID: 400-160492-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/24/18 21:55	1
Acrolein	ND		20	10	ug/L			10/24/18 21:55	1
Acrylonitrile	ND		10	2.8	ug/L			10/24/18 21:55	1
Benzene	ND		1.0	0.38	ug/L			10/24/18 21:55	1
Bromobenzene	ND		1.0	0.54	ug/L			10/24/18 21:55	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/24/18 21:55	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/24/18 21:55	1
Bromoform	ND		5.0	0.71	ug/L			10/24/18 21:55	1
Bromomethane	ND		1.0	0.98	ug/L			10/24/18 21:55	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/24/18 21:55	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/24/18 21:55	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/24/18 21:55	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/24/18 21:55	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/24/18 21:55	1
Chloroethane	ND		1.0	0.76	ug/L			10/24/18 21:55	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/24/18 21:55	1
Chloroform	ND		1.0	0.60	ug/L			10/24/18 21:55	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/24/18 21:55	1
Chloromethane	ND		1.0	0.83	ug/L			10/24/18 21:55	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/24/18 21:55	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/24/18 21:55	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/24/18 21:55	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/24/18 21:55	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/24/18 21:55	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/24/18 21:55	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/24/18 21:55	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/24/18 21:55	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/24/18 21:55	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/24/18 21:55	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/24/18 21:55	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/24/18 21:55	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/24/18 21:55	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/24/18 21:55	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/24/18 21:55	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/24/18 21:55	1
2-Hexanone	ND		25	3.1	ug/L			10/24/18 21:55	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/24/18 21:55	1
Methylene bromide	ND		5.0	0.59	ug/L			10/24/18 21:55	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/24/18 21:55	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/24/18 21:55	1
Methyl tert-butyl ether	0.90	J	1.0	0.74	ug/L			10/24/18 21:55	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/24/18 21:55	1
Naphthalene	ND		1.0	1.0	ug/L			10/24/18 21:55	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/24/18 21:55	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/24/18 21:55	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/24/18 21:55	1
o-Xylene	ND		5.0	0.60	ug/L			10/24/18 21:55	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/24/18 21:55	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/24/18 21:55	1

Client Sample ID: P114R-ROX-101118-DUP

Lab Sample ID: 400-160492-4

Date Collected: 10/11/18 09:30
Date Received: 10/12/18 08:41

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/24/18 21:55	1
Styrene	ND		1.0	1.0	ug/L			10/24/18 21:55	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/24/18 21:55	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/24/18 21:55	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/24/18 21:55	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/24/18 21:55	1
Toluene	ND		1.0	0.70	ug/L			10/24/18 21:55	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/24/18 21:55	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/24/18 21:55	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/24/18 21:55	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/24/18 21:55	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/24/18 21:55	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/24/18 21:55	1
Trichloroethene	ND		1.0	0.50	ug/L			10/24/18 21:55	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/24/18 21:55	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/24/18 21:55	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/24/18 21:55	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/24/18 21:55	1
Vinyl acetate	ND		25	2.0	ug/L			10/24/18 21:55	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/24/18 21:55	1
Xylenes, Total	ND		10	1.6	ug/L			10/24/18 21:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*78 - 118*		*10/24/18 21:55*	*1*
Dibromofluoromethane	*99*		*81 - 121*		*10/24/18 21:55*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*10/24/18 21:55*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/22/18 23:03	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/22/18 23:03	1
Anthracene	0.055	J	0.20	0.020	ug/L		10/18/18 14:42	10/22/18 23:03	1
Benzo[a]pyrene	ND		0.20	0.039	ug/L		10/18/18 14:42	10/22/18 23:03	1
Benzo[b]fluoranthene	ND		0.20	0.039	ug/L		10/18/18 14:42	10/22/18 23:03	1
Benzo[g,h,i]perylene	ND		0.20	0.039	ug/L		10/18/18 14:42	10/22/18 23:03	1
Benzo[k]fluoranthene	ND		0.20	0.039	ug/L		10/18/18 14:42	10/22/18 23:03	1
Dibenz(a,h)anthracene	ND		0.20	0.039	ug/L		10/18/18 14:42	10/22/18 23:03	1
Fluoranthene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/22/18 23:03	1
Fluorene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/22/18 23:03	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.039	ug/L		10/18/18 14:42	10/22/18 23:03	1
Phenanthrene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/22/18 23:03	1
1-Methylnaphthalene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/22/18 23:03	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/22/18 23:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*70*		*15 - 122*	*10/18/18 14:42*	*10/22/18 23:03*	*1*
Nitrobenzene-d5	*63*		*19 - 130*	*10/18/18 14:42*	*10/22/18 23:03*	*1*

Client Sample ID: P114R-ROX-101118-DUP

Date Collected: 10/11/18 09:30
Date Received: 10/12/18 08:41

Lab Sample ID: 400-160492-4
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.39	0.078	ug/L		10/18/18 14:42	10/23/18 16:11	2
Chrysene	ND		0.39	0.078	ug/L		10/18/18 14:42	10/23/18 16:11	2
Pyrene	ND		0.39	0.039	ug/L		10/18/18 14:42	10/23/18 16:11	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*68*		*33 - 138*	*10/18/18 14:42*	*10/23/18 16:11*	*2*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND	UJ	9.8	3.7	ug/L		10/18/18 14:42	10/22/18 19:44	1
Benzenethiol	ND	* UJ	9.8	1.7	ug/L		10/18/18 14:42	10/22/18 19:44	1
Benzoic acid	ND		29	7.1	ug/L		10/18/18 14:42	10/22/18 19:44	1
Benzyl alcohol	ND	UJ	9.8	2.0	ug/L		10/18/18 14:42	10/22/18 19:44	1
Bis(2-chloroethoxy)methane	ND	UJ	9.8	0.67	ug/L		10/18/18 14:42	10/22/18 19:44	1
Bis(2-chloroethyl)ether	ND		9.8	0.72	ug/L		10/18/18 14:42	10/22/18 19:44	1
bis (2-chloroisopropyl) ether	ND		9.8	0.79	ug/L		10/18/18 14:42	10/22/18 19:44	1
Bis(2-ethylhexyl) phthalate	ND		9.8	2.2	ug/L		10/18/18 14:42	10/22/18 19:44	1
4-Bromophenyl phenyl ether	ND		9.8	0.31	ug/L		10/18/18 14:42	10/22/18 19:44	1
Butyl benzyl phthalate	ND		9.8	0.67	ug/L		10/18/18 14:42	10/22/18 19:44	1
4-Chloroaniline	ND		9.8	3.3	ug/L		10/18/18 14:42	10/22/18 19:44	1
4-Chloro-3-methylphenol	ND		9.8	3.7	ug/L		10/18/18 14:42	10/22/18 19:44	1
2-Chloronaphthalene	ND		9.8	0.51	ug/L		10/18/18 14:42	10/22/18 19:44	1
2-Chlorophenol	ND		9.8	2.1	ug/L		10/18/18 14:42	10/22/18 19:44	1
4-Chlorophenyl phenyl ether	ND		9.8	2.0	ug/L		10/18/18 14:42	10/22/18 19:44	1
Dibenz[a,h]acridine	ND		9.8	2.9	ug/L		10/18/18 14:42	10/22/18 19:44	1
Dibenzofuran	ND		9.8	0.51	ug/L		10/18/18 14:42	10/22/18 19:44	1
3,3'-Dichlorobenzidine	ND		9.8	2.5	ug/L		10/18/18 14:42	10/22/18 19:44	1
2,4-Dichlorophenol	ND		9.8	2.9	ug/L		10/18/18 14:42	10/22/18 19:44	1
Diethyl phthalate	ND		9.8	0.68	ug/L		10/18/18 14:42	10/22/18 19:44	1
2,4-Dimethylphenol	ND		9.8	3.4	ug/L		10/18/18 14:42	10/22/18 19:44	1
Dimethyl phthalate	ND		9.8	0.59	ug/L		10/18/18 14:42	10/22/18 19:44	1
Di-n-butyl phthalate	ND		9.8	2.6	ug/L		10/18/18 14:42	10/22/18 19:44	1
4,6-Dinitro-ortho-cresol	ND		9.8	2.0	ug/L		10/18/18 14:42	10/22/18 19:44	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		10/18/18 14:42	10/22/18 19:44	1
2,4-Dinitrotoluene	ND		9.8	1.9	ug/L		10/18/18 14:42	10/22/18 19:44	1
2,6-Dinitrotoluene	ND		9.8	1.9	ug/L		10/18/18 14:42	10/22/18 19:44	1
Di-n-octyl phthalate	ND		9.8	0.43	ug/L		10/18/18 14:42	10/22/18 19:44	1
1,4-Dioxane	ND	UJ	9.8	0.98	ug/L		10/18/18 14:42	10/22/18 19:44	1
1,2-Diphenylhydrazine (as Azobenzene)	ND	UJ	9.8	0.98	ug/L		10/18/18 14:42	10/22/18 19:44	1
Hexachlorobenzene	ND		9.8	0.24	ug/L		10/18/18 14:42	10/22/18 19:44	1
Hexachlorocyclopentadiene	ND	*	20	2.5	ug/L		10/18/18 14:42	10/22/18 19:44	1
Hexachloroethane	ND		9.8	4.1	ug/L		10/18/18 14:42	10/22/18 19:44	1
Indene	ND		9.8	0.98	ug/L		10/18/18 14:42	10/22/18 19:44	1
Isophorone	ND	UJ	9.8	0.56	ug/L		10/18/18 14:42	10/22/18 19:44	1
2-Methylphenol	ND		9.8	1.8	ug/L		10/18/18 14:42	10/22/18 19:44	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/18/18 14:42	10/22/18 19:44	1
2-Nitroaniline	ND		9.8	2.1	ug/L		10/18/18 14:42	10/22/18 19:44	1
3-Nitroaniline	ND		9.8	1.8	ug/L		10/18/18 14:42	10/22/18 19:44	1
4-Nitroaniline	ND		9.8	2.4	ug/L		10/18/18 14:42	10/22/18 19:44	1

Client Sample ID: P114R-ROX-101118-DUP

Date Collected: 10/11/18 09:30
Date Received: 10/12/18 08:41

Lab Sample ID: 400-160492-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrobenzene	ND	UJ	9.8	0.54	ug/L		10/18/18 14:42	10/22/18 19:44	1
2-Nitrophenol	ND		9.8	0.63	ug/L		10/18/18 14:42	10/22/18 19:44	1
4-Nitrophenol	ND		9.8	2.0	ug/L		10/18/18 14:42	10/22/18 19:44	1
N-Nitrosodimethylamine	ND		9.8	3.4	ug/L		10/18/18 14:42	10/22/18 19:44	1
N-Nitrosodi-n-propylamine	ND	UJ	9.8	3.2	ug/L		10/18/18 14:42	10/22/18 19:44	1
N-Nitrosodiphenylamine	ND		9.8	0.46	ug/L		10/18/18 14:42	10/22/18 19:44	1
Pentachlorophenol	ND		20	1.8	ug/L		10/18/18 14:42	10/22/18 19:44	1
Phenol	ND	UJ	9.8	2.5	ug/L		10/18/18 14:42	10/22/18 19:44	1
Pyridine	ND	UJ	9.8	3.1	ug/L		10/18/18 14:42	10/22/18 19:44	1
Quinoline	ND		9.8	5.9	ug/L		10/18/18 14:42	10/22/18 19:44	1
2,4,5-Trichlorophenol	ND		9.8	3.6	ug/L		10/18/18 14:42	10/22/18 19:44	1
2,4,6-Trichlorophenol	ND		9.8	3.4	ug/L		10/18/18 14:42	10/22/18 19:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*52*		*34 - 120*	*10/18/18 14:42*	*10/22/18 19:44*	*1*
2-Fluorophenol	*35*		*10 - 120*	*10/18/18 14:42*	*10/22/18 19:44*	*1*
Nitrobenzene-d5	*47*		*27 - 120*	*10/18/18 14:42*	*10/22/18 19:44*	*1*
Phenol-d5	*43*		*10 - 120*	*10/18/18 14:42*	*10/22/18 19:44*	*1*
Terphenyl-d14	*52*	*X*	*53 - 125*	*10/18/18 14:42*	*10/22/18 19:44*	*1*
2,4,6-Tribromophenol	*91*		*15 - 135*	*10/18/18 14:42*	*10/22/18 19:44*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.031	0.0056	ug/L		10/25/18 11:28	10/25/18 23:13	1
1,2-Dibromoethane	ND	*	0.021	0.0051	ug/L		10/25/18 11:28	10/25/18 23:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*	*p*	*51 - 149*	*10/25/18 11:28*	*10/25/18 23:13*	*1*

Client Sample ID: MW13-ROX-101118

Date Collected: 10/11/18 10:40
Date Received: 10/12/18 08:41

Lab Sample ID: 400-160492-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/24/18 10:40	1
Acrolein	ND		20	10	ug/L			10/24/18 10:40	1
Acrylonitrile	ND		10	2.8	ug/L			10/24/18 10:40	1
Benzene	ND		1.0	0.38	ug/L			10/24/18 10:40	1
Bromobenzene	ND		1.0	0.54	ug/L			10/24/18 10:40	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/24/18 10:40	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/24/18 10:40	1
Bromoform	ND		5.0	0.71	ug/L			10/24/18 10:40	1
Bromomethane	ND		1.0	0.98	ug/L			10/24/18 10:40	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/24/18 10:40	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/24/18 10:40	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/24/18 10:40	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/24/18 10:40	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/24/18 10:40	1
Chloroethane	ND		1.0	0.76	ug/L			10/24/18 10:40	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/24/18 10:40	1
Chloroform	ND		1.0	0.60	ug/L			10/24/18 10:40	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/24/18 10:40	1
Chloromethane	ND		1.0	0.83	ug/L			10/24/18 10:40	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/24/18 10:40	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/24/18 10:40	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/24/18 10:40	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/24/18 10:40	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/24/18 10:40	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/24/18 10:40	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/24/18 10:40	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/24/18 10:40	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/24/18 10:40	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/24/18 10:40	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/24/18 10:40	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/24/18 10:40	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/24/18 10:40	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/24/18 10:40	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/24/18 10:40	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/24/18 10:40	1
2-Hexanone	ND		25	3.1	ug/L			10/24/18 10:40	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/24/18 10:40	1
Methylene bromide	ND		5.0	0.59	ug/L			10/24/18 10:40	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/24/18 10:40	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/24/18 10:40	1
Methyl tert-butyl ether	3.3		1.0	0.74	ug/L			10/24/18 10:40	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/24/18 10:40	1
Naphthalene	ND		1.0	1.0	ug/L			10/24/18 10:40	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/24/18 10:40	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/24/18 10:40	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/24/18 10:40	1
o-Xylene	ND		5.0	0.60	ug/L			10/24/18 10:40	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/24/18 10:40	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/24/18 10:40	1

Client Sample ID: MW13-ROX-101118
Date Collected: 10/11/18 10:40
Date Received: 10/12/18 08:41

Lab Sample ID: 400-160492-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/24/18 10:40	1
Styrene	ND		1.0	1.0	ug/L			10/24/18 10:40	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/24/18 10:40	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/24/18 10:40	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/24/18 10:40	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/24/18 10:40	1
Toluene	ND		1.0	0.70	ug/L			10/24/18 10:40	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/24/18 10:40	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/24/18 10:40	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/24/18 10:40	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/24/18 10:40	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/24/18 10:40	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/24/18 10:40	1
Trichloroethene	ND		1.0	0.50	ug/L			10/24/18 10:40	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/24/18 10:40	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/24/18 10:40	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/24/18 10:40	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/24/18 10:40	1
Vinyl acetate	ND		25	2.0	ug/L			10/24/18 10:40	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/24/18 10:40	1
Xylenes, Total	ND		10	1.6	ug/L			10/24/18 10:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*78 - 118*		*10/24/18 10:40*	*1*
Dibromofluoromethane	*96*		*81 - 121*		*10/24/18 10:40*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*10/24/18 10:40*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.19	0.019	ug/L		10/18/18 14:42	10/23/18 00:53	1
Acenaphthylene	ND		0.19	0.019	ug/L		10/18/18 14:42	10/23/18 00:53	1
Anthracene	ND		0.19	0.019	ug/L		10/18/18 14:42	10/23/18 00:53	1
Benzo[a]anthracene	ND		0.19	0.039	ug/L		10/18/18 14:42	10/23/18 00:53	1
Benzo[a]pyrene	ND		0.19	0.039	ug/L		10/18/18 14:42	10/23/18 00:53	1
Benzo[b]fluoranthene	ND		0.19	0.039	ug/L		10/18/18 14:42	10/23/18 00:53	1
Benzo[g,h,i]perylene	ND		0.19	0.039	ug/L		10/18/18 14:42	10/23/18 00:53	1
Benzo[k]fluoranthene	ND		0.19	0.039	ug/L		10/18/18 14:42	10/23/18 00:53	1
Chrysene	ND		0.19	0.039	ug/L		10/18/18 14:42	10/23/18 00:53	1
Dibenz(a,h)anthracene	ND		0.19	0.039	ug/L		10/18/18 14:42	10/23/18 00:53	1
Fluoranthene	ND		0.19	0.019	ug/L		10/18/18 14:42	10/23/18 00:53	1
Fluorene	ND		0.19	0.020	ug/L		10/18/18 14:42	10/23/18 00:53	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.039	ug/L		10/18/18 14:42	10/23/18 00:53	1
Phenanthrene	ND		0.19	0.019	ug/L		10/18/18 14:42	10/23/18 00:53	1
Pyrene	ND		0.19	0.019	ug/L		10/18/18 14:42	10/23/18 00:53	1
1-Methylnaphthalene	ND		0.19	0.019	ug/L		10/18/18 14:42	10/23/18 00:53	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		10/18/18 14:42	10/23/18 00:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*115*		*33 - 138*	*10/18/18 14:42*	*10/23/18 00:53*	*1*
2-Fluorobiphenyl	*90*		*15 - 122*	*10/18/18 14:42*	*10/23/18 00:53*	*1*

Client Sample ID: MW13-ROX-101118
Date Collected: 10/11/18 10:40
Date Received: 10/12/18 08:41

Lab Sample ID: 400-160492-5
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	59		19 - 130	10/18/18 14:42	10/23/18 00:53	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND	UJ	9.7	3.7	ug/L		10/18/18 14:42	10/22/18 20:06	1
Benzenethiol	ND	* UJ	9.7	1.6	ug/L		10/18/18 14:42	10/22/18 20:06	1
Benzoic acid	ND		29	7.1	ug/L		10/18/18 14:42	10/22/18 20:06	1
Benzyl alcohol	ND	UJ	9.7	1.9	ug/L		10/18/18 14:42	10/22/18 20:06	1
Bis(2-chloroethoxy)methane	ND	UJ	9.7	0.67	ug/L		10/18/18 14:42	10/22/18 20:06	1
Bis(2-chloroethyl)ether	ND		9.7	0.72	ug/L		10/18/18 14:42	10/22/18 20:06	1
bis (2-chloroisopropyl) ether	ND		9.7	0.79	ug/L		10/18/18 14:42	10/22/18 20:06	1
Bis(2-ethylhexyl) phthalate	ND		9.7	2.2	ug/L		10/18/18 14:42	10/22/18 20:06	1
4-Bromophenyl phenyl ether	ND		9.7	0.31	ug/L		10/18/18 14:42	10/22/18 20:06	1
Butyl benzyl phthalate	ND		9.7	0.67	ug/L		10/18/18 14:42	10/22/18 20:06	1
4-Chloroaniline	ND		9.7	3.3	ug/L		10/18/18 14:42	10/22/18 20:06	1
4-Chloro-3-methylphenol	ND		9.7	3.7	ug/L		10/18/18 14:42	10/22/18 20:06	1
2-Chloronaphthalene	ND		9.7	0.50	ug/L		10/18/18 14:42	10/22/18 20:06	1
2-Chlorophenol	ND		9.7	2.1	ug/L		10/18/18 14:42	10/22/18 20:06	1
4-Chlorophenyl phenyl ether	ND		9.7	1.9	ug/L		10/18/18 14:42	10/22/18 20:06	1
Dibenz[a,h]acridine	ND		9.7	2.9	ug/L		10/18/18 14:42	10/22/18 20:06	1
Dibenzofuran	ND		9.7	0.50	ug/L		10/18/18 14:42	10/22/18 20:06	1
3,3'-Dichlorobenzidine	ND		9.7	2.5	ug/L		10/18/18 14:42	10/22/18 20:06	1
2,4-Dichlorophenol	ND		9.7	2.9	ug/L		10/18/18 14:42	10/22/18 20:06	1
Diethyl phthalate	ND		9.7	0.68	ug/L		10/18/18 14:42	10/22/18 20:06	1
2,4-Dimethylphenol	ND		9.7	3.4	ug/L		10/18/18 14:42	10/22/18 20:06	1
Dimethyl phthalate	ND		9.7	0.58	ug/L		10/18/18 14:42	10/22/18 20:06	1
Di-n-butyl phthalate	ND		9.7	2.6	ug/L		10/18/18 14:42	10/22/18 20:06	1
4,6-Dinitro-ortho-cresol	ND		9.7	1.9	ug/L		10/18/18 14:42	10/22/18 20:06	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		10/18/18 14:42	10/22/18 20:06	1
2,4-Dinitrotoluene	ND		9.7	1.8	ug/L		10/18/18 14:42	10/22/18 20:06	1
2,6-Dinitrotoluene	ND		9.7	1.8	ug/L		10/18/18 14:42	10/22/18 20:06	1
Di-n-octyl phthalate	ND		9.7	0.43	ug/L		10/18/18 14:42	10/22/18 20:06	1
1,4-Dioxane	ND	UJ	9.7	0.97	ug/L		10/18/18 14:42	10/22/18 20:06	1
1,2-Diphenylhydrazine (as Azobenzene)	ND	UJ	9.7	0.97	ug/L		10/18/18 14:42	10/22/18 20:06	1
Hexachlorobenzene	ND		9.7	0.24	ug/L		10/18/18 14:42	10/22/18 20:06	1
Hexachlorocyclopentadiene	ND	*	19	2.5	ug/L		10/18/18 14:42	10/22/18 20:06	1
Hexachloroethane	ND		9.7	4.1	ug/L		10/18/18 14:42	10/22/18 20:06	1
Indene	ND		9.7	0.97	ug/L		10/18/18 14:42	10/22/18 20:06	1
Isophorone	ND	UJ	9.7	0.55	ug/L		10/18/18 14:42	10/22/18 20:06	1
2-Methylphenol	ND		9.7	1.7	ug/L		10/18/18 14:42	10/22/18 20:06	1
3 & 4 Methylphenol	ND		19	1.0	ug/L		10/18/18 14:42	10/22/18 20:06	1
2-Nitroaniline	ND		9.7	2.1	ug/L		10/18/18 14:42	10/22/18 20:06	1
3-Nitroaniline	ND		9.7	1.7	ug/L		10/18/18 14:42	10/22/18 20:06	1
4-Nitroaniline	ND		9.7	2.4	ug/L		10/18/18 14:42	10/22/18 20:06	1
Nitrobenzene	ND	UJ	9.7	0.53	ug/L		10/18/18 14:42	10/22/18 20:06	1
2-Nitrophenol	ND		9.7	0.63	ug/L		10/18/18 14:42	10/22/18 20:06	1
4-Nitrophenol	ND		9.7	2.0	ug/L		10/18/18 14:42	10/22/18 20:06	1
N-Nitrosodimethylamine	ND		9.7	3.4	ug/L		10/18/18 14:42	10/22/18 20:06	1

Client Sample ID: MW13-ROX-101118
Date Collected: 10/11/18 10:40
Date Received: 10/12/18 08:41

Lab Sample ID: 400-160492-5
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND	UJ	9.7	3.2	ug/L		10/18/18 14:42	10/22/18 20:06	1
N-Nitrosodiphenylamine	ND		9.7	0.46	ug/L		10/18/18 14:42	10/22/18 20:06	1
Pentachlorophenol	ND		19	1.8	ug/L		10/18/18 14:42	10/22/18 20:06	1
Phenol	ND	UJ	9.7	2.5	ug/L		10/18/18 14:42	10/22/18 20:06	1
Pyridine	ND	UJ	9.7	3.1	ug/L		10/18/18 14:42	10/22/18 20:06	1
Quinoline	ND		9.7	5.8	ug/L		10/18/18 14:42	10/22/18 20:06	1
2,4,5-Trichlorophenol	ND		9.7	3.6	ug/L		10/18/18 14:42	10/22/18 20:06	1
2,4,6-Trichlorophenol	ND		9.7	3.4	ug/L		10/18/18 14:42	10/22/18 20:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*55*		*34 - 120*	*10/18/18 14:42*	*10/22/18 20:06*	*1*
2-Fluorophenol	*33*		*10 - 120*	*10/18/18 14:42*	*10/22/18 20:06*	*1*
Nitrobenzene-d5	*47*		*27 - 120*	*10/18/18 14:42*	*10/22/18 20:06*	*1*
Phenol-d5	*47*		*10 - 120*	*10/18/18 14:42*	*10/22/18 20:06*	*1*
Terphenyl-d14	*77*		*53 - 125*	*10/18/18 14:42*	*10/22/18 20:06*	*1*
2,4,6-Tribromophenol	*105*		*15 - 135*	*10/18/18 14:42*	*10/22/18 20:06*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0056	ug/L		10/25/18 11:28	10/25/18 23:44	1
1,2-Dibromoethane	ND	*	0.020	0.0051	ug/L		10/25/18 11:28	10/25/18 23:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*105*	*p*	*51 - 149*	*10/25/18 11:28*	*10/25/18 23:44*	*1*

Client Sample ID: MW11-ROX-101118
Date Collected: 10/11/18 12:15
Date Received: 10/12/18 08:41

Lab Sample ID: 400-160492-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/24/18 11:04	1
Acrolein	ND		20	10	ug/L			10/24/18 11:04	1
Acrylonitrile	ND		10	2.8	ug/L			10/24/18 11:04	1
Benzene	ND		1.0	0.38	ug/L			10/24/18 11:04	1
Bromobenzene	ND		1.0	0.54	ug/L			10/24/18 11:04	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/24/18 11:04	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/24/18 11:04	1
Bromoform	ND		5.0	0.71	ug/L			10/24/18 11:04	1
Bromomethane	ND		1.0	0.98	ug/L			10/24/18 11:04	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/24/18 11:04	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/24/18 11:04	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/24/18 11:04	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/24/18 11:04	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/24/18 11:04	1
Chloroethane	ND		1.0	0.76	ug/L			10/24/18 11:04	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/24/18 11:04	1
Chloroform	ND		1.0	0.60	ug/L			10/24/18 11:04	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/24/18 11:04	1
Chloromethane	ND		1.0	0.83	ug/L			10/24/18 11:04	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/24/18 11:04	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/24/18 11:04	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/24/18 11:04	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/24/18 11:04	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/24/18 11:04	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/24/18 11:04	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/24/18 11:04	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/24/18 11:04	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/24/18 11:04	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/24/18 11:04	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/24/18 11:04	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/24/18 11:04	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/24/18 11:04	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/24/18 11:04	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/24/18 11:04	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/24/18 11:04	1
2-Hexanone	ND		25	3.1	ug/L			10/24/18 11:04	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/24/18 11:04	1
Methylene bromide	ND		5.0	0.59	ug/L			10/24/18 11:04	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/24/18 11:04	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/24/18 11:04	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/24/18 11:04	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/24/18 11:04	1
Naphthalene	ND		1.0	1.0	ug/L			10/24/18 11:04	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/24/18 11:04	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/24/18 11:04	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/24/18 11:04	1
o-Xylene	ND		5.0	0.60	ug/L			10/24/18 11:04	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/24/18 11:04	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/24/18 11:04	1

Client Sample ID: MW11-ROX-101118

Lab Sample ID: 400-160492-6

Date Collected: 10/11/18 12:15
Date Received: 10/12/18 08:41

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/24/18 11:04	1
Styrene	ND		1.0	1.0	ug/L			10/24/18 11:04	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/24/18 11:04	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/24/18 11:04	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/24/18 11:04	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/24/18 11:04	1
Toluene	ND		1.0	0.70	ug/L			10/24/18 11:04	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/24/18 11:04	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/24/18 11:04	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/24/18 11:04	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/24/18 11:04	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/24/18 11:04	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/24/18 11:04	1
Trichloroethene	ND		1.0	0.50	ug/L			10/24/18 11:04	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/24/18 11:04	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/24/18 11:04	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/24/18 11:04	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/24/18 11:04	1
Vinyl acetate	ND		25	2.0	ug/L			10/24/18 11:04	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/24/18 11:04	1
Xylenes, Total	ND		10	1.6	ug/L			10/24/18 11:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*78 - 118*		*10/24/18 11:04*	*1*
Dibromofluoromethane	*97*		*81 - 121*		*10/24/18 11:04*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*10/24/18 11:04*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/23/18 01:09	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/23/18 01:09	1
Anthracene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/23/18 01:09	1
Benzo[a]anthracene	ND		0.20	0.039	ug/L		10/18/18 14:42	10/23/18 01:09	1
Benzo[a]pyrene	ND		0.20	0.039	ug/L		10/18/18 14:42	10/23/18 01:09	1
Benzo[b]fluoranthene	ND		0.20	0.039	ug/L		10/18/18 14:42	10/23/18 01:09	1
Benzo[g,h,i]perylene	ND		0.20	0.039	ug/L		10/18/18 14:42	10/23/18 01:09	1
Benzo[k]fluoranthene	ND		0.20	0.039	ug/L		10/18/18 14:42	10/23/18 01:09	1
Chrysene	ND		0.20	0.039	ug/L		10/18/18 14:42	10/23/18 01:09	1
Dibenz(a,h)anthracene	ND		0.20	0.039	ug/L		10/18/18 14:42	10/23/18 01:09	1
Fluoranthene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/23/18 01:09	1
Fluorene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/23/18 01:09	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.039	ug/L		10/18/18 14:42	10/23/18 01:09	1
Phenanthrene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/23/18 01:09	1
Pyrene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/23/18 01:09	1
1-Methylnaphthalene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/23/18 01:09	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/23/18 01:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*100*		*33 - 138*	*10/18/18 14:42*	*10/23/18 01:09*	*1*
2-Fluorobiphenyl	*99*		*15 - 122*	*10/18/18 14:42*	*10/23/18 01:09*	*1*

Client Sample ID: MW11-ROX-101118

Date Collected: 10/11/18 12:15
Date Received: 10/12/18 08:41

Lab Sample ID: 400-160492-6
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	69		19 - 130	10/18/18 14:42	10/23/18 01:09	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND	UJ	9.8	3.7	ug/L		10/18/18 14:42	10/22/18 20:27	1
Benzenethiol	ND	* UJ	9.8	1.7	ug/L		10/18/18 14:42	10/22/18 20:27	1
Benzoic acid	ND		29	7.1	ug/L		10/18/18 14:42	10/22/18 20:27	1
Benzyl alcohol	ND	UJ	9.8	2.0	ug/L		10/18/18 14:42	10/22/18 20:27	1
Bis(2-chloroethoxy)methane	ND	UJ	9.8	0.67	ug/L		10/18/18 14:42	10/22/18 20:27	1
Bis(2-chloroethyl)ether	ND		9.8	0.72	ug/L		10/18/18 14:42	10/22/18 20:27	1
bis (2-chloroisopropyl) ether	ND		9.8	0.79	ug/L		10/18/18 14:42	10/22/18 20:27	1
Bis(2-ethylhexyl) phthalate	8.6	J	9.8	2.2	ug/L		10/18/18 14:42	10/22/18 20:27	1
4-Bromophenyl phenyl ether	ND		9.8	0.31	ug/L		10/18/18 14:42	10/22/18 20:27	1
Butyl benzyl phthalate	ND		9.8	0.67	ug/L		10/18/18 14:42	10/22/18 20:27	1
4-Chloroaniline	ND		9.8	3.3	ug/L		10/18/18 14:42	10/22/18 20:27	1
4-Chloro-3-methylphenol	ND		9.8	3.7	ug/L		10/18/18 14:42	10/22/18 20:27	1
2-Chloronaphthalene	ND		9.8	0.51	ug/L		10/18/18 14:42	10/22/18 20:27	1
2-Chlorophenol	ND		9.8	2.1	ug/L		10/18/18 14:42	10/22/18 20:27	1
4-Chlorophenyl phenyl ether	ND		9.8	2.0	ug/L		10/18/18 14:42	10/22/18 20:27	1
Dibenz[a,h]acridine	ND		9.8	2.9	ug/L		10/18/18 14:42	10/22/18 20:27	1
Dibenzofuran	ND		9.8	0.51	ug/L		10/18/18 14:42	10/22/18 20:27	1
3,3'-Dichlorobenzidine	ND		9.8	2.5	ug/L		10/18/18 14:42	10/22/18 20:27	1
2,4-Dichlorophenol	ND		9.8	2.9	ug/L		10/18/18 14:42	10/22/18 20:27	1
Diethyl phthalate	ND		9.8	0.68	ug/L		10/18/18 14:42	10/22/18 20:27	1
2,4-Dimethylphenol	ND		9.8	3.4	ug/L		10/18/18 14:42	10/22/18 20:27	1
Dimethyl phthalate	ND		9.8	0.59	ug/L		10/18/18 14:42	10/22/18 20:27	1
Di-n-butyl phthalate	ND		9.8	2.6	ug/L		10/18/18 14:42	10/22/18 20:27	1
4,6-Dinitro-ortho-cresol	ND		9.8	2.0	ug/L		10/18/18 14:42	10/22/18 20:27	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		10/18/18 14:42	10/22/18 20:27	1
2,4-Dinitrotoluene	ND		9.8	1.9	ug/L		10/18/18 14:42	10/22/18 20:27	1
2,6-Dinitrotoluene	ND		9.8	1.9	ug/L		10/18/18 14:42	10/22/18 20:27	1
Di-n-octyl phthalate	ND		9.8	0.43	ug/L		10/18/18 14:42	10/22/18 20:27	1
1,4-Dioxane	ND	UJ	9.8	0.98	ug/L		10/18/18 14:42	10/22/18 20:27	1
1,2-Diphenylhydrazine (as Azobenzene)	ND	UJ	9.8	0.98	ug/L		10/18/18 14:42	10/22/18 20:27	1
Hexachlorobenzene	ND		9.8	0.24	ug/L		10/18/18 14:42	10/22/18 20:27	1
Hexachlorocyclopentadiene	ND	*	20	2.5	ug/L		10/18/18 14:42	10/22/18 20:27	1
Hexachloroethane	ND		9.8	4.1	ug/L		10/18/18 14:42	10/22/18 20:27	1
Indene	ND		9.8	0.98	ug/L		10/18/18 14:42	10/22/18 20:27	1
Isophorone	ND	UJ	9.8	0.56	ug/L		10/18/18 14:42	10/22/18 20:27	1
2-Methylphenol	ND		9.8	1.8	ug/L		10/18/18 14:42	10/22/18 20:27	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/18/18 14:42	10/22/18 20:27	1
2-Nitroaniline	ND		9.8	2.1	ug/L		10/18/18 14:42	10/22/18 20:27	1
3-Nitroaniline	ND		9.8	1.8	ug/L		10/18/18 14:42	10/22/18 20:27	1
4-Nitroaniline	ND		9.8	2.4	ug/L		10/18/18 14:42	10/22/18 20:27	1
Nitrobenzene	ND	UJ	9.8	0.54	ug/L		10/18/18 14:42	10/22/18 20:27	1
2-Nitrophenol	ND		9.8	0.63	ug/L		10/18/18 14:42	10/22/18 20:27	1
4-Nitrophenol	ND		9.8	2.0	ug/L		10/18/18 14:42	10/22/18 20:27	1
N-Nitrosodimethylamine	ND		9.8	3.4	ug/L		10/18/18 14:42	10/22/18 20:27	1

Client Sample ID: MW11-ROX-101118
Date Collected: 10/11/18 12:15
Date Received: 10/12/18 08:41

Lab Sample ID: 400-160492-6
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND	UJ	9.8	3.2	ug/L		10/18/18 14:42	10/22/18 20:27	1
N-Nitrosodiphenylamine	ND		9.8	0.46	ug/L		10/18/18 14:42	10/22/18 20:27	1
Pentachlorophenol	ND		20	1.8	ug/L		10/18/18 14:42	10/22/18 20:27	1
Phenol	ND	UJ	9.8	2.5	ug/L		10/18/18 14:42	10/22/18 20:27	1
Pyridine	ND	UJ	9.8	3.1	ug/L		10/18/18 14:42	10/22/18 20:27	1
Quinoline	ND		9.8	5.9	ug/L		10/18/18 14:42	10/22/18 20:27	1
2,4,5-Trichlorophenol	ND		9.8	3.6	ug/L		10/18/18 14:42	10/22/18 20:27	1
2,4,6-Trichlorophenol	ND		9.8	3.4	ug/L		10/18/18 14:42	10/22/18 20:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*47*		*34 - 120*	*10/18/18 14:42*	*10/22/18 20:27*	*1*
2-Fluorophenol	*47*		*10 - 120*	*10/18/18 14:42*	*10/22/18 20:27*	*1*
Nitrobenzene-d5	*50*		*27 - 120*	*10/18/18 14:42*	*10/22/18 20:27*	*1*
Phenol-d5	*49*		*10 - 120*	*10/18/18 14:42*	*10/22/18 20:27*	*1*
Terphenyl-d14	*61*		*53 - 125*	*10/18/18 14:42*	*10/22/18 20:27*	*1*
2,4,6-Tribromophenol	*72*		*15 - 135*	*10/18/18 14:42*	*10/22/18 20:27*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0055	ug/L		10/25/18 11:28	10/26/18 00:48	1
1,2-Dibromoethane	ND	*	0.020	0.0050	ug/L		10/25/18 11:28	10/26/18 00:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*	*p*	*51 - 149*	*10/25/18 11:28*	*10/26/18 00:48*	*1*

Client Sample ID: MW28-ROX-101118
Date Collected: 10/11/18 13:20
Date Received: 10/12/18 08:41

Lab Sample ID: 400-160492-7
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/24/18 09:04	1
Acrolein	ND		20	10	ug/L			10/24/18 09:04	1
Acrylonitrile	ND		10	2.8	ug/L			10/24/18 09:04	1
Benzene	2.6		1.0	0.38	ug/L			10/24/18 09:04	1
Bromobenzene	ND		1.0	0.54	ug/L			10/24/18 09:04	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/24/18 09:04	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/24/18 09:04	1
Bromoform	ND		5.0	0.71	ug/L			10/24/18 09:04	1
Bromomethane	ND		1.0	0.98	ug/L			10/24/18 09:04	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/24/18 09:04	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/24/18 09:04	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/24/18 09:04	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/24/18 09:04	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/24/18 09:04	1
Chloroethane	ND		1.0	0.76	ug/L			10/24/18 09:04	1
2-Chloroethyl vinyl ether	ND	F1 UJ	5.0	2.0	ug/L			10/24/18 09:04	1
Chloroform	ND		1.0	0.60	ug/L			10/24/18 09:04	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/24/18 09:04	1
Chloromethane	ND		1.0	0.83	ug/L			10/24/18 09:04	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/24/18 09:04	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/24/18 09:04	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/24/18 09:04	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/24/18 09:04	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/24/18 09:04	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/24/18 09:04	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/24/18 09:04	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/24/18 09:04	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/24/18 09:04	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/24/18 09:04	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/24/18 09:04	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/24/18 09:04	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/24/18 09:04	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/24/18 09:04	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/24/18 09:04	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/24/18 09:04	1
2-Hexanone	ND		25	3.1	ug/L			10/24/18 09:04	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/24/18 09:04	1
Methylene bromide	ND		5.0	0.59	ug/L			10/24/18 09:04	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/24/18 09:04	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/24/18 09:04	1
Methyl tert-butyl ether	5.0		1.0	0.74	ug/L			10/24/18 09:04	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/24/18 09:04	1
Naphthalene	ND		1.0	1.0	ug/L			10/24/18 09:04	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/24/18 09:04	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/24/18 09:04	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/24/18 09:04	1
o-Xylene	ND		5.0	0.60	ug/L			10/24/18 09:04	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/24/18 09:04	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/24/18 09:04	1

Client Sample ID: MW28-ROX-101118

Lab Sample ID: 400-160492-7

Date Collected: 10/11/18 13:20
Date Received: 10/12/18 08:41

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/24/18 09:04	1
Styrene	ND		1.0	1.0	ug/L			10/24/18 09:04	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/24/18 09:04	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/24/18 09:04	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/24/18 09:04	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/24/18 09:04	1
Toluene	ND		1.0	0.70	ug/L			10/24/18 09:04	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/24/18 09:04	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/24/18 09:04	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/24/18 09:04	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/24/18 09:04	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/24/18 09:04	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/24/18 09:04	1
Trichloroethene	ND		1.0	0.50	ug/L			10/24/18 09:04	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/24/18 09:04	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/24/18 09:04	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/24/18 09:04	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/24/18 09:04	1
Vinyl acetate	ND		25	2.0	ug/L			10/24/18 09:04	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/24/18 09:04	1
Xylenes, Total	ND		10	1.6	ug/L			10/24/18 09:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*103*		*78 - 118*		*10/24/18 09:04*	*1*
Dibromofluoromethane	*96*		*81 - 121*		*10/24/18 09:04*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*10/24/18 09:04*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/23/18 00:37	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/23/18 00:37	1
Anthracene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/23/18 00:37	1
Benzo[a]anthracene	ND		0.20	0.039	ug/L		10/18/18 14:42	10/23/18 00:37	1
Benzo[a]pyrene	ND		0.20	0.039	ug/L		10/18/18 14:42	10/23/18 00:37	1
Benzo[b]fluoranthene	ND		0.20	0.039	ug/L		10/18/18 14:42	10/23/18 00:37	1
Benzo[g,h,i]perylene	ND		0.20	0.039	ug/L		10/18/18 14:42	10/23/18 00:37	1
Benzo[k]fluoranthene	ND		0.20	0.039	ug/L		10/18/18 14:42	10/23/18 00:37	1
Chrysene	ND		0.20	0.039	ug/L		10/18/18 14:42	10/23/18 00:37	1
Dibenz(a,h)anthracene	ND		0.20	0.039	ug/L		10/18/18 14:42	10/23/18 00:37	1
Fluoranthene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/23/18 00:37	1
Fluorene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/23/18 00:37	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.039	ug/L		10/18/18 14:42	10/23/18 00:37	1
Phenanthrene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/23/18 00:37	1
Pyrene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/23/18 00:37	1
1-Methylnaphthalene	0.039	J	0.20	0.020	ug/L		10/18/18 14:42	10/23/18 00:37	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/23/18 00:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*96*		*33 - 138*	*10/18/18 14:42*	*10/23/18 00:37*	*1*
2-Fluorobiphenyl	*82*		*15 - 122*	*10/18/18 14:42*	*10/23/18 00:37*	*1*

Client Sample ID: MW28-ROX-101118
Date Collected: 10/11/18 13:20
Date Received: 10/12/18 08:41

Lab Sample ID: 400-160492-7
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	67		19 - 130	10/18/18 14:42	10/23/18 00:37	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND	UJ	9.8	3.7	ug/L		10/18/18 14:42	10/22/18 19:01	1
Benzenethiol	ND	* UJ	9.8	1.7	ug/L		10/18/18 14:42	10/22/18 19:01	1
Benzoic acid	ND		29	7.1	ug/L		10/18/18 14:42	10/22/18 19:01	1
Benzyl alcohol	ND	UJ	9.8	2.0	ug/L		10/18/18 14:42	10/22/18 19:01	1
Bis(2-chloroethoxy)methane	ND	UJ	9.8	0.67	ug/L		10/18/18 14:42	10/22/18 19:01	1
Bis(2-chloroethyl)ether	ND		9.8	0.72	ug/L		10/18/18 14:42	10/22/18 19:01	1
bis (2-chloroisopropyl) ether	ND		9.8	0.79	ug/L		10/18/18 14:42	10/22/18 19:01	1
Bis(2-ethylhexyl) phthalate	10	F1 J	9.8	2.2	ug/L		10/18/18 14:42	10/22/18 19:01	1
4-Bromophenyl phenyl ether	ND		9.8	0.31	ug/L		10/18/18 14:42	10/22/18 19:01	1
Butyl benzyl phthalate	ND		9.8	0.67	ug/L		10/18/18 14:42	10/22/18 19:01	1
4-Chloroaniline	ND		9.8	3.3	ug/L		10/18/18 14:42	10/22/18 19:01	1
4-Chloro-3-methylphenol	ND		9.8	3.7	ug/L		10/18/18 14:42	10/22/18 19:01	1
2-Chloronaphthalene	ND		9.8	0.51	ug/L		10/18/18 14:42	10/22/18 19:01	1
2-Chlorophenol	ND		9.8	2.1	ug/L		10/18/18 14:42	10/22/18 19:01	1
4-Chlorophenyl phenyl ether	ND		9.8	2.0	ug/L		10/18/18 14:42	10/22/18 19:01	1
Dibenz[a,h]acridine	ND		9.8	2.9	ug/L		10/18/18 14:42	10/22/18 19:01	1
Dibenzofuran	ND		9.8	0.51	ug/L		10/18/18 14:42	10/22/18 19:01	1
3,3'-Dichlorobenzidine	ND		9.8	2.5	ug/L		10/18/18 14:42	10/22/18 19:01	1
2,4-Dichlorophenol	ND		9.8	2.9	ug/L		10/18/18 14:42	10/22/18 19:01	1
Diethyl phthalate	ND		9.8	0.68	ug/L		10/18/18 14:42	10/22/18 19:01	1
2,4-Dimethylphenol	ND		9.8	3.4	ug/L		10/18/18 14:42	10/22/18 19:01	1
Dimethyl phthalate	ND		9.8	0.59	ug/L		10/18/18 14:42	10/22/18 19:01	1
Di-n-butyl phthalate	ND		9.8	2.6	ug/L		10/18/18 14:42	10/22/18 19:01	1
4,6-Dinitro-ortho-cresol	ND		9.8	2.0	ug/L		10/18/18 14:42	10/22/18 19:01	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		10/18/18 14:42	10/22/18 19:01	1
2,4-Dinitrotoluene	ND		9.8	1.9	ug/L		10/18/18 14:42	10/22/18 19:01	1
2,6-Dinitrotoluene	ND		9.8	1.9	ug/L		10/18/18 14:42	10/22/18 19:01	1
Di-n-octyl phthalate	ND		9.8	0.43	ug/L		10/18/18 14:42	10/22/18 19:01	1
1,4-Dioxane	ND	UJ	9.8	0.98	ug/L		10/18/18 14:42	10/22/18 19:01	1
1,2-Diphenylhydrazine (as Azobenzene)	ND	UJ	9.8	0.98	ug/L		10/18/18 14:42	10/22/18 19:01	1
Hexachlorobenzene	ND		9.8	0.24	ug/L		10/18/18 14:42	10/22/18 19:01	1
Hexachlorocyclopentadiene	ND	*	20	2.5	ug/L		10/18/18 14:42	10/22/18 19:01	1
Hexachloroethane	ND		9.8	4.1	ug/L		10/18/18 14:42	10/22/18 19:01	1
Indene	ND		9.8	0.98	ug/L		10/18/18 14:42	10/22/18 19:01	1
Isophorone	ND	UJ	9.8	0.56	ug/L		10/18/18 14:42	10/22/18 19:01	1
2-Methylphenol	ND		9.8	1.8	ug/L		10/18/18 14:42	10/22/18 19:01	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/18/18 14:42	10/22/18 19:01	1
2-Nitroaniline	ND		9.8	2.1	ug/L		10/18/18 14:42	10/22/18 19:01	1
3-Nitroaniline	ND		9.8	1.8	ug/L		10/18/18 14:42	10/22/18 19:01	1
4-Nitroaniline	ND		9.8	2.4	ug/L		10/18/18 14:42	10/22/18 19:01	1
Nitrobenzene	ND	UJ	9.8	0.54	ug/L		10/18/18 14:42	10/22/18 19:01	1
2-Nitrophenol	ND		9.8	0.63	ug/L		10/18/18 14:42	10/22/18 19:01	1
4-Nitrophenol	ND		9.8	2.0	ug/L		10/18/18 14:42	10/22/18 19:01	1
N-Nitrosodimethylamine	ND		9.8	3.4	ug/L		10/18/18 14:42	10/22/18 19:01	1

Client Sample ID: MW28-ROX-101118
Date Collected: 10/11/18 13:20
Date Received: 10/12/18 08:41

Lab Sample ID: 400-160492-7
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND	UJ	9.8	3.2	ug/L		10/18/18 14:42	10/22/18 19:01	1
N-Nitrosodiphenylamine	ND		9.8	0.46	ug/L		10/18/18 14:42	10/22/18 19:01	1
Pentachlorophenol	ND		20	1.8	ug/L		10/18/18 14:42	10/22/18 19:01	1
Phenol	ND	UJ	9.8	2.5	ug/L		10/18/18 14:42	10/22/18 19:01	1
Pyridine	ND	UJ	9.8	3.1	ug/L		10/18/18 14:42	10/22/18 19:01	1
Quinoline	ND		9.8	5.9	ug/L		10/18/18 14:42	10/22/18 19:01	1
2,4,5-Trichlorophenol	ND		9.8	3.6	ug/L		10/18/18 14:42	10/22/18 19:01	1
2,4,6-Trichlorophenol	ND		9.8	3.4	ug/L		10/18/18 14:42	10/22/18 19:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*54*		*34 - 120*	*10/18/18 14:42*	*10/22/18 19:01*	*1*
2-Fluorophenol	*45*		*10 - 120*	*10/18/18 14:42*	*10/22/18 19:01*	*1*
Nitrobenzene-d5	*53*		*27 - 120*	*10/18/18 14:42*	*10/22/18 19:01*	*1*
Phenol-d5	*52*		*10 - 120*	*10/18/18 14:42*	*10/22/18 19:01*	*1*
Terphenyl-d14	*65*		*53 - 125*	*10/18/18 14:42*	*10/22/18 19:01*	*1*
2,4,6-Tribromophenol	*81*		*15 - 135*	*10/18/18 14:42*	*10/22/18 19:01*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.031	0.0056	ug/L		10/25/18 11:28	10/26/18 01:13	1
1,2-Dibromoethane	ND	*	0.020	0.0051	ug/L		10/25/18 11:28	10/26/18 01:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*	*p*	*51 - 149*	*10/25/18 11:28*	*10/26/18 01:13*	*1*

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits
F1	MS and/or MSD Recovery is outside acceptance limits.

GC Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160492-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(78-118)	(81-121)	(80-120)
400-160492-2	TB-ROX-101118-8260	99	97	99
400-160492-3	P114R-ROX-101118	102	95	100
400-160492-4	P114R-ROX-101118-DUP	101	99	97
400-160492-5	MW13-ROX-101118	101	96	99
400-160492-6	MW11-ROX-101118	100	97	98
400-160492-7	MW28-ROX-101118	103	96	99
400-160492-7 MS	MW28-ROX-101118	101	99	100
400-160492-7 MSD	MW28-ROX-101118	101	97	99
LCS 400-416685/1002	Lab Control Sample	100	97	100
LCS 400-416790/1002	Lab Control Sample	102	97	100
MB 400-416685/4	Method Blank	99	97	98
MB 400-416790/4	Method Blank	99	95	98

Surrogate Legend

BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPHL	TBP
Lab Sample ID	Client Sample ID	(34-120)	(10-120)	(27-120)	(10-120)	(53-125)	(15-135)
400-160492-3	P114R-ROX-101118	51	41	48	48	53	96
400-160492-4	P114R-ROX-101118-DUP	52	35	47	43	52 X	91
400-160492-5	MW13-ROX-101118	55	33	47	47	77	105
400-160492-6	MW11-ROX-101118	47	47	50	49	61	72
400-160492-7	MW28-ROX-101118	54	45	53	52	65	81
400-160492-7 MS	MW28-ROX-101118	49	33	47	43	57	69
400-160492-7 MSD	MW28-ROX-101118	52	33	50	46	60	76
LCS 400-415994/2-A	Lab Control Sample	58	34	51	51	71	82
LCS 400-415994/4-A	Lab Control Sample	66	47	64	64	99	94
LCSD 400-415994/3-A	Lab Control Sample Dup	60	35	52	53	72	84
LCSD 400-415994/5-A	Lab Control Sample Dup	59	46	59	58	86	84
MB 400-415994/1-A	Method Blank	48	31	48	47	72	71

Surrogate Legend

FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPHL = Terphenyl-d14
TBP = 2,4,6-Tribromophenol

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160492-1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		TPHL	FBP	NBZ
Lab Sample ID	Client Sample ID	(33-138)	(15-122)	(19-130)
400-160492-3	P114R-ROX-101118	84	73	69
400-160492-4	P114R-ROX-101118-DUP		70	63
400-160492-4 - DL	P114R-ROX-101118-DUP	68		
400-160492-5	MW13-ROX-101118	115	90	59
400-160492-6	MW11-ROX-101118	100	99	69
400-160492-7	MW28-ROX-101118	96	82	67
400-160492-7 MS	MW28-ROX-101118	76	71	54
400-160492-7 MSD	MW28-ROX-101118	73	68	53
LCS 400-415994/2-A	Lab Control Sample	88	82	58
LCSD 400-415994/3-A	Lab Control Sample Dup	89	78	62
MB 400-415994/1-A	Method Blank	151 X	93	79

Surrogate Legend

TPHL = Terphenyl-d14
FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5

Method: 8011 - EDB and DBCP in Water by Microextraction

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		BFB2
Lab Sample ID	Client Sample ID	(51-149)
400-160492-1	TB-ROX-101118-8011	98 p
400-160492-3	P114R-ROX-101118	113 p
400-160492-4	P114R-ROX-101118-DUP	100 p
400-160492-5	MW13-ROX-101118	105 p
400-160492-6	MW11-ROX-101118	100 p
400-160492-7	MW28-ROX-101118	102 p
400-160492-7 MS	MW28-ROX-101118	95 p
400-160492-7 MSD	MW28-ROX-101118	98 p
LCS 400-416928/2-A	Lab Control Sample	101
LCSD 400-416928/3-A	Lab Control Sample Dup	96
MB 400-416928/1-A	Method Blank	100

Surrogate Legend

BFB = 4-Bromofluorobenzene

Method Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160492-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL PEN
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	TAL PEN
8011	EDB and DBCP in Water by Microextraction	EPA	TAL PEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL PEN
5030B	Purge and Trap	SW846	TAL PEN
8011	Microextraction	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160492-1

Client Sample ID: TB-ROX-101118-8011

Lab Sample ID: 400-160492-1
Matrix: Water
Date Collected: 10/11/18 00:00
Date Received: 10/12/18 08:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			33.8 mL	35 mL	416928	10/25/18 11:28	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/25/18 22:11	DS	TAL PEN

Client Sample ID: TB-ROX-101118-8260

Lab Sample ID: 400-160492-2
Matrix: Water
Date Collected: 10/11/18 00:00
Date Received: 10/12/18 08:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416790	10/24/18 18:20	BSW	TAL PEN

Client Sample ID: P114R-ROX-101118

Lab Sample ID: 400-160492-3
Matrix: Water
Date Collected: 10/11/18 09:30
Date Received: 10/12/18 08:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416685	10/24/18 09:52	RS	TAL PEN
Total/NA	Prep	3520C			1016.8 mL	1.0 mL	415994	10/18/18 17:11	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416437	10/22/18 19:23	VC1	TAL PEN
Total/NA	Prep	3520C			1016.8 mL	1.0 mL	415994	10/18/18 17:11	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416478	10/23/18 01:25	RM	TAL PEN
Total/NA	Prep	8011			34.4 mL	35 mL	416928	10/25/18 11:28	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/25/18 22:42	DS	TAL PEN

Client Sample ID: P114R-ROX-101118-DUP

Lab Sample ID: 400-160492-4
Matrix: Water
Date Collected: 10/11/18 09:30
Date Received: 10/12/18 08:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416790	10/24/18 21:55	BSW	TAL PEN
Total/NA	Prep	3520C			1024.4 mL	1.0 mL	415994	10/18/18 14:42	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416437	10/22/18 19:44	VC1	TAL PEN
Total/NA	Prep	3520C	DL		1024.4 mL	1.0 mL	415994	10/18/18 14:42	JJA	TAL PEN
Total/NA	Analysis	8270D LL	DL	2			416619	10/23/18 16:11	RM	TAL PEN
Total/NA	Prep	3520C			1024.4 mL	1.0 mL	415994	10/18/18 14:42	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416415	10/22/18 23:03	RM	TAL PEN
Total/NA	Prep	8011			34.1 mL	35 mL	416928	10/25/18 11:28	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/25/18 23:13	DS	TAL PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160492-1

Client Sample ID: MW13-ROX-101118

Lab Sample ID: 400-160492-5
Matrix: Water

Date Collected: 10/11/18 10:40
Date Received: 10/12/18 08:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416685	10/24/18 10:40	RS	TAL PEN
Total/NA	Prep	3520C			1031 mL	1.0 mL	415994	10/18/18 14:42	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416437	10/22/18 20:06	VC1	TAL PEN
Total/NA	Prep	3520C			1031 mL	1.0 mL	415994	10/18/18 14:42	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416478	10/23/18 00:53	RM	TAL PEN
Total/NA	Prep	8011			34.5 mL	35 mL	416928	10/25/18 11:28	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/25/18 23:44	DS	TAL PEN

Client Sample ID: MW11-ROX-101118

Lab Sample ID: 400-160492-6
Matrix: Water

Date Collected: 10/11/18 12:15
Date Received: 10/12/18 08:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416685	10/24/18 11:04	RS	TAL PEN
Total/NA	Prep	3520C			1025 mL	1.0 mL	415994	10/18/18 14:42	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416437	10/22/18 20:27	VC1	TAL PEN
Total/NA	Prep	3520C			1025 mL	1.0 mL	415994	10/18/18 14:42	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416478	10/23/18 01:09	RM	TAL PEN
Total/NA	Prep	8011			34.7 mL	35 mL	416928	10/25/18 11:28	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/26/18 00:48	DS	TAL PEN

Client Sample ID: MW28-ROX-101118

Lab Sample ID: 400-160492-7
Matrix: Water

Date Collected: 10/11/18 13:20
Date Received: 10/12/18 08:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416685	10/24/18 09:04	RS	TAL PEN
Total/NA	Prep	3520C			1025.6 mL	1.0 mL	415994	10/18/18 14:42	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416437	10/22/18 19:01	VC1	TAL PEN
Total/NA	Prep	3520C			1025.6 mL	1.0 mL	415994	10/18/18 14:42	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416478	10/23/18 00:37	RM	TAL PEN
Total/NA	Prep	8011			34.3 mL	35 mL	416928	10/25/18 11:28	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/26/18 01:13	DS	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-415994/1-A
Matrix: Water

Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	415994	10/18/18 14:42	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416437	10/22/18 16:30	VC1	TAL PEN
Total/NA	Prep	3520C			1000 mL	1.0 mL	415994	10/18/18 14:42	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416415	10/22/18 18:34	RM	TAL PEN

Client Sample ID: Method Blank — **Lab Sample ID: MB 400-416685/4**
Date Collected: N/A
Date Received: N/A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416685	10/24/18 07:52	RS	TAL PEN

Client Sample ID: Method Blank — **Lab Sample ID: MB 400-416790/4**
Date Collected: N/A
Date Received: N/A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416790	10/24/18 15:21	BSW	TAL PEN

Client Sample ID: Method Blank — **Lab Sample ID: MB 400-416928/1-A**
Date Collected: N/A
Date Received: N/A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	416928	10/25/18 11:28	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/25/18 19:37	DS	TAL PEN

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 400-415994/2-A**
Date Collected: N/A
Date Received: N/A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	415994	10/18/18 14:42	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416437	10/22/18 16:52	VC1	TAL PEN
Total/NA	Prep	3520C			1000 mL	1.0 mL	415994	10/18/18 14:42	JJA	TAL PEN
Total/NA	Analysis	8270D LL		5			416415	10/22/18 18:50	RM	TAL PEN

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 400-415994/4-A**
Date Collected: N/A
Date Received: N/A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	415994	10/18/18 14:42	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416437	10/22/18 17:35	VC1	TAL PEN

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 400-416685/1002**
Date Collected: N/A
Date Received: N/A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416685	10/24/18 06:58	RS	TAL PEN

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 400-416790/1002**
Date Collected: N/A
Date Received: N/A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416790	10/24/18 14:19	BSW	TAL PEN

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 400-416928/2-A**
Date Collected: N/A
Date Received: N/A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	416928	10/25/18 11:28	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/25/18 21:09	DS	TAL PEN

Client Sample ID: Lab Control Sample Dup — **Lab Sample ID: LCSD 400-415994/3-A**
Date Collected: N/A
Date Received: N/A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	415994	10/18/18 14:42	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416437	10/22/18 17:13	VC1	TAL PEN
Total/NA	Prep	3520C			1000 mL	1.0 mL	415994	10/18/18 14:42	JJA	TAL PEN
Total/NA	Analysis	8270D LL		5			416415	10/22/18 19:06	RM	TAL PEN

Client Sample ID: Lab Control Sample Dup — **Lab Sample ID: LCSD 400-415994/5-A**
Date Collected: N/A
Date Received: N/A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	415994	10/18/18 14:42	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416437	10/22/18 17:56	VC1	TAL PEN

Client Sample ID: Lab Control Sample Dup — **Lab Sample ID: LCSD 400-416928/3-A**
Date Collected: N/A
Date Received: N/A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	416928	10/25/18 11:28	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/25/18 21:39	DS	TAL PEN

Client Sample ID: MW28-ROX-101118 — **Lab Sample ID: 400-160492-7 MS**
Date Collected: 10/11/18 13:20
Date Received: 10/12/18 08:41
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416685	10/24/18 12:40	RS	TAL PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160492-1

Client Sample ID: MW28-ROX-101118

Date Collected: 10/11/18 13:20
Date Received: 10/12/18 08:41

Lab Sample ID: 400-160492-7 MS
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1027 mL	1.0 mL	415994	10/18/18 14:42	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416437	10/22/18 18:18	VC1	TAL PEN
Total/NA	Prep	3520C			1027 mL	1.0 mL	415994	10/18/18 14:42	JJA	TAL PEN
Total/NA	Analysis	8270D LL		5			416478	10/23/18 00:06	RM	TAL PEN
Total/NA	Prep	8011			34.1 mL	35 mL	416928	10/25/18 11:28	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/26/18 01:44	DS	TAL PEN

Client Sample ID: MW28-ROX-101118

Date Collected: 10/11/18 13:20
Date Received: 10/12/18 08:41

Lab Sample ID: 400-160492-7 MSD
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416685	10/24/18 13:04	RS	TAL PEN
Total/NA	Prep	3520C			1029 mL	1.0 mL	415994	10/18/18 14:42	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416437	10/22/18 18:39	VC1	TAL PEN
Total/NA	Prep	3520C			1029 mL	1.0 mL	415994	10/18/18 14:42	JJA	TAL PEN
Total/NA	Analysis	8270D LL		5			416478	10/23/18 00:21	RM	TAL PEN
Total/NA	Prep	8011			33.2 mL	35 mL	416928	10/25/18 11:28	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/26/18 02:08	DS	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

GC/MS VOA

Analysis Batch: 416685

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160492-3	P114R-ROX-101118	Total/NA	Water	8260B	
400-160492-5	MW13-ROX-101118	Total/NA	Water	8260B	
400-160492-6	MW11-ROX-101118	Total/NA	Water	8260B	
400-160492-7	MW28-ROX-101118	Total/NA	Water	8260B	
MB 400-416685/4	Method Blank	Total/NA	Water	8260B	
LCS 400-416685/1002	Lab Control Sample	Total/NA	Water	8260B	
400-160492-7 MS	MW28-ROX-101118	Total/NA	Water	8260B	
400-160492-7 MSD	MW28-ROX-101118	Total/NA	Water	8260B	

Analysis Batch: 416790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160492-2	TB-ROX-101118-8260	Total/NA	Water	8260B	
400-160492-4	P114R-ROX-101118-DUP	Total/NA	Water	8260B	
MB 400-416790/4	Method Blank	Total/NA	Water	8260B	
LCS 400-416790/1002	Lab Control Sample	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 415994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160492-3	P114R-ROX-101118	Total/NA	Water	3520C	
400-160492-4 - DL	P114R-ROX-101118-DUP	Total/NA	Water	3520C	
400-160492-4	P114R-ROX-101118-DUP	Total/NA	Water	3520C	
400-160492-5	MW13-ROX-101118	Total/NA	Water	3520C	
400-160492-6	MW11-ROX-101118	Total/NA	Water	3520C	
400-160492-7	MW28-ROX-101118	Total/NA	Water	3520C	
MB 400-415994/1-A	Method Blank	Total/NA	Water	3520C	
LCS 400-415994/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 400-415994/4-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-415994/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
LCSD 400-415994/5-A	Lab Control Sample Dup	Total/NA	Water	3520C	
400-160492-7 MS	MW28-ROX-101118	Total/NA	Water	3520C	
400-160492-7 MSD	MW28-ROX-101118	Total/NA	Water	3520C	

Analysis Batch: 416415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160492-4	P114R-ROX-101118-DUP	Total/NA	Water	8270D LL	415994
MB 400-415994/1-A	Method Blank	Total/NA	Water	8270D LL	415994
LCS 400-415994/2-A	Lab Control Sample	Total/NA	Water	8270D LL	415994
LCSD 400-415994/3-A	Lab Control Sample Dup	Total/NA	Water	8270D LL	415994

Analysis Batch: 416437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160492-3	P114R-ROX-101118	Total/NA	Water	8270D	415994
400-160492-4	P114R-ROX-101118-DUP	Total/NA	Water	8270D	415994
400-160492-5	MW13-ROX-101118	Total/NA	Water	8270D	415994
400-160492-6	MW11-ROX-101118	Total/NA	Water	8270D	415994
400-160492-7	MW28-ROX-101118	Total/NA	Water	8270D	415994
MB 400-415994/1-A	Method Blank	Total/NA	Water	8270D	415994
LCS 400-415994/2-A	Lab Control Sample	Total/NA	Water	8270D	415994

GC/MS Semi VOA (Continued)

Analysis Batch: 416437 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-415994/4-A	Lab Control Sample	Total/NA	Water	8270D	415994
LCSD 400-415994/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	415994
LCSD 400-415994/5-A	Lab Control Sample Dup	Total/NA	Water	8270D	415994
400-160492-7 MS	MW28-ROX-101118	Total/NA	Water	8270D	415994
400-160492-7 MSD	MW28-ROX-101118	Total/NA	Water	8270D	415994

Analysis Batch: 416478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160492-3	P114R-ROX-101118	Total/NA	Water	8270D LL	415994
400-160492-5	MW13-ROX-101118	Total/NA	Water	8270D LL	415994
400-160492-6	MW11-ROX-101118	Total/NA	Water	8270D LL	415994
400-160492-7	MW28-ROX-101118	Total/NA	Water	8270D LL	415994
400-160492-7 MS	MW28-ROX-101118	Total/NA	Water	8270D LL	415994
400-160492-7 MSD	MW28-ROX-101118	Total/NA	Water	8270D LL	415994

Analysis Batch: 416619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160492-4 - DL	P114R-ROX-101118-DUP	Total/NA	Water	8270D LL	415994

GC Semi VOA

Prep Batch: 416928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160492-1	TB-ROX-101118-8011	Total/NA	Water	8011	
400-160492-3	P114R-ROX-101118	Total/NA	Water	8011	
400-160492-4	P114R-ROX-101118-DUP	Total/NA	Water	8011	
400-160492-5	MW13-ROX-101118	Total/NA	Water	8011	
400-160492-6	MW11-ROX-101118	Total/NA	Water	8011	
400-160492-7	MW28-ROX-101118	Total/NA	Water	8011	
MB 400-416928/1-A	Method Blank	Total/NA	Water	8011	
LCS 400-416928/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 400-416928/3-A	Lab Control Sample Dup	Total/NA	Water	8011	
400-160492-7 MS	MW28-ROX-101118	Total/NA	Water	8011	
400-160492-7 MSD	MW28-ROX-101118	Total/NA	Water	8011	

Analysis Batch: 417027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160492-1	TB-ROX-101118-8011	Total/NA	Water	8011	416928
400-160492-3	P114R-ROX-101118	Total/NA	Water	8011	416928
400-160492-4	P114R-ROX-101118-DUP	Total/NA	Water	8011	416928
400-160492-5	MW13-ROX-101118	Total/NA	Water	8011	416928
400-160492-6	MW11-ROX-101118	Total/NA	Water	8011	416928
400-160492-7	MW28-ROX-101118	Total/NA	Water	8011	416928
MB 400-416928/1-A	Method Blank	Total/NA	Water	8011	416928
LCS 400-416928/2-A	Lab Control Sample	Total/NA	Water	8011	416928
LCSD 400-416928/3-A	Lab Control Sample Dup	Total/NA	Water	8011	416928
400-160492-7 MS	MW28-ROX-101118	Total/NA	Water	8011	416928
400-160492-7 MSD	MW28-ROX-101118	Total/NA	Water	8011	416928

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-416685/4
Matrix: Water
Analysis Batch: 416685

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/24/18 07:52	1
Acrolein	ND		20	10	ug/L			10/24/18 07:52	1
Acrylonitrile	ND		10	2.8	ug/L			10/24/18 07:52	1
Benzene	ND		1.0	0.38	ug/L			10/24/18 07:52	1
Bromobenzene	ND		1.0	0.54	ug/L			10/24/18 07:52	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/24/18 07:52	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/24/18 07:52	1
Bromoform	ND		5.0	0.71	ug/L			10/24/18 07:52	1
Bromomethane	ND		1.0	0.98	ug/L			10/24/18 07:52	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/24/18 07:52	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/24/18 07:52	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/24/18 07:52	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/24/18 07:52	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/24/18 07:52	1
Chloroethane	ND		1.0	0.76	ug/L			10/24/18 07:52	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/24/18 07:52	1
Chloroform	ND		1.0	0.60	ug/L			10/24/18 07:52	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/24/18 07:52	1
Chloromethane	ND		1.0	0.83	ug/L			10/24/18 07:52	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/24/18 07:52	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/24/18 07:52	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/24/18 07:52	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/24/18 07:52	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/24/18 07:52	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/24/18 07:52	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/24/18 07:52	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/24/18 07:52	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/24/18 07:52	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/24/18 07:52	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/24/18 07:52	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/24/18 07:52	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/24/18 07:52	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/24/18 07:52	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/24/18 07:52	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/24/18 07:52	1
2-Hexanone	ND		25	3.1	ug/L			10/24/18 07:52	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/24/18 07:52	1
Methylene bromide	ND		5.0	0.59	ug/L			10/24/18 07:52	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/24/18 07:52	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/24/18 07:52	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/24/18 07:52	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/24/18 07:52	1
Naphthalene	ND		1.0	1.0	ug/L			10/24/18 07:52	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/24/18 07:52	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/24/18 07:52	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/24/18 07:52	1
o-Xylene	ND		5.0	0.60	ug/L			10/24/18 07:52	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/24/18 07:52	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-416685/4
Matrix: Water
Analysis Batch: 416685

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/24/18 07:52	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/24/18 07:52	1
Styrene	ND		1.0	1.0	ug/L			10/24/18 07:52	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/24/18 07:52	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/24/18 07:52	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/24/18 07:52	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/24/18 07:52	1
Toluene	ND		1.0	0.70	ug/L			10/24/18 07:52	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/24/18 07:52	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/24/18 07:52	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/24/18 07:52	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/24/18 07:52	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/24/18 07:52	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/24/18 07:52	1
Trichloroethene	ND		1.0	0.50	ug/L			10/24/18 07:52	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/24/18 07:52	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/24/18 07:52	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/24/18 07:52	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/24/18 07:52	1
Vinyl acetate	ND		25	2.0	ug/L			10/24/18 07:52	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/24/18 07:52	1
Xylenes, Total	ND		10	1.6	ug/L			10/24/18 07:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*78 - 118*		*10/24/18 07:52*	*1*
Dibromofluoromethane	*97*		*81 - 121*		*10/24/18 07:52*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*10/24/18 07:52*	*1*

Lab Sample ID: LCS 400-416685/1002
Matrix: Water
Analysis Batch: 416685

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	200	194		ug/L		97	43 - 160
Acrolein	500	360		ug/L		72	38 - 160
Acrylonitrile	500	531		ug/L		106	64 - 142
Benzene	50.0	48.1		ug/L		96	70 - 130
Bromobenzene	50.0	53.0		ug/L		106	70 - 132
Bromochloromethane	50.0	52.9		ug/L		106	70 - 130
Bromodichloromethane	50.0	48.6		ug/L		97	67 - 133
Bromoform	50.0	46.7		ug/L		93	57 - 140
Bromomethane	50.0	42.5		ug/L		85	10 - 160
2-Butanone (MEK)	200	165		ug/L		82	61 - 145
Carbon disulfide	50.0	46.0		ug/L		92	61 - 137
Carbon tetrachloride	50.0	48.0		ug/L		96	61 - 137
Chlorobenzene	50.0	50.0		ug/L		100	70 - 130
Dibromochloromethane	50.0	48.7		ug/L		97	67 - 135
Chloroethane	50.0	41.9		ug/L		84	55 - 141

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-416685/1002
Matrix: Water
Analysis Batch: 416685

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloroethyl vinyl ether	50.0	37.2		ug/L		74	10 - 160
Chloroform	50.0	50.7		ug/L		101	69 - 130
1-Chlorohexane	50.0	50.7		ug/L		101	69 - 130
Chloromethane	50.0	43.2		ug/L		86	58 - 137
cis-1,2-Dichloroethene	50.0	51.4		ug/L		103	68 - 130
cis-1,3-Dichloropropene	50.0	44.6		ug/L		89	69 - 132
1,2-Dichlorobenzene	50.0	54.3		ug/L		109	67 - 130
1,3-Dichlorobenzene	50.0	56.2		ug/L		112	70 - 130
1,4-Dichlorobenzene	50.0	55.3		ug/L		111	70 - 130
Dichlorodifluoromethane	50.0	32.2		ug/L		64	41 - 146
1,1-Dichloroethane	50.0	50.9		ug/L		102	70 - 130
1,2-Dichloroethane	50.0	52.2		ug/L		104	69 - 130
1,1-Dichloroethene	50.0	48.9		ug/L		98	63 - 134
1,2-Dichloropropane	50.0	50.6		ug/L		101	70 - 130
1,3-Dichloropropane	50.0	47.2		ug/L		94	70 - 130
2,2-Dichloropropane	50.0	38.4		ug/L		77	52 - 135
1,1-Dichloropropene	50.0	48.6		ug/L		97	70 - 130
Ethylbenzene	50.0	50.9		ug/L		102	70 - 130
Ethyl methacrylate	50.0	44.5		ug/L		89	68 - 130
Hexachlorobutadiene	50.0	52.7		ug/L		105	53 - 140
2-Hexanone	200	190		ug/L		95	65 - 137
Isopropylbenzene	50.0	49.3		ug/L		99	70 - 130
Methylene bromide	50.0	49.4		ug/L		99	70 - 130
Methylene Chloride	50.0	50.0		ug/L		100	66 - 135
4-Methyl-2-pentanone (MIBK)	200	184		ug/L		92	69 - 138
Methyl tert-butyl ether	50.0	42.0		ug/L		84	66 - 130
m-Xylene & p-Xylene	50.0	50.1		ug/L		100	70 - 130
Naphthalene	50.0	44.6		ug/L		89	47 - 149
n-Butylbenzene	50.0	52.2		ug/L		104	67 - 130
N-Propylbenzene	50.0	53.7		ug/L		107	70 - 130
o-Chlorotoluene	50.0	52.1		ug/L		104	70 - 130
o-Xylene	50.0	50.0		ug/L		100	70 - 130
p-Chlorotoluene	50.0	53.1		ug/L		106	70 - 130
p-Isopropyltoluene	50.0	54.0		ug/L		108	65 - 130
sec-Butylbenzene	50.0	51.8		ug/L		104	66 - 130
Styrene	50.0	47.4		ug/L		95	70 - 130
tert-Butylbenzene	50.0	51.0		ug/L		102	64 - 139
1,1,1,2-Tetrachloroethane	50.0	51.0		ug/L		102	67 - 131
1,1,2,2-Tetrachloroethane	50.0	49.4		ug/L		99	70 - 131
Tetrachloroethene	50.0	51.3		ug/L		103	65 - 130
Toluene	50.0	49.1		ug/L		98	70 - 130
trans-1,2-Dichloroethene	50.0	50.9		ug/L		102	70 - 130
trans-1,3-Dichloropropene	50.0	42.0		ug/L		84	63 - 130
1,2,3-Trichlorobenzene	50.0	50.4		ug/L		101	60 - 138
1,2,4-Trichlorobenzene	50.0	51.6		ug/L		103	60 - 140
1,1,1-Trichloroethane	50.0	49.0		ug/L		98	68 - 130
1,1,2-Trichloroethane	50.0	47.5		ug/L		95	70 - 130
Trichloroethene	50.0	51.7		ug/L		103	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-416685/1002
Matrix: Water
Analysis Batch: 416685

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	50.0	43.5		ug/L		87	65 - 138
1,2,3-Trichloropropane	50.0	49.6		ug/L		99	70 - 130
1,2,4-Trimethylbenzene	50.0	52.4		ug/L		105	70 - 130
1,3,5-Trimethylbenzene	50.0	52.7		ug/L		105	69 - 130
Vinyl acetate	100	78.8		ug/L		79	26 - 160
Vinyl chloride	50.0	40.2		ug/L		80	59 - 136
Xylenes, Total	100	100		ug/L		100	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*100*		*78 - 118*
Dibromofluoromethane	*97*		*81 - 121*
Toluene-d8 (Surr)	*100*		*80 - 120*

Lab Sample ID: 400-160492-7 MS
Matrix: Water
Analysis Batch: 416685

Client Sample ID: MW28-ROX-101118
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	ND		200	195		ug/L		97	43 - 150
Acrolein	ND		500	374		ug/L		75	38 - 150
Acrylonitrile	ND		500	539		ug/L		108	62 - 149
Benzene	2.6		50.0	50.1		ug/L		95	56 - 142
Bromobenzene	ND		50.0	53.2		ug/L		106	59 - 136
Bromochloromethane	ND		50.0	53.3		ug/L		107	64 - 140
Bromodichloromethane	ND		50.0	48.3		ug/L		97	59 - 143
Bromoform	ND		50.0	46.4		ug/L		93	50 - 140
Bromomethane	ND		50.0	44.0		ug/L		88	10 - 150
2-Butanone (MEK)	ND		200	167		ug/L		83	55 - 150
Carbon disulfide	ND		50.0	44.5		ug/L		89	48 - 150
Carbon tetrachloride	ND		50.0	48.5		ug/L		97	55 - 145
Chlorobenzene	ND		50.0	48.8		ug/L		98	64 - 130
Dibromochloromethane	ND		50.0	48.0		ug/L		96	56 - 143
Chloroethane	ND		50.0	43.1		ug/L		86	50 - 150
2-Chloroethyl vinyl ether	ND	F1	50.0	3.78	J F1	ug/L		8	10 - 150
Chloroform	ND		50.0	51.2		ug/L		102	60 - 141
1-Chlorohexane	ND		50.0	49.9		ug/L		100	56 - 136
Chloromethane	ND		50.0	42.4		ug/L		85	49 - 148
cis-1,2-Dichloroethene	ND		50.0	50.7		ug/L		101	59 - 143
cis-1,3-Dichloropropene	ND		50.0	43.9		ug/L		88	57 - 140
1,2-Dichlorobenzene	ND		50.0	54.0		ug/L		108	52 - 137
1,3-Dichlorobenzene	ND		50.0	54.7		ug/L		109	54 - 135
1,4-Dichlorobenzene	ND		50.0	53.3		ug/L		107	53 - 135
Dichlorodifluoromethane	ND		50.0	33.3		ug/L		67	16 - 150
1,1-Dichloroethane	ND		50.0	50.1		ug/L		100	61 - 144
1,2-Dichloroethane	ND		50.0	52.7		ug/L		105	60 - 141
1,1-Dichloroethene	ND		50.0	48.2		ug/L		96	54 - 147
1,2-Dichloropropane	ND		50.0	49.3		ug/L		99	66 - 137
1,3-Dichloropropane	ND		50.0	47.5		ug/L		95	66 - 133

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-160492-7 MS
Matrix: Water
Analysis Batch: 416685

Client Sample ID: MW28-ROX-101118
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,2-Dichloropropane	ND		50.0	37.8		ug/L		76	42 - 144
1,1-Dichloropropene	ND		50.0	48.3		ug/L		97	65 - 136
Ethylbenzene	ND		50.0	49.5		ug/L		99	58 - 131
Ethyl methacrylate	ND		50.0	43.8		ug/L		88	64 - 130
Hexachlorobutadiene	ND		50.0	51.5		ug/L		103	31 - 149
2-Hexanone	ND		200	196		ug/L		98	65 - 140
Isopropylbenzene	ND		50.0	47.8		ug/L		96	56 - 133
Methylene bromide	ND		50.0	49.4		ug/L		99	63 - 138
Methylene Chloride	ND		50.0	49.8		ug/L		100	60 - 146
4-Methyl-2-pentanone (MIBK)	ND		200	185		ug/L		92	63 - 146
Methyl tert-butyl ether	5.0		50.0	47.5		ug/L		85	59 - 137
m-Xylene & p-Xylene	ND		50.0	48.5		ug/L		97	57 - 130
Naphthalene	ND		50.0	44.7		ug/L		89	25 - 150
n-Butylbenzene	ND		50.0	51.3		ug/L		103	41 - 142
N-Propylbenzene	ND		50.0	52.6		ug/L		105	51 - 138
o-Chlorotoluene	ND		50.0	51.8		ug/L		104	53 - 134
o-Xylene	ND		50.0	49.0		ug/L		98	61 - 130
p-Chlorotoluene	ND		50.0	52.2		ug/L		104	54 - 133
p-Isopropyltoluene	ND		50.0	52.4		ug/L		105	48 - 139
sec-Butylbenzene	ND		50.0	51.2		ug/L		102	50 - 138
Styrene	ND		50.0	46.2		ug/L		92	58 - 131
tert-Butylbenzene	ND		50.0	50.6		ug/L		101	54 - 146
1,1,1,2-Tetrachloroethane	ND		50.0	50.8		ug/L		102	59 - 137
1,1,2,2-Tetrachloroethane	ND		50.0	49.2		ug/L		98	66 - 135
Tetrachloroethene	ND		50.0	50.9		ug/L		102	52 - 133
Toluene	ND		50.0	48.4		ug/L		97	65 - 130
trans-1,2-Dichloroethene	ND		50.0	50.8		ug/L		102	61 - 143
trans-1,3-Dichloropropene	ND		50.0	41.4		ug/L		83	53 - 133
1,2,3-Trichlorobenzene	ND		50.0	48.7		ug/L		97	43 - 145
1,2,4-Trichlorobenzene	ND		50.0	50.4		ug/L		101	39 - 148
1,1,1-Trichloroethane	ND		50.0	49.5		ug/L		99	57 - 142
1,1,2-Trichloroethane	ND		50.0	48.1		ug/L		96	66 - 131
Trichloroethene	ND		50.0	51.0		ug/L		102	64 - 136
Trichlorofluoromethane	ND		50.0	43.7		ug/L		87	54 - 150
1,2,3-Trichloropropane	ND		50.0	51.8		ug/L		104	65 - 133
1,2,4-Trimethylbenzene	ND		50.0	51.3		ug/L		103	50 - 139
1,3,5-Trimethylbenzene	ND		50.0	51.3		ug/L		103	52 - 135
Vinyl acetate	ND		100	79.4		ug/L		79	26 - 150
Vinyl chloride	ND		50.0	40.4		ug/L		81	46 - 150
Xylenes, Total	ND		100	97.5		ug/L		97	59 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*78 - 118*
Dibromofluoromethane	*99*		*81 - 121*
Toluene-d8 (Surr)	*100*		*80 - 120*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-160492-7 MSD
Matrix: Water
Analysis Batch: 416685

Client Sample ID: MW28-ROX-101118
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	ND		200	198		ug/L		99	43 - 150	2	30
Acrolein	ND		500	371		ug/L		74	38 - 150	1	31
Acrylonitrile	ND		500	542		ug/L		108	62 - 149	1	30
Benzene	2.6		50.0	48.4		ug/L		92	56 - 142	3	30
Bromobenzene	ND		50.0	51.0		ug/L		102	59 - 136	4	30
Bromochloromethane	ND		50.0	52.6		ug/L		105	64 - 140	1	30
Bromodichloromethane	ND		50.0	46.9		ug/L		94	59 - 143	3	30
Bromoform	ND		50.0	45.7		ug/L		91	50 - 140	2	30
Bromomethane	ND		50.0	43.0		ug/L		86	10 - 150	2	50
2-Butanone (MEK)	ND		200	166		ug/L		83	55 - 150	0	30
Carbon disulfide	ND		50.0	43.7		ug/L		87	48 - 150	2	30
Carbon tetrachloride	ND		50.0	47.1		ug/L		94	55 - 145	3	30
Chlorobenzene	ND		50.0	46.9		ug/L		94	64 - 130	4	30
Dibromochloromethane	ND		50.0	47.3		ug/L		95	56 - 143	2	30
Chloroethane	ND		50.0	41.9		ug/L		84	50 - 150	3	30
2-Chloroethyl vinyl ether	ND	F1	50.0	ND	F1	ug/L		0	10 - 150	NC	50
Chloroform	ND		50.0	50.8		ug/L		102	60 - 141	1	30
1-Chlorohexane	ND		50.0	47.4		ug/L		95	56 - 136	5	30
Chloromethane	ND		50.0	42.7		ug/L		85	49 - 148	1	31
cis-1,2-Dichloroethene	ND		50.0	49.7		ug/L		99	59 - 143	2	30
cis-1,3-Dichloropropene	ND		50.0	43.6		ug/L		87	57 - 140	1	30
1,2-Dichlorobenzene	ND		50.0	50.5		ug/L		101	52 - 137	7	30
1,3-Dichlorobenzene	ND		50.0	51.3		ug/L		103	54 - 135	6	30
1,4-Dichlorobenzene	ND		50.0	50.8		ug/L		102	53 - 135	5	30
Dichlorodifluoromethane	ND		50.0	32.3		ug/L		65	16 - 150	3	31
1,1-Dichloroethane	ND		50.0	49.1		ug/L		98	61 - 144	2	30
1,2-Dichloroethane	ND		50.0	51.9		ug/L		104	60 - 141	2	30
1,1-Dichloroethene	ND		50.0	47.5		ug/L		95	54 - 147	1	30
1,2-Dichloropropane	ND		50.0	48.2		ug/L		96	66 - 137	2	30
1,3-Dichloropropane	ND		50.0	46.0		ug/L		92	66 - 133	3	30
2,2-Dichloropropane	ND		50.0	38.6		ug/L		77	42 - 144	2	31
1,1-Dichloropropene	ND		50.0	46.5		ug/L		93	65 - 136	4	30
Ethylbenzene	ND		50.0	47.2		ug/L		94	58 - 131	5	30
Ethyl methacrylate	ND		50.0	44.7		ug/L		89	64 - 130	2	30
Hexachlorobutadiene	ND		50.0	45.6		ug/L		91	31 - 149	12	36
2-Hexanone	ND		200	201		ug/L		100	65 - 140	3	30
Isopropylbenzene	ND		50.0	45.6		ug/L		91	56 - 133	5	30
Methylene bromide	ND		50.0	48.2		ug/L		96	63 - 138	2	30
Methylene Chloride	ND		50.0	49.1		ug/L		98	60 - 146	1	32
4-Methyl-2-pentanone (MIBK)	ND		200	188		ug/L		94	63 - 146	2	30
Methyl tert-butyl ether	5.0		50.0	47.5		ug/L		85	59 - 137	0	30
m-Xylene & p-Xylene	ND		50.0	46.1		ug/L		92	57 - 130	5	30
Naphthalene	ND		50.0	44.1		ug/L		88	25 - 150	1	30
n-Butylbenzene	ND		50.0	45.6		ug/L		91	41 - 142	12	31
N-Propylbenzene	ND		50.0	49.3		ug/L		99	51 - 138	6	30
o-Chlorotoluene	ND		50.0	47.8		ug/L		96	53 - 134	8	30
o-Xylene	ND		50.0	46.7		ug/L		93	61 - 130	5	30
p-Chlorotoluene	ND		50.0	48.5		ug/L		97	54 - 133	7	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-160492-7 MSD
Matrix: Water
Analysis Batch: 416685

Client Sample ID: MW28-ROX-101118
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
p-Isopropyltoluene	ND		50.0	48.4		ug/L		97	48 - 139	8	30
sec-Butylbenzene	ND		50.0	47.5		ug/L		95	50 - 138	8	30
Styrene	ND		50.0	43.9		ug/L		88	58 - 131	5	30
tert-Butylbenzene	ND		50.0	47.9		ug/L		96	54 - 146	6	30
1,1,1,2-Tetrachloroethane	ND		50.0	48.9		ug/L		98	59 - 137	4	30
1,1,2,2-Tetrachloroethane	ND		50.0	49.7		ug/L		99	66 - 135	1	30
Tetrachloroethene	ND		50.0	48.7		ug/L		97	52 - 133	4	30
Toluene	ND		50.0	47.2		ug/L		94	65 - 130	2	30
trans-1,2-Dichloroethene	ND		50.0	49.3		ug/L		99	61 - 143	3	30
trans-1,3-Dichloropropene	ND		50.0	41.4		ug/L		83	53 - 133	0	30
1,2,3-Trichlorobenzene	ND		50.0	46.0		ug/L		92	43 - 145	6	30
1,2,4-Trichlorobenzene	ND		50.0	46.5		ug/L		93	39 - 148	8	30
1,1,1-Trichloroethane	ND		50.0	49.1		ug/L		98	57 - 142	1	30
1,1,2-Trichloroethane	ND		50.0	47.1		ug/L		94	66 - 131	2	30
Trichloroethene	ND		50.0	49.4		ug/L		99	64 - 136	3	30
Trichlorofluoromethane	ND		50.0	43.8		ug/L		88	54 - 150	0	30
1,2,3-Trichloropropane	ND		50.0	51.0		ug/L		102	65 - 133	2	30
1,2,4-Trimethylbenzene	ND		50.0	47.5		ug/L		95	50 - 139	8	30
1,3,5-Trimethylbenzene	ND		50.0	48.2		ug/L		96	52 - 135	6	30
Vinyl acetate	ND		100	83.4		ug/L		83	26 - 150	5	33
Vinyl chloride	ND		50.0	40.0		ug/L		80	46 - 150	1	30
Xylenes, Total	ND		100	92.8		ug/L		93	59 - 130	5	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*78 - 118*
Dibromofluoromethane	*97*		*81 - 121*
Toluene-d8 (Surr)	*99*		*80 - 120*

Lab Sample ID: MB 400-416790/4
Matrix: Water
Analysis Batch: 416790

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/24/18 15:21	1
Acrolein	ND		20	10	ug/L			10/24/18 15:21	1
Acrylonitrile	ND		10	2.8	ug/L			10/24/18 15:21	1
Benzene	ND		1.0	0.38	ug/L			10/24/18 15:21	1
Bromobenzene	ND		1.0	0.54	ug/L			10/24/18 15:21	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/24/18 15:21	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/24/18 15:21	1
Bromoform	ND		5.0	0.71	ug/L			10/24/18 15:21	1
Bromomethane	ND		1.0	0.98	ug/L			10/24/18 15:21	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/24/18 15:21	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/24/18 15:21	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/24/18 15:21	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/24/18 15:21	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/24/18 15:21	1
Chloroethane	ND		1.0	0.76	ug/L			10/24/18 15:21	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-416790/4
Matrix: Water
Analysis Batch: 416790

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/24/18 15:21	1
Chloroform	ND		1.0	0.60	ug/L			10/24/18 15:21	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/24/18 15:21	1
Chloromethane	ND		1.0	0.83	ug/L			10/24/18 15:21	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/24/18 15:21	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/24/18 15:21	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/24/18 15:21	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/24/18 15:21	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/24/18 15:21	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/24/18 15:21	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/24/18 15:21	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/24/18 15:21	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/24/18 15:21	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/24/18 15:21	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/24/18 15:21	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/24/18 15:21	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/24/18 15:21	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/24/18 15:21	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/24/18 15:21	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/24/18 15:21	1
2-Hexanone	ND		25	3.1	ug/L			10/24/18 15:21	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/24/18 15:21	1
Methylene bromide	ND		5.0	0.59	ug/L			10/24/18 15:21	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/24/18 15:21	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/24/18 15:21	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/24/18 15:21	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/24/18 15:21	1
Naphthalene	ND		1.0	1.0	ug/L			10/24/18 15:21	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/24/18 15:21	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/24/18 15:21	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/24/18 15:21	1
o-Xylene	ND		5.0	0.60	ug/L			10/24/18 15:21	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/24/18 15:21	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/24/18 15:21	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/24/18 15:21	1
Styrene	ND		1.0	1.0	ug/L			10/24/18 15:21	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/24/18 15:21	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/24/18 15:21	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/24/18 15:21	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/24/18 15:21	1
Toluene	ND		1.0	0.70	ug/L			10/24/18 15:21	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/24/18 15:21	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/24/18 15:21	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/24/18 15:21	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/24/18 15:21	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/24/18 15:21	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/24/18 15:21	1
Trichloroethene	ND		1.0	0.50	ug/L			10/24/18 15:21	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-416790/4
Matrix: Water
Analysis Batch: 416790

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/24/18 15:21	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/24/18 15:21	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/24/18 15:21	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/24/18 15:21	1
Vinyl acetate	ND		25	2.0	ug/L			10/24/18 15:21	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/24/18 15:21	1
Xylenes, Total	ND		10	1.6	ug/L			10/24/18 15:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*78 - 118*		*10/24/18 15:21*	*1*
Dibromofluoromethane	*95*		*81 - 121*		*10/24/18 15:21*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*10/24/18 15:21*	*1*

Lab Sample ID: LCS 400-416790/1002
Matrix: Water
Analysis Batch: 416790

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	200	209		ug/L		105	43 - 160
Acrolein	500	392		ug/L		78	38 - 160
Acrylonitrile	500	573		ug/L		115	64 - 142
Benzene	50.0	52.2		ug/L		104	70 - 130
Bromobenzene	50.0	58.8		ug/L		118	70 - 132
Bromochloromethane	50.0	57.9		ug/L		116	70 - 130
Bromodichloromethane	50.0	52.7		ug/L		105	67 - 133
Bromoform	50.0	51.5		ug/L		103	57 - 140
Bromomethane	50.0	49.3		ug/L		99	10 - 160
2-Butanone (MEK)	200	174		ug/L		87	61 - 145
Carbon disulfide	50.0	50.0		ug/L		100	61 - 137
Carbon tetrachloride	50.0	54.0		ug/L		108	61 - 137
Chlorobenzene	50.0	54.9		ug/L		110	70 - 130
Dibromochloromethane	50.0	52.9		ug/L		106	67 - 135
Chloroethane	50.0	46.5		ug/L		93	55 - 141
2-Chloroethyl vinyl ether	50.0	40.6		ug/L		81	10 - 160
Chloroform	50.0	55.5		ug/L		111	69 - 130
1-Chlorohexane	50.0	55.6		ug/L		111	69 - 130
Chloromethane	50.0	46.1		ug/L		92	58 - 137
cis-1,2-Dichloroethene	50.0	55.8		ug/L		112	68 - 130
cis-1,3-Dichloropropene	50.0	48.7		ug/L		97	69 - 132
1,2-Dichlorobenzene	50.0	60.1		ug/L		120	67 - 130
1,3-Dichlorobenzene	50.0	61.1		ug/L		122	70 - 130
1,4-Dichlorobenzene	50.0	61.2		ug/L		122	70 - 130
Dichlorodifluoromethane	50.0	34.9		ug/L		70	41 - 146
1,1-Dichloroethane	50.0	55.3		ug/L		111	70 - 130
1,2-Dichloroethane	50.0	56.8		ug/L		114	69 - 130
1,1-Dichloroethene	50.0	54.0		ug/L		108	63 - 134
1,2-Dichloropropane	50.0	54.2		ug/L		108	70 - 130
1,3-Dichloropropane	50.0	51.1		ug/L		102	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-416790/1002
Matrix: Water
Analysis Batch: 416790

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,2-Dichloropropane	50.0	43.5		ug/L		87	52 - 135
1,1-Dichloropropene	50.0	53.5		ug/L		107	70 - 130
Ethylbenzene	50.0	55.8		ug/L		112	70 - 130
Ethyl methacrylate	50.0	48.1		ug/L		96	68 - 130
Hexachlorobutadiene	50.0	59.8		ug/L		120	53 - 140
2-Hexanone	200	205		ug/L		103	65 - 137
Isopropylbenzene	50.0	53.8		ug/L		108	70 - 130
Methylene bromide	50.0	53.4		ug/L		107	70 - 130
Methylene Chloride	50.0	54.6		ug/L		109	66 - 135
4-Methyl-2-pentanone (MIBK)	200	198		ug/L		99	69 - 138
Methyl tert-butyl ether	50.0	45.7		ug/L		91	66 - 130
m-Xylene & p-Xylene	50.0	54.6		ug/L		109	70 - 130
Naphthalene	50.0	49.3		ug/L		99	47 - 149
n-Butylbenzene	50.0	58.0		ug/L		116	67 - 130
N-Propylbenzene	50.0	59.8		ug/L		120	70 - 130
o-Chlorotoluene	50.0	57.6		ug/L		115	70 - 130
o-Xylene	50.0	54.8		ug/L		110	70 - 130
p-Chlorotoluene	50.0	58.8		ug/L		118	70 - 130
p-Isopropyltoluene	50.0	60.1		ug/L		120	65 - 130
sec-Butylbenzene	50.0	57.7		ug/L		115	66 - 130
Styrene	50.0	51.6		ug/L		103	70 - 130
tert-Butylbenzene	50.0	56.8		ug/L		114	64 - 139
1,1,1,2-Tetrachloroethane	50.0	55.7		ug/L		111	67 - 131
1,1,2,2-Tetrachloroethane	50.0	53.3		ug/L		107	70 - 131
Tetrachloroethene	50.0	57.5		ug/L		115	65 - 130
Toluene	50.0	53.7		ug/L		107	70 - 130
trans-1,2-Dichloroethene	50.0	55.5		ug/L		111	70 - 130
trans-1,3-Dichloropropene	50.0	46.6		ug/L		93	63 - 130
1,2,3-Trichlorobenzene	50.0	56.0		ug/L		112	60 - 138
1,2,4-Trichlorobenzene	50.0	57.1		ug/L		114	60 - 140
1,1,1-Trichloroethane	50.0	55.0		ug/L		110	68 - 130
1,1,2-Trichloroethane	50.0	52.4		ug/L		105	70 - 130
Trichloroethene	50.0	56.5		ug/L		113	70 - 130
Trichlorofluoromethane	50.0	48.4		ug/L		97	65 - 138
1,2,3-Trichloropropane	50.0	53.2		ug/L		106	70 - 130
1,2,4-Trimethylbenzene	50.0	57.8		ug/L		116	70 - 130
1,3,5-Trimethylbenzene	50.0	58.0		ug/L		116	69 - 130
Vinyl acetate	100	87.0		ug/L		87	26 - 160
Vinyl chloride	50.0	43.3		ug/L		87	59 - 136
Xylenes, Total	100	109		ug/L		109	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*102*		*78 - 118*
Dibromofluoromethane	*97*		*81 - 121*
Toluene-d8 (Surr)	*100*		*80 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-415994/1-A
Matrix: Water
Analysis Batch: 416437

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 415994

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.8	ug/L		10/18/18 14:42	10/22/18 16:30	1
Benzenethiol	ND		10	1.7	ug/L		10/18/18 14:42	10/22/18 16:30	1
Benzoic acid	ND		30	7.3	ug/L		10/18/18 14:42	10/22/18 16:30	1
Benzyl alcohol	ND		10	2.0	ug/L		10/18/18 14:42	10/22/18 16:30	1
Bis(2-chloroethoxy)methane	ND		10	0.69	ug/L		10/18/18 14:42	10/22/18 16:30	1
Bis(2-chloroethyl)ether	ND		10	0.74	ug/L		10/18/18 14:42	10/22/18 16:30	1
bis (2-chloroisopropyl) ether	ND		10	0.81	ug/L		10/18/18 14:42	10/22/18 16:30	1
Bis(2-ethylhexyl) phthalate	ND		10	2.3	ug/L		10/18/18 14:42	10/22/18 16:30	1
4-Bromophenyl phenyl ether	ND		10	0.32	ug/L		10/18/18 14:42	10/22/18 16:30	1
Butyl benzyl phthalate	ND		10	0.69	ug/L		10/18/18 14:42	10/22/18 16:30	1
4-Chloroaniline	ND		10	3.4	ug/L		10/18/18 14:42	10/22/18 16:30	1
4-Chloro-3-methylphenol	ND		10	3.8	ug/L		10/18/18 14:42	10/22/18 16:30	1
2-Chloronaphthalene	ND		10	0.52	ug/L		10/18/18 14:42	10/22/18 16:30	1
2-Chlorophenol	ND		10	2.2	ug/L		10/18/18 14:42	10/22/18 16:30	1
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		10/18/18 14:42	10/22/18 16:30	1
Dibenz[a,h]acridine	ND		10	3.0	ug/L		10/18/18 14:42	10/22/18 16:30	1
Dibenzofuran	ND		10	0.52	ug/L		10/18/18 14:42	10/22/18 16:30	1
3,3'-Dichlorobenzidine	ND		10	2.6	ug/L		10/18/18 14:42	10/22/18 16:30	1
2,4-Dichlorophenol	ND		10	3.0	ug/L		10/18/18 14:42	10/22/18 16:30	1
Diethyl phthalate	ND		10	0.70	ug/L		10/18/18 14:42	10/22/18 16:30	1
2,4-Dimethylphenol	ND		10	3.5	ug/L		10/18/18 14:42	10/22/18 16:30	1
Dimethyl phthalate	ND		10	0.60	ug/L		10/18/18 14:42	10/22/18 16:30	1
Di-n-butyl phthalate	ND		10	2.7	ug/L		10/18/18 14:42	10/22/18 16:30	1
4,6-Dinitro-ortho-cresol	ND		10	2.0	ug/L		10/18/18 14:42	10/22/18 16:30	1
2,4-Dinitrophenol	ND		30	3.4	ug/L		10/18/18 14:42	10/22/18 16:30	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		10/18/18 14:42	10/22/18 16:30	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		10/18/18 14:42	10/22/18 16:30	1
Di-n-octyl phthalate	ND		10	0.44	ug/L		10/18/18 14:42	10/22/18 16:30	1
1,4-Dioxane	ND		10	1.0	ug/L		10/18/18 14:42	10/22/18 16:30	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		10/18/18 14:42	10/22/18 16:30	1
Hexachlorobenzene	ND		10	0.25	ug/L		10/18/18 14:42	10/22/18 16:30	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		10/18/18 14:42	10/22/18 16:30	1
Hexachloroethane	ND		10	4.2	ug/L		10/18/18 14:42	10/22/18 16:30	1
Indene	ND		10	1.0	ug/L		10/18/18 14:42	10/22/18 16:30	1
Isophorone	ND		10	0.57	ug/L		10/18/18 14:42	10/22/18 16:30	1
2-Methylphenol	ND		10	1.8	ug/L		10/18/18 14:42	10/22/18 16:30	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/18/18 14:42	10/22/18 16:30	1
2-Nitroaniline	ND		10	2.2	ug/L		10/18/18 14:42	10/22/18 16:30	1
3-Nitroaniline	ND		10	1.8	ug/L		10/18/18 14:42	10/22/18 16:30	1
4-Nitroaniline	ND		10	2.5	ug/L		10/18/18 14:42	10/22/18 16:30	1
Nitrobenzene	ND		10	0.55	ug/L		10/18/18 14:42	10/22/18 16:30	1
2-Nitrophenol	ND		10	0.65	ug/L		10/18/18 14:42	10/22/18 16:30	1
4-Nitrophenol	ND		10	2.1	ug/L		10/18/18 14:42	10/22/18 16:30	1
N-Nitrosodimethylamine	ND		10	3.5	ug/L		10/18/18 14:42	10/22/18 16:30	1
N-Nitrosodi-n-propylamine	ND		10	3.3	ug/L		10/18/18 14:42	10/22/18 16:30	1
N-Nitrosodiphenylamine	ND		10	0.47	ug/L		10/18/18 14:42	10/22/18 16:30	1
Pentachlorophenol	ND		20	1.8	ug/L		10/18/18 14:42	10/22/18 16:30	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-415994/1-A
Matrix: Water
Analysis Batch: 416437

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 415994

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		10	2.6	ug/L		10/18/18 14:42	10/22/18 16:30	1
Pyridine	ND		10	3.2	ug/L		10/18/18 14:42	10/22/18 16:30	1
Quinoline	ND		10	6.0	ug/L		10/18/18 14:42	10/22/18 16:30	1
2,4,5-Trichlorophenol	ND		10	3.7	ug/L		10/18/18 14:42	10/22/18 16:30	1
2,4,6-Trichlorophenol	ND		10	3.5	ug/L		10/18/18 14:42	10/22/18 16:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*48*		*34 - 120*	*10/18/18 14:42*	*10/22/18 16:30*	*1*
2-Fluorophenol	*31*		*10 - 120*	*10/18/18 14:42*	*10/22/18 16:30*	*1*
Nitrobenzene-d5	*48*		*27 - 120*	*10/18/18 14:42*	*10/22/18 16:30*	*1*
Phenol-d5	*47*		*10 - 120*	*10/18/18 14:42*	*10/22/18 16:30*	*1*
Terphenyl-d14	*72*		*53 - 125*	*10/18/18 14:42*	*10/22/18 16:30*	*1*
2,4,6-Tribromophenol	*71*		*15 - 135*	*10/18/18 14:42*	*10/22/18 16:30*	*1*

Lab Sample ID: LCS 400-415994/2-A
Matrix: Water
Analysis Batch: 416437

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 415994

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aniline	30.0	18.0		ug/L		60	29 - 120
Benzoic acid	118	48.9		ug/L		42	10 - 150
Benzyl alcohol	30.0	18.0		ug/L		60	19 - 125
Bis(2-chloroethoxy)methane	30.0	17.5		ug/L		58	45 - 120
Bis(2-chloroethyl)ether	30.0	17.7		ug/L		59	48 - 120
bis (2-chloroisopropyl) ether	30.0	15.9		ug/L		53	30 - 125
Bis(2-ethylhexyl) phthalate	30.0	28.5		ug/L		95	48 - 150
4-Bromophenyl phenyl ether	30.0	27.8		ug/L		93	55 - 122
Butyl benzyl phthalate	30.0	22.4		ug/L		75	46 - 145
4-Chloroaniline	30.0	16.4		ug/L		55	30 - 120
4-Chloro-3-methylphenol	30.0	21.5		ug/L		72	39 - 140
2-Chloronaphthalene	30.0	19.3		ug/L		64	52 - 120
2-Chlorophenol	30.0	19.4		ug/L		65	34 - 120
4-Chlorophenyl phenyl ether	30.0	24.2		ug/L		81	58 - 124
Dibenz[a,h]acridine	30.0	25.6		ug/L		85	46 - 149
Dibenzofuran	30.0	21.4		ug/L		71	58 - 123
3,3'-Dichlorobenzidine	40.0	40.9		ug/L		102	39 - 135
2,4-Dichlorophenol	30.0	23.3		ug/L		78	39 - 128
Diethyl phthalate	30.0	24.6		ug/L		82	44 - 146
2,4-Dimethylphenol	30.0	21.5		ug/L		72	44 - 120
Dimethyl phthalate	30.0	22.7		ug/L		76	50 - 131
Di-n-butyl phthalate	30.0	27.7		ug/L		92	55 - 131
4,6-Dinitro-ortho-cresol	60.0	60.3		ug/L		101	10 - 150
2,4-Dinitrophenol	60.0	65.2		ug/L		109	10 - 150
2,4-Dinitrotoluene	30.0	23.7		ug/L		79	58 - 140
2,6-Dinitrotoluene	30.0	22.6		ug/L		75	57 - 130
Di-n-octyl phthalate	30.0	25.9		ug/L		86	50 - 150
1,4-Dioxane	30.0	12.0		ug/L		40	25 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-415994/2-A
Matrix: Water
Analysis Batch: 416437

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 415994

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Diphenylhydrazine (as Azobenzene)	30.0	17.9		ug/L		60	47 - 123
Hexachlorobenzene	30.0	32.6		ug/L		109	52 - 131
Hexachlorocyclopentadiene	30.0	6.15	J	ug/L		20	10 - 129
Hexachloroethane	30.0	14.4		ug/L		48	41 - 120
Indene	30.0	18.1		ug/L		60	47 - 120
Isophorone	30.0	17.5		ug/L		58	49 - 120
2-Methylphenol	30.0	24.9		ug/L		83	39 - 123
3 & 4 Methylphenol	30.0	23.6		ug/L		79	38 - 121
2-Nitroaniline	30.0	18.1		ug/L		60	47 - 150
3-Nitroaniline	30.0	17.2		ug/L		57	34 - 132
4-Nitroaniline	30.0	18.3		ug/L		61	41 - 135
Nitrobenzene	30.0	16.3		ug/L		54	47 - 120
2-Nitrophenol	30.0	25.0		ug/L		83	28 - 136
4-Nitrophenol	60.0	56.4		ug/L		94	10 - 150
N-Nitrosodimethylamine	30.0	21.2		ug/L		71	22 - 148
N-Nitrosodi-n-propylamine	30.0	21.1		ug/L		70	44 - 120
N-Nitrosodiphenylamine	29.8	23.1		ug/L		78	56 - 120
Pentachlorophenol	60.0	55.5		ug/L		93	15 - 141
Phenol	30.0	15.8		ug/L		53	33 - 120
Pyridine	60.0	26.3		ug/L		44	26 - 120
Quinoline	30.0	19.5		ug/L		65	51 - 129
2,4,5-Trichlorophenol	30.0	24.8		ug/L		83	38 - 147
2,4,6-Trichlorophenol	30.0	23.7		ug/L		79	36 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*58*		*34 - 120*
2-Fluorophenol	*34*		*10 - 120*
Nitrobenzene-d5	*51*		*27 - 120*
Phenol-d5	*51*		*10 - 120*
Terphenyl-d14	*71*		*53 - 125*
2,4,6-Tribromophenol	*82*		*15 - 135*

Lab Sample ID: LCS 400-415994/4-A
Matrix: Water
Analysis Batch: 416437

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 415994

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzenethiol	30.0	ND	*	ug/L		2	10 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*66*		*34 - 120*
2-Fluorophenol	*47*		*10 - 120*
Nitrobenzene-d5	*64*		*27 - 120*
Phenol-d5	*64*		*10 - 120*
Terphenyl-d14	*99*		*53 - 125*
2,4,6-Tribromophenol	*94*		*15 - 135*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-415994/3-A
Matrix: Water
Analysis Batch: 416437

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 415994

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aniline	30.0	19.0		ug/L		63	29 - 120	5	30
Benzoic acid	118	52.0		ug/L		44	10 - 150	6	30
Benzyl alcohol	30.0	18.7		ug/L		62	19 - 125	4	30
Bis(2-chloroethoxy)methane	30.0	18.4		ug/L		61	45 - 120	5	30
Bis(2-chloroethyl)ether	30.0	18.2		ug/L		61	48 - 120	2	30
bis (2-chloroisopropyl) ether	30.0	16.0		ug/L		53	30 - 125	0	30
Bis(2-ethylhexyl) phthalate	30.0	25.7		ug/L		86	48 - 150	10	30
4-Bromophenyl phenyl ether	30.0	29.4		ug/L		98	55 - 122	6	30
Butyl benzyl phthalate	30.0	23.8		ug/L		79	46 - 145	6	30
4-Chloroaniline	30.0	18.0		ug/L		60	30 - 120	9	30
4-Chloro-3-methylphenol	30.0	22.9		ug/L		76	39 - 140	6	30
2-Chloronaphthalene	30.0	20.3		ug/L		68	52 - 120	5	30
2-Chlorophenol	30.0	20.5		ug/L		68	34 - 120	6	30
4-Chlorophenyl phenyl ether	30.0	25.3		ug/L		84	58 - 124	5	30
Dibenz[a,h]acridine	30.0	26.3		ug/L		88	46 - 149	3	30
Dibenzofuran	30.0	22.2		ug/L		74	58 - 123	4	30
3,3'-Dichlorobenzidine	40.0	41.1		ug/L		103	39 - 135	0	30
2,4-Dichlorophenol	30.0	25.1		ug/L		84	39 - 128	8	30
Diethyl phthalate	30.0	25.2		ug/L		84	44 - 146	3	30
2,4-Dimethylphenol	30.0	22.7		ug/L		76	44 - 120	5	30
Dimethyl phthalate	30.0	23.6		ug/L		79	50 - 131	4	30
Di-n-butyl phthalate	30.0	28.4		ug/L		95	55 - 131	2	30
4,6-Dinitro-ortho-cresol	60.0	64.8		ug/L		108	10 - 150	7	30
2,4-Dinitrophenol	60.0	72.9		ug/L		121	10 - 150	11	30
2,4-Dinitrotoluene	30.0	24.4		ug/L		81	58 - 140	3	30
2,6-Dinitrotoluene	30.0	23.5		ug/L		78	57 - 130	4	30
Di-n-octyl phthalate	30.0	26.8		ug/L		89	50 - 150	4	30
1,4-Dioxane	30.0	12.8		ug/L		43	25 - 120	6	30
1,2-Diphenylhydrazine (as Azobenzene)	30.0	18.6		ug/L		62	47 - 123	4	30
Hexachlorobenzene	30.0	34.4		ug/L		115	52 - 131	5	30
Hexachlorocyclopentadiene	30.0	4.13	J *	ug/L		14	10 - 129	39	30
Hexachloroethane	30.0	15.0		ug/L		50	41 - 120	4	30
Indene	30.0	18.5		ug/L		62	47 - 120	3	30
Isophorone	30.0	17.9		ug/L		60	49 - 120	2	30
2-Methylphenol	30.0	25.7		ug/L		86	39 - 123	3	30
3 & 4 Methylphenol	30.0	24.5		ug/L		82	38 - 121	4	30
2-Nitroaniline	30.0	18.9		ug/L		63	47 - 150	4	30
3-Nitroaniline	30.0	18.0		ug/L		60	34 - 132	5	30
4-Nitroaniline	30.0	22.3		ug/L		74	41 - 135	20	30
Nitrobenzene	30.0	17.1		ug/L		57	47 - 120	5	30
2-Nitrophenol	30.0	26.4		ug/L		88	28 - 136	5	30
4-Nitrophenol	60.0	57.3		ug/L		95	10 - 150	2	30
N-Nitrosodimethylamine	30.0	20.6		ug/L		69	22 - 148	3	30
N-Nitrosodi-n-propylamine	30.0	21.4		ug/L		71	44 - 120	1	30
N-Nitrosodiphenylamine	29.8	24.6		ug/L		83	56 - 120	6	30
Pentachlorophenol	60.0	58.4		ug/L		97	15 - 141	5	30
Phenol	30.0	16.8		ug/L		56	33 - 120	6	30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-415994/3-A
Matrix: Water
Analysis Batch: 416437

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 415994

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Pyridine	60.0	27.1		ug/L		45	26 - 120	3	30
Quinoline	30.0	20.0		ug/L		67	51 - 129	2	30
2,4,5-Trichlorophenol	30.0	26.5		ug/L		88	38 - 147	7	30
2,4,6-Trichlorophenol	30.0	25.3		ug/L		84	36 - 139	7	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*60*		*34 - 120*
2-Fluorophenol	*35*		*10 - 120*
Nitrobenzene-d5	*52*		*27 - 120*
Phenol-d5	*53*		*10 - 120*
Terphenyl-d14	*72*		*53 - 125*
2,4,6-Tribromophenol	*84*		*15 - 135*

Lab Sample ID: LCSD 400-415994/5-A
Matrix: Water
Analysis Batch: 416437

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 415994

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzenethiol	30.0	ND	*	ug/L		2	10 - 120	23	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*59*		*34 - 120*
2-Fluorophenol	*46*		*10 - 120*
Nitrobenzene-d5	*59*		*27 - 120*
Phenol-d5	*58*		*10 - 120*
Terphenyl-d14	*86*		*53 - 125*
2,4,6-Tribromophenol	*84*		*15 - 135*

Lab Sample ID: 400-160492-7 MS
Matrix: Water
Analysis Batch: 416437

Client Sample ID: MW28-ROX-101118
Prep Type: Total/NA
Prep Batch: 415994

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aniline	ND		29.2	13.5		ug/L		46	10 - 143
Benzoic acid	ND		115	88.1		ug/L		77	10 - 134
Benzyl alcohol	ND		29.2	13.9		ug/L		48	10 - 154
Bis(2-chloroethoxy)methane	ND		29.2	13.9		ug/L		47	14 - 147
Bis(2-chloroethyl)ether	ND		29.2	14.6		ug/L		50	28 - 130
bis (2-chloroisopropyl) ether	ND		29.2	12.7		ug/L		44	10 - 141
Bis(2-ethylhexyl) phthalate	10	F1	29.2	20.4	F1	ug/L		35	43 - 160
4-Bromophenyl phenyl ether	ND		29.2	23.0		ug/L		79	26 - 159
Butyl benzyl phthalate	ND		29.2	18.2		ug/L		62	43 - 151
4-Chloroaniline	ND		29.2	8.71	J	ug/L		30	10 - 152
4-Chloro-3-methylphenol	ND		29.2	18.3		ug/L		62	17 - 156
2-Chloronaphthalene	ND		29.2	17.9		ug/L		61	10 - 155
2-Chlorophenol	ND		29.2	16.7		ug/L		57	19 - 130
4-Chlorophenyl phenyl ether	ND		29.2	20.8		ug/L		71	25 - 161
Dibenz[a,h]acridine	ND		29.2	20.5		ug/L		70	42 - 147

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-160492-7 MS
Matrix: Water
Analysis Batch: 416437

Client Sample ID: MW28-ROX-101118
Prep Type: Total/NA
Prep Batch: 415994

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dibenzofuran	ND		29.2	17.9		ug/L		61	18 - 157
3,3'-Dichlorobenzidine	ND		38.9	28.5		ug/L		73	10 - 172
2,4-Dichlorophenol	ND		29.2	20.1		ug/L		69	16 - 147
Diethyl phthalate	ND		29.2	19.5		ug/L		67	23 - 160
2,4-Dimethylphenol	ND		29.2	17.2		ug/L		59	25 - 146
Dimethyl phthalate	ND		29.2	18.2		ug/L		62	11 - 158
Di-n-butyl phthalate	ND		29.2	22.6		ug/L		77	28 - 162
4,6-Dinitro-ortho-cresol	ND		58.4	52.6		ug/L		90	10 - 168
2,4-Dinitrophenol	ND		58.4	62.5		ug/L		107	10 - 166
2,4-Dinitrotoluene	ND		29.2	19.3		ug/L		66	26 - 158
2,6-Dinitrotoluene	ND		29.2	18.0		ug/L		62	19 - 157
Di-n-octyl phthalate	ND		29.2	21.6		ug/L		74	42 - 150
1,4-Dioxane	ND		29.2	8.39	J	ug/L		29	10 - 130
1,2-Diphenylhydrazine (as Azobenzene)	ND		29.2	14.5		ug/L		50	19 - 162
Hexachlorobenzene	ND		29.2	27.3		ug/L		93	45 - 145
Hexachlorocyclopentadiene	ND	*	29.2	6.01	J	ug/L		21	10 - 151
Hexachloroethane	ND		29.2	17.9		ug/L		61	29 - 130
Indene	ND		29.2	15.2		ug/L		52	22 - 130
Isophorone	ND		29.2	14.3		ug/L		49	24 - 144
2-Methylphenol	ND		29.2	20.5		ug/L		70	22 - 130
3 & 4 Methylphenol	ND		29.2	19.1		ug/L		65	31 - 130
2-Nitroaniline	ND		29.2	14.6		ug/L		50	10 - 162
3-Nitroaniline	ND		29.2	13.4		ug/L		46	10 - 163
4-Nitroaniline	ND		29.2	17.5		ug/L		60	10 - 162
Nitrobenzene	ND		29.2	13.4		ug/L		46	34 - 135
2-Nitrophenol	ND		29.2	20.6		ug/L		71	27 - 134
4-Nitrophenol	ND		58.4	48.0		ug/L		82	10 - 175
N-Nitrosodimethylamine	ND		29.2	15.0		ug/L		51	10 - 139
N-Nitrosodi-n-propylamine	ND		29.2	15.6		ug/L		53	13 - 147
N-Nitrosodiphenylamine	ND		29.0	18.9		ug/L		65	31 - 150
Pentachlorophenol	ND		58.4	53.1		ug/L		91	10 - 180
Phenol	ND		29.2	13.1		ug/L		45	23 - 130
Pyridine	ND		58.4	20.4		ug/L		35	10 - 130
Quinoline	ND		29.2	15.4		ug/L		53	10 - 180
2,4,5-Trichlorophenol	ND		29.2	21.0		ug/L		72	43 - 137
2,4,6-Trichlorophenol	ND		29.2	19.6		ug/L		67	42 - 135

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl	*49*		*34 - 120*
2-Fluorophenol	*33*		*10 - 120*
Nitrobenzene-d5	*47*		*27 - 120*
Phenol-d5	*43*		*10 - 120*
Terphenyl-d14	*57*		*53 - 125*
2,4,6-Tribromophenol	*69*		*15 - 135*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-160492-7 MSD
Matrix: Water
Analysis Batch: 416437

Client Sample ID: MW28-ROX-101118
Prep Type: Total/NA
Prep Batch: 415994

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aniline	ND		29.2	14.8		ug/L		51	10 - 143	9	63
Benzoic acid	ND		114	96.0		ug/L		84	10 - 134	9	49
Benzyl alcohol	ND		29.2	15.9		ug/L		54	10 - 154	13	37
Bis(2-chloroethoxy)methane	ND		29.2	14.6		ug/L		50	14 - 147	5	70
Bis(2-chloroethyl)ether	ND		29.2	15.8		ug/L		54	28 - 130	8	42
bis (2-chloroisopropyl) ether	ND		29.2	12.6		ug/L		43	10 - 141	1	41
Bis(2-ethylhexyl) phthalate	10	F1	29.2	21.7	F1	ug/L		40	43 - 160	7	35
4-Bromophenyl phenyl ether	ND		29.2	24.1		ug/L		83	26 - 159	5	30
Butyl benzyl phthalate	ND		29.2	19.0		ug/L		65	43 - 151	4	32
4-Chloroaniline	ND		29.2	9.01	J	ug/L		31	10 - 152	3	94
4-Chloro-3-methylphenol	ND		29.2	18.8		ug/L		64	17 - 156	3	40
2-Chloronaphthalene	ND		29.2	18.6		ug/L		64	10 - 155	4	29
2-Chlorophenol	ND		29.2	16.8		ug/L		58	19 - 130	1	42
4-Chlorophenyl phenyl ether	ND		29.2	21.3		ug/L		73	25 - 161	3	27
Dibenz[a,h]acridine	ND		29.2	21.5		ug/L		74	42 - 147	4	40
Dibenzofuran	ND		29.2	18.7		ug/L		64	18 - 157	4	29
3,3'-Dichlorobenzidine	ND		38.9	27.9		ug/L		72	10 - 172	2	58
2,4-Dichlorophenol	ND		29.2	21.3		ug/L		73	16 - 147	6	43
Diethyl phthalate	ND		29.2	19.9		ug/L		68	23 - 160	2	40
2,4-Dimethylphenol	ND		29.2	17.9		ug/L		61	25 - 146	4	47
Dimethyl phthalate	ND		29.2	18.9		ug/L		65	11 - 158	4	36
Di-n-butyl phthalate	ND		29.2	23.4		ug/L		80	28 - 162	3	32
4,6-Dinitro-ortho-cresol	ND		58.3	55.9		ug/L		96	10 - 168	6	42
2,4-Dinitrophenol	ND		58.3	66.1		ug/L		113	10 - 166	6	36
2,4-Dinitrotoluene	ND		29.2	20.0		ug/L		69	26 - 158	4	28
2,6-Dinitrotoluene	ND		29.2	18.6		ug/L		64	19 - 157	4	28
Di-n-octyl phthalate	ND		29.2	22.0		ug/L		76	42 - 150	2	35
1,4-Dioxane	ND		29.2	9.13	J	ug/L		31	10 - 130	8	40
1,2-Diphenylhydrazine (as Azobenzene)	ND		29.2	15.2		ug/L		52	19 - 162	5	40
Hexachlorobenzene	ND		29.2	28.3		ug/L		97	45 - 145	4	33
Hexachlorocyclopentadiene	ND	*	29.2	6.26	J	ug/L		21	10 - 151	4	50
Hexachloroethane	ND		29.2	18.5		ug/L		63	29 - 130	3	41
Indene	ND		29.2	15.0		ug/L		52	22 - 130	2	40
Isophorone	ND		29.2	14.9		ug/L		51	24 - 144	4	33
2-Methylphenol	ND		29.2	19.1		ug/L		66	22 - 130	7	47
3 & 4 Methylphenol	ND		29.2	19.1		ug/L		66	31 - 130	0	47
2-Nitroaniline	ND		29.2	15.1		ug/L		52	10 - 162	3	33
3-Nitroaniline	ND		29.2	13.8		ug/L		47	10 - 163	3	39
4-Nitroaniline	ND		29.2	18.2		ug/L		63	10 - 162	4	50
Nitrobenzene	ND		29.2	14.0		ug/L		48	34 - 135	4	35
2-Nitrophenol	ND		29.2	21.2		ug/L		73	27 - 134	3	43
4-Nitrophenol	ND		58.3	51.1		ug/L		88	10 - 175	6	82
N-Nitrosodimethylamine	ND		29.2	15.2		ug/L		52	10 - 139	1	62
N-Nitrosodi-n-propylamine	ND		29.2	15.7		ug/L		54	13 - 147	0	36
N-Nitrosodiphenylamine	ND		28.9	19.7		ug/L		68	31 - 150	4	34
Pentachlorophenol	ND		58.3	56.5		ug/L		97	10 - 180	6	42
Phenol	ND		29.2	14.1		ug/L		48	23 - 130	7	52

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-160492-7 MSD
Matrix: Water
Analysis Batch: 416437

Client Sample ID: MW28-ROX-101118
Prep Type: Total/NA
Prep Batch: 415994

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Pyridine	ND		58.3	20.6		ug/L		35	10 - 130	1	55
Quinoline	ND		29.2	16.3		ug/L		56	10 - 180	6	40
2,4,5-Trichlorophenol	ND		29.2	22.1		ug/L		76	43 - 137	5	42
2,4,6-Trichlorophenol	ND		29.2	20.7		ug/L		71	42 - 135	6	44

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl	*52*		*34 - 120*
2-Fluorophenol	*33*		*10 - 120*
Nitrobenzene-d5	*50*		*27 - 120*
Phenol-d5	*46*		*10 - 120*
Terphenyl-d14	*60*		*53 - 125*
2,4,6-Tribromophenol	*76*		*15 - 135*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 400-415994/1-A
Matrix: Water
Analysis Batch: 416415

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 415994

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/22/18 18:34	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/22/18 18:34	1
Anthracene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/22/18 18:34	1
Benzo[a]anthracene	ND		0.20	0.040	ug/L		10/18/18 14:42	10/22/18 18:34	1
Benzo[a]pyrene	ND		0.20	0.040	ug/L		10/18/18 14:42	10/22/18 18:34	1
Benzo[b]fluoranthene	ND		0.20	0.040	ug/L		10/18/18 14:42	10/22/18 18:34	1
Benzo[g,h,i]perylene	ND		0.20	0.040	ug/L		10/18/18 14:42	10/22/18 18:34	1
Benzo[k]fluoranthene	ND		0.20	0.040	ug/L		10/18/18 14:42	10/22/18 18:34	1
Chrysene	ND		0.20	0.040	ug/L		10/18/18 14:42	10/22/18 18:34	1
Dibenz(a,h)anthracene	ND		0.20	0.040	ug/L		10/18/18 14:42	10/22/18 18:34	1
Fluoranthene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/22/18 18:34	1
Fluorene	ND		0.20	0.021	ug/L		10/18/18 14:42	10/22/18 18:34	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.040	ug/L		10/18/18 14:42	10/22/18 18:34	1
Phenanthrene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/22/18 18:34	1
Pyrene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/22/18 18:34	1
1-Methylnaphthalene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/22/18 18:34	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		10/18/18 14:42	10/22/18 18:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*151*	*X*	*33 - 138*	*10/18/18 14:42*	*10/22/18 18:34*	*1*
2-Fluorobiphenyl	*93*		*15 - 122*	*10/18/18 14:42*	*10/22/18 18:34*	*1*
Nitrobenzene-d5	*79*		*19 - 130*	*10/18/18 14:42*	*10/22/18 18:34*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCS 400-415994/2-A
Matrix: Water
Analysis Batch: 416415

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 415994

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	30.0	29.4		ug/L		98	41 - 120
Acenaphthylene	30.0	28.1		ug/L		94	44 - 120
Anthracene	30.0	30.9		ug/L		103	49 - 120
Benzo[a]anthracene	30.0	29.0		ug/L		97	61 - 135
Benzo[a]pyrene	30.0	29.1		ug/L		97	52 - 120
Benzo[b]fluoranthene	30.0	31.9		ug/L		106	53 - 134
Benzo[g,h,i]perylene	30.0	26.9		ug/L		90	47 - 133
Benzo[k]fluoranthene	30.0	28.4		ug/L		95	57 - 134
Chrysene	30.0	27.8		ug/L		93	55 - 122
Dibenz(a,h)anthracene	30.0	27.9		ug/L		93	48 - 146
Fluoranthene	30.0	30.7		ug/L		102	54 - 128
Fluorene	30.0	32.8		ug/L		109	45 - 125
Indeno[1,2,3-cd]pyrene	30.0	28.6		ug/L		95	43 - 142
Phenanthrene	30.0	30.8		ug/L		103	48 - 120
Pyrene	30.0	28.0		ug/L		93	48 - 132
1-Methylnaphthalene	30.0	15.3		ug/L		51	41 - 120
2-Methylnaphthalene	30.0	15.4		ug/L		51	32 - 124

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14	*88*		*33 - 138*
2-Fluorobiphenyl	*82*		*15 - 122*
Nitrobenzene-d5	*58*		*19 - 130*

Lab Sample ID: LCSD 400-415994/3-A
Matrix: Water
Analysis Batch: 416415

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 415994

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	30.0	29.1		ug/L		97	41 - 120	1	56
Acenaphthylene	30.0	27.4		ug/L		91	44 - 120	3	56
Anthracene	30.0	31.2		ug/L		104	49 - 120	1	51
Benzo[a]anthracene	30.0	29.6		ug/L		99	61 - 135	2	49
Benzo[a]pyrene	30.0	28.9		ug/L		96	52 - 120	1	50
Benzo[b]fluoranthene	30.0	31.8		ug/L		106	53 - 134	1	54
Benzo[g,h,i]perylene	30.0	24.8		ug/L		83	47 - 133	8	50
Benzo[k]fluoranthene	30.0	29.9		ug/L		100	57 - 134	5	52
Chrysene	30.0	28.6		ug/L		95	55 - 122	3	50
Dibenz(a,h)anthracene	30.0	25.9		ug/L		86	48 - 146	8	50
Fluoranthene	30.0	30.6		ug/L		102	54 - 128	0	52
Fluorene	30.0	31.6		ug/L		105	45 - 125	4	56
Indeno[1,2,3-cd]pyrene	30.0	26.9		ug/L		90	43 - 142	6	51
Phenanthrene	30.0	30.7		ug/L		102	48 - 120	0	56
Pyrene	30.0	29.5		ug/L		98	48 - 132	5	52
1-Methylnaphthalene	30.0	16.4		ug/L		55	41 - 120	7	55
2-Methylnaphthalene	30.0	16.1		ug/L		54	32 - 124	4	57

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCSD 400-415994/3-A
Matrix: Water
Analysis Batch: 416415

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 415994

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Terphenyl-d14	89		33 - 138
2-Fluorobiphenyl	78		15 - 122
Nitrobenzene-d5	62		19 - 130

Lab Sample ID: 400-160492-7 MS
Matrix: Water
Analysis Batch: 416478

Client Sample ID: MW28-ROX-101118
Prep Type: Total/NA
Prep Batch: 415994

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	ND		29.2	26.3		ug/L		90	35 - 113
Acenaphthylene	ND		29.2	23.9		ug/L		82	41 - 118
Anthracene	ND		29.2	27.5		ug/L		94	45 - 122
Benzo[a]anthracene	ND		29.2	25.7		ug/L		88	55 - 133
Benzo[a]pyrene	ND		29.2	25.3		ug/L		87	50 - 108
Benzo[b]fluoranthene	ND		29.2	26.7		ug/L		91	50 - 128
Benzo[g,h,i]perylene	ND		29.2	22.5		ug/L		77	46 - 133
Benzo[k]fluoranthene	ND		29.2	27.5		ug/L		94	52 - 128
Chrysene	ND		29.2	24.9		ug/L		85	52 - 116
Dibenz(a,h)anthracene	ND		29.2	23.8		ug/L		81	52 - 143
Fluoranthene	ND		29.2	26.7		ug/L		92	32 - 150
Fluorene	ND		29.2	28.4		ug/L		97	15 - 150
Indeno[1,2,3-cd]pyrene	ND		29.2	24.9		ug/L		85	41 - 141
Phenanthrene	ND		29.2	26.9		ug/L		92	36 - 125
Pyrene	ND		29.2	25.1		ug/L		86	41 - 127
1-Methylnaphthalene	0.039	J	29.2	15.8		ug/L		54	10 - 150
2-Methylnaphthalene	ND		29.2	15.6		ug/L		53	10 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
Terphenyl-d14	76		33 - 138
2-Fluorobiphenyl	71		15 - 122
Nitrobenzene-d5	54		19 - 130

Lab Sample ID: 400-160492-7 MSD
Matrix: Water
Analysis Batch: 416478

Client Sample ID: MW28-ROX-101118
Prep Type: Total/NA
Prep Batch: 415994

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	ND		29.2	24.4		ug/L		84	35 - 113	8	49
Acenaphthylene	ND		29.2	22.6		ug/L		78	41 - 118	6	48
Anthracene	ND		29.2	25.7		ug/L		88	45 - 122	7	56
Benzo[a]anthracene	ND		29.2	24.1		ug/L		83	55 - 133	6	57
Benzo[a]pyrene	ND		29.2	24.0		ug/L		82	50 - 108	5	59
Benzo[b]fluoranthene	ND		29.2	24.8		ug/L		85	50 - 128	7	62
Benzo[g,h,i]perylene	ND		29.2	20.2		ug/L		69	46 - 133	11	58
Benzo[k]fluoranthene	ND		29.2	25.8		ug/L		88	52 - 128	6	58
Chrysene	ND		29.2	24.3		ug/L		83	52 - 116	2	59
Dibenz(a,h)anthracene	ND		29.2	20.7		ug/L		71	52 - 143	14	60
Fluoranthene	ND		29.2	25.3		ug/L		87	32 - 150	6	59

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: 400-160492-7 MSD
Matrix: Water
Analysis Batch: 416478

Client Sample ID: MW28-ROX-101118
Prep Type: Total/NA
Prep Batch: 415994

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluorene	ND		29.2	26.0		ug/L		89	15 - 150	9	49
Indeno[1,2,3-cd]pyrene	ND		29.2	21.7		ug/L		74	41 - 141	14	58
Phenanthrene	ND		29.2	25.1		ug/L		86	36 - 125	7	69
Pyrene	ND		29.2	23.3		ug/L		80	41 - 127	8	58
1-Methylnaphthalene	0.039	J	29.2	15.7		ug/L		54	10 - 150	0	66
2-Methylnaphthalene	ND		29.2	15.7		ug/L		54	10 - 150	1	66

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Terphenyl-d14	*73*		*33 - 138*
2-Fluorobiphenyl	*68*		*15 - 122*
Nitrobenzene-d5	*53*		*19 - 130*

Method: 8011 - EDB and DBCP in Water by Microextraction

Lab Sample ID: MB 400-416928/1-A
Matrix: Water
Analysis Batch: 417027

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416928

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0055	ug/L		10/25/18 11:28	10/25/18 19:37	1
1,2-Dibromoethane	ND		0.020	0.0050	ug/L		10/25/18 11:28	10/25/18 19:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*51 - 149*	*10/25/18 11:28*	*10/25/18 19:37*	*1*

Lab Sample ID: LCS 400-416928/2-A
Matrix: Water
Analysis Batch: 417027

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416928

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	0.100	0.0780		ug/L		78	60 - 140
1,2-Dibromoethane	0.100	0.123		ug/L		123	60 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*51 - 149*

Lab Sample ID: LCSD 400-416928/3-A
Matrix: Water
Analysis Batch: 417027

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416928

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane	0.100	0.0777		ug/L		78	60 - 140	0	30
1,2-Dibromoethane	0.100	0.106	p *	ug/L		106	60 - 140	45	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*96*		*51 - 149*

Method: 8011 - EDB and DBCP in Water by Microextraction (Continued)

Lab Sample ID: 400-160492-7 MS
Matrix: Water
Analysis Batch: 417027

Client Sample ID: MW28-ROX-101118
Prep Type: Total/NA
Prep Batch: 416928

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	ND		0.103	0.0954		ug/L		93	65 - 135
1,2-Dibromoethane	ND	*	0.103	0.128		ug/L		125	65 - 135

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*95*	*p*	*51 - 149*

Lab Sample ID: 400-160492-7 MSD
Matrix: Water
Analysis Batch: 417027

Client Sample ID: MW28-ROX-101118
Prep Type: Total/NA
Prep Batch: 416928

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane	ND		0.105	0.106		ug/L		100	65 - 135	10	20
1,2-Dibromoethane	ND	*	0.105	0.137		ug/L		130	65 - 135	6	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*98*	*p*	*51 - 149*

Shell Oil Products US Chain Of Custody Record

LAB (LOCATION)

☐ ACCUTEST (_____)
☐ CALSCIENCE (_____)
☑ TESTAMERICA (TestAmerica Pensacola; 3355 McLemore Dr Pensacola, FL 32514 (850-474-1001))
☐ Other Lab Vendor # 1364583 (TestAmerica)

Please Check Appropriate Box:

☐ SGW FDG ☐ PIPELINE ☐ RETAIL
☐ CHEMICALS ☐ CONSULTANT ☐ LUBES
☐ TRANSPORTATION ☑ OTHER ENV. SERVICES

Print Bill To Contact Name: Bob Billman

PlaNet Site or Projec: 25278

400-160492 COC

INCIDENT # APPLIES

10/11/18

PO #: 60527968 - 01.03.004 | 60527968 - 01.03.0044

GSAP Project ID: USPC/00114/R/02

PAGE: 1 of 1

SAMPLING COMPANY: AECOM

LOG CODE:

SITE ADDRESS: Street and City: 900 South Central Ave; ROXANA

State: IL

AECOM Project / Task Number: Roxana Quarterly GW 60527968 - 01.03.004 60527968 - 01.03.0044

ADDRESS: 100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA

EDF DELIVERABLE TO (Name, Company, Office Location)

PHONE NO.

E-MAIL:

AECOM Shell ID

PROJECT CONTACT (Hardcopy or PDF Reports): Elizabeth Kunkel, Bob Billman, Melissa Remiger

SAMPLER NAME (S) (Print): B. Howell M. Karrick

LAB USE ONLY

TELEPHONE: 314-429-0100

FAX: 314-429-0462

Bill To Contact E-MAIL: bob.billman@aecom.com; elizabeth.kunkel@aecom.com; melissa.remiger@aecom.com

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAY ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ 1A - RWQCB REPORT FORMAT

DELIVERABLES: ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
* Please include "J" values on Reports
* Please provide sample receipt upon login

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

NON-UNIT COST 60527968 - 01.03.004: VOC 8260, SVOC 8270

UNIT COST 60527968 - 01.03.0044: VOC 8011, PAH 8270LL

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

Container PID Readings or Laboratory Notes

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT	VOC 8260	SVOC 8270	VOC 8011	PAH 8270LL	Container PID Readings or Laboratory Notes
	TB-ROX-101118-8011	10/11/18	0000	Water	2					2			✓		
	TB-ROX-101118-8270	↓	0000	↓	2					2		✓			
	P114R-ROX-101118		0930		4			2		6	✓	✓	✓	✓	
	P114R-ROX-101118-DUP		0930		4			2		6	✓	✓	✓	✓	
	MW13-ROX-101118		1040		4			2		6	✓	✓	✓	✓	
	MW11-ROX-101118		1245		4			2		6	✓	✓	✓	✓	
	MW28-ROX-101118		1320	↓	4			2		6	✓	✓	✓	✓	0.5°C 1IK8
	MW28-ROX-101118-MS		1320		4			2		6	✓	✓	✓	✓	1.3°C 1IK8
	MW28-ROX-101118-MSD	↓	1320	↓	4			2		6	✓	✓	✓	✓	3.2°C 1IK8
															3.1°C 1IK8

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Megan Kaiser	Fedex: 4535 0239 0718; 4535 0239 0707;	10/11/18	1530
Relinquished by: (Signature)	Received by: (Signature) 4535 0239 0692; 4535 0239 0681	10/12/18	841
Relinquished by: (Signature)	Received by: (Signature) Kathy R Anne	Date	Time

Version: 14Dec15

Custody seals: 572460, 572461, 572462, 572463, 572464, 572465, 572494, 572495, ~~572496~~, ~~572497~~

Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 400-160492-1

Login Number: 160492
List Number: 1
Creator: Johnson, Jeremy N

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	572465, 572464, 572463, 572462, 572461, 572460, 572494, 572495,
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.5°C 1.3°C 3.2°C 3.1°C IR8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160492-1

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-18 *
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-16	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

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Roxana Groundwater Quarterly – 4th Quarter 2018 Data Review

Laboratory SDG: 400-160552-1

Data Reviewer: Melissa Remiger

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 10/30/2018

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2017

Sample Identification	Sample Identification
TB-ROX-101218-8011	TB-ROX-101218-8260
MW5-ROX-101218	ROST4PZC-ROX-101218-EB
ROST4PZC-ROX-101218	ROST4PZG-ROX-101218
MW2-ROX-101218	MW2-ROX-101218-Dup

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated SVOC LCS/LCSD recoveries for benzenethiol and benzoic acid, and several LCS/LCSD RPDs, were outside evaluation criteria. The SVOC/PAH surrogate recovery for terphenyl-d_{14} was outside criteria in several investigative and quality control samples, and the VOC by 8011 surrogate recovery for 4-bromoflourobenzene was outside criteria in MW2-ROX-101218-Dup. Results for m,p-xylene, 1,2,4-trimethylbenzene, and 2-methylnaphthalene in field duplicate pair MW2-ROX-101218/MW2-ROX-101218-Dup were qualified due to field duplicate RPD above evaluation criteria; therefore results were qualified as estimated (**J**/**J**). The continuing calibration verifications for several analytes were outside evaluation criteria, biased low. These issues are addressed further in the appropriate sections of this data review.

Three of 69 (2-chloroethyl vinyl ether, acrolein, and acrylonitrile) 8260 VOCs are acid-reactive compounds; results may be biased low due to the presence of HCl in the preservative.

The cooler receipt form did not indicate any problems.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS/LCSD ID	Parameter	Analyte	LCS/ LCSD Recovery	RPD	LCS/LCSD/ RPD Criteria
LCS/LCSD 400-416151/4-A/5-A	SVOCs	Benzenethiol	**1/1**	11	10-120/30
LCS/LCSD 400-416151/2-A/3-A	SVOCs	Benzoic acid	54/**0**	**200**	10-150/30
LCS/LCSD 400-416151/2-A/3-A	SVOCs	4,6-Dinitro-ortho-cresol	104/70	**39**	10-150/30
LCS/LCSD 400-416151/2-A/3-A	SVOCs	2,4-Dinitrophenol	116/41	**95**	10-150/30
LCS/LCSD 400-416151/2-A/3-A	SVOCs	4-Nitrophenol	100/56	**56**	10-150/30

Analytical data that required qualification based on LCS/LCSD data are included in the table below. Professional judgment was used to qualify, however not reject, data associated with benzenethiol in LCS/LCSD 400-416151/4-A/5-A, and benzoic acid in LCS/LCSD 400-416151/2-A/3-A; benzenethiol and benzoic acid have been identified as poor performing analytes under Method 8270. Analytical data associated with RPD alone outside evaluation criteria did not require qualification.

Sample ID	Parameter	Analyte	Qualification
MW5-ROX-101218	SVOCs	Benzenethiol	**UJ**
MW5-ROX-101218	SVOCs	Benzoic acid	**UJ**
ROST4PZC-ROX-101218	SVOCs	Benzenethiol	**UJ**
ROST4PZC-ROX-101218	SVOCs	Benzoic acid	**UJ**
ROST4PZG-ROX-101218	SVOCs	Benzenethiol	**UJ**
ROST4PZG-ROX-101218	SVOCs	Benzoic acid	**UJ**
MW2-ROX-101218	SVOCs	Benzenethiol	**UJ**
MW2-ROX-101218	SVOCs	Benzoic acid	**UJ**
MW2-ROX-101218-Dup	SVOCs	Benzenethiol	**UJ**
MW2-ROX-101218-Dup	SVOCs	Benzoic acid	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
ROST4PZC-ROX-101218-EB	PAHs	Terphenyl-d_{14}	**144**	33-138
ROST4PZG-ROX-101218	SVOCs	Terphenyl-d_{14}	**41**	53-125
MW2-ROX-101218	SVOCs	Terphenyl-d_{14}	**31**	53-125
MW2-ROX-101218-Dup	SVOCs	Terphenyl-d_{14}	**40**	53-125
MW2-ROX-101218-Dup	VOCs by 8011	4-Bromofluorobenzene	**164**	51-149

Qualifications due to surrogate recoveries were not required if only one of three base/neutral fraction surrogate recoveries were outside evaluation criteria in the associated SVOC samples. Analytical data reported as non-detect and associated with surrogate recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Quality control samples do not require qualification. No qualification of data was required.

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
MW2-ROX-101218	MW2-ROX-101218-Dup

Were field duplicates within evaluation criteria?

No

Field ID	Field Duplicate ID	Parameter	Analyte	RPD	Qualification
MW2-ROX-101218	MW2-ROX-101218-Dup	VOCs	m,p-Xylene	**25**	**J/J**
MW2-ROX-101218	MW2-ROX-101218-Dup	VOCs	1,2,4-Trimethylbenzene	**27**	**J/J**
MW2-ROX-101218	MW2-ROX-101218-Dup	PAHs	2-Methylnaphthalene	**50**	**J/J**

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; samples analyzed did not require dilution.

12.0 Additional Qualifications

Were additional qualifications applied?

Yes, the continuing calibration verifications for several analytes were below acceptance criteria and are qualified as summarized in the following table. Hexachlorocyclopentadiene was previously qualified in Section 5.0 of this review due to

LCS/LCSD recoveries outside evaluation criteria; no further qualification of hexachlorocyclopentadiene was required.

Sample ID	Parameter	Analyte	Qualification
MW5-ROX-101218	SVOCs	Aniline	UJ
MW5-ROX-101218	SVOCs	Benzyl alcohol	UJ
MW5-ROX-101218	SVOCs	bis(2-Chloroethoxy)methane	UJ
MW5-ROX-101218	SVOCs	1,4-Dioxane	UJ
MW5-ROX-101218	SVOCs	1,2-Diphenylhydrazine (as Azobenzene)	UJ
MW5-ROX-101218	SVOCs	Isophorone	UJ
MW5-ROX-101218	SVOCs	Nitrobenzene	UJ
MW5-ROX-101218	SVOCs	n-Nitrosodi-n-propylamine	UJ
MW5-ROX-101218	SVOCs	Phenol	UJ
MW5-ROX-101218	SVOCs	Pyridine	UJ
ROST4PZC-ROX-101218	SVOCs	Aniline	UJ
ROST4PZC-ROX-101218	SVOCs	Benzyl alcohol	UJ
ROST4PZC-ROX-101218	SVOCs	bis(2-Chloroethoxy)methane	UJ
ROST4PZC-ROX-101218	SVOCs	1,4-Dioxane	UJ
ROST4PZC-ROX-101218	SVOCs	1,2-Diphenylhydrazine (as Azobenzene)	UJ
ROST4PZC-ROX-101218	SVOCs	Isophorone	UJ
ROST4PZC-ROX-101218	SVOCs	Nitrobenzene	UJ
ROST4PZC-ROX-101218	SVOCs	n-Nitrosodi-n-propylamine	UJ
ROST4PZC-ROX-101218	SVOCs	Phenol	UJ
ROST4PZC-ROX-101218	SVOCs	Pyridine	UJ
ROST4PZG-ROX-101218	SVOCs	Aniline	UJ
ROST4PZG-ROX-101218	SVOCs	Benzyl alcohol	UJ
ROST4PZG-ROX-101218	SVOCs	bis(2-Chloroethoxy)methane	UJ
ROST4PZG-ROX-101218	SVOCs	1,4-Dioxane	UJ
ROST4PZG-ROX-101218	SVOCs	1,2-Diphenylhydrazine (as Azobenzene)	UJ
ROST4PZG-ROX-101218	SVOCs	Isophorone	UJ
ROST4PZG-ROX-101218	SVOCs	Nitrobenzene	UJ
ROST4PZG-ROX-101218	SVOCs	n-Nitrosodi-n-propylamine	UJ
ROST4PZG-ROX-101218	SVOCs	Phenol	UJ
ROST4PZG-ROX-101218	SVOCs	Pyridine	UJ
MW2-ROX-101218	SVOCs	Aniline	UJ
MW2-ROX-101218	SVOCs	Benzyl alcohol	UJ
MW2-ROX-101218	SVOCs	bis(2-Chloroethoxy)methane	UJ
MW2-ROX-101218	SVOCs	1,4-Dioxane	UJ
MW2-ROX-101218	SVOCs	1,2-Diphenylhydrazine (as Azobenzene)	UJ
MW2-ROX-101218	SVOCs	Isophorone	UJ
MW2-ROX-101218	SVOCs	Nitrobenzene	UJ
MW2-ROX-101218	SVOCs	n-Nitrosodi-n-propylamine	UJ
MW2-ROX-101218	SVOCs	Phenol	UJ
MW2-ROX-101218	SVOCs	Pyridine	UJ

Sample ID	Parameter	Analyte	Qualification
MW2-ROX-101218-Dup	SVOCs	Aniline	**UJ**
MW2-ROX-101218-Dup	SVOCs	Benzyl alcohol	**UJ**
MW2-ROX-101218-Dup	SVOCs	bis(2-Chloroethoxy)methane	**UJ**
MW2-ROX-101218-Dup	SVOCs	1,4-Dioxane	**UJ**
MW2-ROX-101218-Dup	SVOCs	1,2-Diphenylhydrazine (as Azobenzene)	**UJ**
MW2-ROX-101218-Dup	SVOCs	Isophorone	**UJ**
MW2-ROX-101218-Dup	SVOCs	Nitrobenzene	**UJ**
MW2-ROX-101218-Dup	SVOCs	n-Nitrosodi-n-propylamine	**UJ**
MW2-ROX-101218-Dup	SVOCs	Phenol	**UJ**
MW2-ROX-101218-Dup	SVOCs	Pyridine	**UJ**

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-160552-1
Client Project/Site: ROXANA QUARTERLY

For:
AECOM Technical Services Inc.
100 N. Broadway
20th Floor
St. Louis, Missouri 63102

Attn: Elizabeth Kunkel

Authorized for release by:
10/30/2018 11:17:48 AM

Leah Klingensmith, Senior Project Manager
(615)301-5038
leah.klingensmith@testamericainc.com

LINKS

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Reviewed 10/30/18 LR

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-160552-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-160552-1

Comments
No additional comments.

Receipt
The samples were received on 10/13/2018 8:36 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.4° C, 3.0° C and 4.5° C.

GC/MS VOA
Method(s) 8260B: The preservative used in the sample containers provided is not compatible with some of the Method 8260 analytes requested. The following samples were received preserved with hydrochloric acid: TB-ROX-101218-8260 (400-160552-2), MW5-ROX-101218 (400-160552-3), ROST4PZC-ROX-101218-EB (400-160552-4), ROST4PZC-ROX-101218 (400-160552-5), ROST4PZG-ROX-101218 (400-160552-6), MW2-ROX-101218 (400-160552-7) and MW2-ROX-101218-DUP (400-160552-8). The requested target analyte list include 2-chloroethyl vinyl ether, Acrolein and Acrylonitrile, which are acid-labile compounds that degrade in an acidic medium.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270D LL: Three surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: ROST4PZC-ROX-101218-EB (400-160552-4). These results have been reported and qualified.

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 400-416437 recovered above the upper control limit for Hexachlorobenzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW5-ROX-101218 (400-160552-3), ROST4PZC-ROX-101218-EB (400-160552-4), ROST4PZC-ROX-101218 (400-160552-5), ROST4PZG-ROX-101218 (400-160552-6), MW2-ROX-101218 (400-160552-7), MW2-ROX-101218-DUP (400-160552-8) and (MB 400-416151/1-A).

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 400-416437 recovered outside acceptance criteria, low biased, for Nitrobenzene, Isophorone, N-Nitrosodi-n-propylamine, Aniline, 1,4-Dioxane, Pyridine, Phenol, Benzyl alcohol, Bis(2-chloroethoxy)methane and 1,2-Diphenylhydrazine (as Azobenzene). A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method(s) 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 400-416151 and analytical batch 400-416437 recovered outside control limits for the following analytes: Benzoic acid, 4,6-Dinitro-ortho-cresol, 2,4-Dinitrophenol and 4-Nitrophenol.

Method(s) 8270D: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 400-416151 and analytical batch 400-416437 recovered outside control limits for the following analyte(s): Benzoic acid. Benzoic acid has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. Batch precision also exceeded control limits for these analyte(s). These results have been reported and qualified.

Method(s) 8270D: Six surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following samples contained an allowable number of surrogate compounds outside limits: ROST4PZG-ROX-101218 (400-160552-6), MW2-ROX-101218 (400-160552-7) and MW2-ROX-101218-DUP (400-160552-8). These results have been reported and qualified.

Method(s) 8270D: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 400-416151 and analytical batch 400-416437 recovered outside control limits for the following analyte(s): Benzenethiol. Benzenethiol has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. Batch precision also exceeded control limits for these analyte(s). These results have been reported and qualified.

Job ID: 400-160552-1 (Continued)

Laboratory: TestAmerica Pensacola (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method(s) 8011: Surrogate recovery for the following sample was outside the upper control limit: MW2-ROX-101218-DUP (400-160552-8). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8011: The continuing calibration verification (CCV) associated with batch 400-417027 recovered above the upper control limit for 1,2-Dibromo-3-Chloropropane and 1,2-Dibromoethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: TB-ROX-101218-8011 (400-160552-1), MW5-ROX-101218 (400-160552-3), ROST4PZC-ROX-101218-EB (400-160552-4), ROST4PZC-ROX-101218 (400-160552-5), ROST4PZG-ROX-101218 (400-160552-6), MW2-ROX-101218 (400-160552-7) and MW2-ROX-101218-DUP (400-160552-8).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160552-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-160552-1	TB-ROX-101218-8011	Water	10/12/18 00:00	10/13/18 08:36
400-160552-2	TB-ROX-101218-8260	Water	10/12/18 00:00	10/13/18 08:36
400-160552-3	MW5-ROX-101218	Water	10/12/18 09:10	10/13/18 08:36
400-160552-4	ROST4PZC-ROX-101218-EB	Water	10/12/18 09:45	10/13/18 08:36
400-160552-5	ROST4PZC-ROX-101218	Water	10/12/18 10:15	10/13/18 08:36
400-160552-6	ROST4PZG-ROX-101218	Water	10/12/18 11:10	10/13/18 08:36
400-160552-7	MW2-ROX-101218	Water	10/12/18 12:05	10/13/18 08:36
400-160552-8	MW2-ROX-101218-DUP	Water	10/12/18 12:05	10/13/18 08:36

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160552-1

Client Sample ID: TB-ROX-101218-8011 — Lab Sample ID: 400-160552-1

No Detections.

Client Sample ID: TB-ROX-101218-8260 — Lab Sample ID: 400-160552-2

No Detections.

Client Sample ID: MW5-ROX-101218 — Lab Sample ID: 400-160552-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.9		1.0	0.38	ug/L	1		8260B	Total/NA
tert-Butylbenzene	2.2		1.0	0.63	ug/L	1		8260B	Total/NA
1-Methylnaphthalene	0.026	J	0.22	0.022	ug/L	1		8270D LL	Total/NA

Client Sample ID: ROST4PZC-ROX-101218-EB — Lab Sample ID: 400-160552-4

No Detections.

Client Sample ID: ROST4PZC-ROX-101218 — Lab Sample ID: 400-160552-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	27		25	10	ug/L	1		8260B	Total/NA
Benzene	8.5		1.0	0.38	ug/L	1		8260B	Total/NA
2-Butanone (MEK)	8.3	J	25	2.6	ug/L	1		8260B	Total/NA
Ethylbenzene	61		1.0	0.50	ug/L	1		8260B	Total/NA
Isopropylbenzene	1.6		1.0	0.53	ug/L	1		8260B	Total/NA
m-Xylene & p-Xylene	55		5.0	1.6	ug/L	1		8260B	Total/NA
Naphthalene	31		1.0	1.0	ug/L	1		8260B	Total/NA
N-Propylbenzene	2.1		1.0	0.69	ug/L	1		8260B	Total/NA
o-Xylene	0.99	J	5.0	0.60	ug/L	1		8260B	Total/NA
Toluene	11		1.0	0.70	ug/L	1		8260B	Total/NA
1,2,4-Trimethylbenzene	6.9		1.0	0.82	ug/L	1		8260B	Total/NA
Xylenes, Total	56		10	1.6	ug/L	1		8260B	Total/NA
Acenaphthene	0.44		0.20	0.020	ug/L	1		8270D LL	Total/NA
Anthracene	0.14	J	0.20	0.020	ug/L	1		8270D LL	Total/NA
Fluorene	0.32		0.20	0.021	ug/L	1		8270D LL	Total/NA
Phenanthrene	0.83		0.20	0.020	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene	6.4		0.20	0.020	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	0.58		0.20	0.020	ug/L	1		8270D LL	Total/NA
Indene	1.2	J	9.8	0.98	ug/L	1		8270D	Total/NA

Client Sample ID: ROST4PZG-ROX-101218 — Lab Sample ID: 400-160552-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.1		1.0	0.38	ug/L	1		8260B	Total/NA
Phenanthrene	0.13	J	0.19	0.019	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene	0.12	J	0.19	0.019	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	0.14	J	0.19	0.019	ug/L	1		8270D LL	Total/NA

Client Sample ID: MW2-ROX-101218 — Lab Sample ID: 400-160552-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	21	J	25	10	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160552-1

Client Sample ID: MW2-ROX-101218 (Continued)

Lab Sample ID: 400-160552-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	4.4		1.0	0.38	ug/L	1		8260B	Total/NA
2-Butanone (MEK)	9.9	J	25	2.6	ug/L	1		8260B	Total/NA
Ethylbenzene	110		1.0	0.50	ug/L	1		8260B	Total/NA
Isopropylbenzene	35		1.0	0.53	ug/L	1		8260B	Total/NA
m-Xylene & p-Xylene	45	J	5.0	1.6	ug/L	1		8260B	Total/NA
Naphthalene	11		1.0	1.0	ug/L	1		8260B	Total/NA
n-Butylbenzene	2.2		1.0	0.76	ug/L	1		8260B	Total/NA
N-Propylbenzene	49		1.0	0.69	ug/L	1		8260B	Total/NA
o-Xylene	5.3		5.0	0.60	ug/L	1		8260B	Total/NA
p-Isopropyltoluene	3.6		1.0	0.71	ug/L	1		8260B	Total/NA
sec-Butylbenzene	4.0		1.0	0.70	ug/L	1		8260B	Total/NA
Toluene	4.9		1.0	0.70	ug/L	1		8260B	Total/NA
1,2,4-Trimethylbenzene	9.1	J	1.0	0.82	ug/L	1		8260B	Total/NA
1,3,5-Trimethylbenzene	14		1.0	0.56	ug/L	1		8260B	Total/NA
Xylenes, Total	50		10	1.6	ug/L	1		8260B	Total/NA
1-Methylnaphthalene	4.8		0.20	0.020	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	3.0	J	0.20	0.020	ug/L	1		8270D LL	Total/NA

Client Sample ID: MW2-ROX-101218-DUP

Lab Sample ID: 400-160552-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	17	J	25	10	ug/L	1		8260B	Total/NA
Benzene	4.5		1.0	0.38	ug/L	1		8260B	Total/NA
2-Butanone (MEK)	9.5	J	25	2.6	ug/L	1		8260B	Total/NA
Ethylbenzene	130		1.0	0.50	ug/L	1		8260B	Total/NA
Isopropylbenzene	35		1.0	0.53	ug/L	1		8260B	Total/NA
m-Xylene & p-Xylene	58	J	5.0	1.6	ug/L	1		8260B	Total/NA
Naphthalene	13		1.0	1.0	ug/L	1		8260B	Total/NA
n-Butylbenzene	2.2		1.0	0.76	ug/L	1		8260B	Total/NA
N-Propylbenzene	50		1.0	0.69	ug/L	1		8260B	Total/NA
o-Xylene	6.7		5.0	0.60	ug/L	1		8260B	Total/NA
p-Isopropyltoluene	3.7		1.0	0.71	ug/L	1		8260B	Total/NA
sec-Butylbenzene	4.1		1.0	0.70	ug/L	1		8260B	Total/NA
Toluene	5.4		1.0	0.70	ug/L	1		8260B	Total/NA
1,2,4-Trimethylbenzene	12	J	1.0	0.82	ug/L	1		8260B	Total/NA
1,3,5-Trimethylbenzene	14		1.0	0.56	ug/L	1		8260B	Total/NA
Xylenes, Total	65		10	1.6	ug/L	1		8260B	Total/NA
1-Methylnaphthalene	5.1		0.19	0.019	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	1.8	J	0.19	0.019	ug/L	1		8270D LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160552-1

Client Sample ID: TB-ROX-101218-8011
Date Collected: 10/12/18 00:00
Date Received: 10/13/18 08:36

Lab Sample ID: 400-160552-1
Matrix: Water

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.032	0.0059	ug/L		10/25/18 11:36	10/26/18 18:53	1
1,2-Dibromoethane	ND		0.021	0.0053	ug/L		10/25/18 11:36	10/26/18 18:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*104*	*p*	*51 - 149*	*10/25/18 11:36*	*10/26/18 18:53*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160552-1

Client Sample ID: TB-ROX-101218-8260
Date Collected: 10/12/18 00:00
Date Received: 10/13/18 08:36

Lab Sample ID: 400-160552-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/25/18 14:40	1
Acrolein	ND		20	10	ug/L			10/25/18 14:40	1
Acrylonitrile	ND		10	2.8	ug/L			10/25/18 14:40	1
Benzene	ND		1.0	0.38	ug/L			10/25/18 14:40	1
Bromobenzene	ND		1.0	0.54	ug/L			10/25/18 14:40	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/25/18 14:40	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/25/18 14:40	1
Bromoform	ND		5.0	0.71	ug/L			10/25/18 14:40	1
Bromomethane	ND		1.0	0.98	ug/L			10/25/18 14:40	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/25/18 14:40	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/25/18 14:40	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/25/18 14:40	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/25/18 14:40	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/25/18 14:40	1
Chloroethane	ND		1.0	0.76	ug/L			10/25/18 14:40	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/25/18 14:40	1
Chloroform	ND		1.0	0.60	ug/L			10/25/18 14:40	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/25/18 14:40	1
Chloromethane	ND		1.0	0.83	ug/L			10/25/18 14:40	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/25/18 14:40	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/25/18 14:40	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/25/18 14:40	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/25/18 14:40	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/25/18 14:40	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/25/18 14:40	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/25/18 14:40	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/25/18 14:40	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/25/18 14:40	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/25/18 14:40	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/25/18 14:40	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/25/18 14:40	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/25/18 14:40	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/25/18 14:40	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/25/18 14:40	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/25/18 14:40	1
2-Hexanone	ND		25	3.1	ug/L			10/25/18 14:40	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/25/18 14:40	1
Methylene bromide	ND		5.0	0.59	ug/L			10/25/18 14:40	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/25/18 14:40	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/25/18 14:40	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/25/18 14:40	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/25/18 14:40	1
Naphthalene	ND		1.0	1.0	ug/L			10/25/18 14:40	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/25/18 14:40	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/25/18 14:40	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/25/18 14:40	1
o-Xylene	ND		5.0	0.60	ug/L			10/25/18 14:40	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/25/18 14:40	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/25/18 14:40	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160552-1

Client Sample ID: TB-ROX-101218-8260
Date Collected: 10/12/18 00:00
Date Received: 10/13/18 08:36

Lab Sample ID: 400-160552-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/25/18 14:40	1
Styrene	ND		1.0	1.0	ug/L			10/25/18 14:40	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/25/18 14:40	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/25/18 14:40	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/25/18 14:40	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/25/18 14:40	1
Toluene	ND		1.0	0.70	ug/L			10/25/18 14:40	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/25/18 14:40	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/25/18 14:40	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/25/18 14:40	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/25/18 14:40	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/25/18 14:40	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/25/18 14:40	1
Trichloroethene	ND		1.0	0.50	ug/L			10/25/18 14:40	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/25/18 14:40	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/25/18 14:40	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/25/18 14:40	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/25/18 14:40	1
Vinyl acetate	ND		25	2.0	ug/L			10/25/18 14:40	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/25/18 14:40	1
Xylenes, Total	ND		10	1.6	ug/L			10/25/18 14:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*78 - 118*		*10/25/18 14:40*	*1*
Dibromofluoromethane	*96*		*81 - 121*		*10/25/18 14:40*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*10/25/18 14:40*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160552-1

Client Sample ID: MW5-ROX-101218
Date Collected: 10/12/18 09:10
Date Received: 10/13/18 08:36

Lab Sample ID: 400-160552-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/25/18 17:04	1
Acrolein	ND		20	10	ug/L			10/25/18 17:04	1
Acrylonitrile	ND		10	2.8	ug/L			10/25/18 17:04	1
Benzene	1.9		1.0	0.38	ug/L			10/25/18 17:04	1
Bromobenzene	ND		1.0	0.54	ug/L			10/25/18 17:04	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/25/18 17:04	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/25/18 17:04	1
Bromoform	ND		5.0	0.71	ug/L			10/25/18 17:04	1
Bromomethane	ND		1.0	0.98	ug/L			10/25/18 17:04	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/25/18 17:04	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/25/18 17:04	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/25/18 17:04	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/25/18 17:04	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/25/18 17:04	1
Chloroethane	ND		1.0	0.76	ug/L			10/25/18 17:04	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/25/18 17:04	1
Chloroform	ND		1.0	0.60	ug/L			10/25/18 17:04	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/25/18 17:04	1
Chloromethane	ND		1.0	0.83	ug/L			10/25/18 17:04	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/25/18 17:04	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/25/18 17:04	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/25/18 17:04	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/25/18 17:04	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/25/18 17:04	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/25/18 17:04	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/25/18 17:04	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/25/18 17:04	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/25/18 17:04	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/25/18 17:04	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/25/18 17:04	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/25/18 17:04	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/25/18 17:04	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/25/18 17:04	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/25/18 17:04	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/25/18 17:04	1
2-Hexanone	ND		25	3.1	ug/L			10/25/18 17:04	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/25/18 17:04	1
Methylene bromide	ND		5.0	0.59	ug/L			10/25/18 17:04	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/25/18 17:04	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/25/18 17:04	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/25/18 17:04	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/25/18 17:04	1
Naphthalene	ND		1.0	1.0	ug/L			10/25/18 17:04	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/25/18 17:04	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/25/18 17:04	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/25/18 17:04	1
o-Xylene	ND		5.0	0.60	ug/L			10/25/18 17:04	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/25/18 17:04	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/25/18 17:04	1

Client Sample ID: MW5-ROX-101218
Date Collected: 10/12/18 09:10
Date Received: 10/13/18 08:36

Lab Sample ID: 400-160552-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/25/18 17:04	1
Styrene	ND		1.0	1.0	ug/L			10/25/18 17:04	1
tert-Butylbenzene	2.2		1.0	0.63	ug/L			10/25/18 17:04	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/25/18 17:04	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/25/18 17:04	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/25/18 17:04	1
Toluene	ND		1.0	0.70	ug/L			10/25/18 17:04	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/25/18 17:04	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/25/18 17:04	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/25/18 17:04	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/25/18 17:04	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/25/18 17:04	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/25/18 17:04	1
Trichloroethene	ND		1.0	0.50	ug/L			10/25/18 17:04	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/25/18 17:04	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/25/18 17:04	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/25/18 17:04	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/25/18 17:04	1
Vinyl acetate	ND		25	2.0	ug/L			10/25/18 17:04	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/25/18 17:04	1
Xylenes, Total	ND		10	1.6	ug/L			10/25/18 17:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*78 - 118*		*10/25/18 17:04*	*1*
Dibromofluoromethane	*97*		*81 - 121*		*10/25/18 17:04*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*10/25/18 17:04*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.22	0.022	ug/L		10/19/18 14:52	10/22/18 21:12	1
Acenaphthylene	ND		0.22	0.022	ug/L		10/19/18 14:52	10/22/18 21:12	1
Anthracene	ND		0.22	0.022	ug/L		10/19/18 14:52	10/22/18 21:12	1
Benzo[a]anthracene	ND		0.22	0.043	ug/L		10/19/18 14:52	10/22/18 21:12	1
Benzo[a]pyrene	ND		0.22	0.043	ug/L		10/19/18 14:52	10/22/18 21:12	1
Benzo[b]fluoranthene	ND		0.22	0.043	ug/L		10/19/18 14:52	10/22/18 21:12	1
Benzo[g,h,i]perylene	ND		0.22	0.043	ug/L		10/19/18 14:52	10/22/18 21:12	1
Benzo[k]fluoranthene	ND		0.22	0.043	ug/L		10/19/18 14:52	10/22/18 21:12	1
Chrysene	ND		0.22	0.043	ug/L		10/19/18 14:52	10/22/18 21:12	1
Dibenz(a,h)anthracene	ND		0.22	0.043	ug/L		10/19/18 14:52	10/22/18 21:12	1
Fluoranthene	ND		0.22	0.022	ug/L		10/19/18 14:52	10/22/18 21:12	1
Fluorene	ND		0.22	0.023	ug/L		10/19/18 14:52	10/22/18 21:12	1
Indeno[1,2,3-cd]pyrene	ND		0.22	0.043	ug/L		10/19/18 14:52	10/22/18 21:12	1
Phenanthrene	ND		0.22	0.022	ug/L		10/19/18 14:52	10/22/18 21:12	1
Pyrene	ND		0.22	0.022	ug/L		10/19/18 14:52	10/22/18 21:12	1
1-Methylnaphthalene	0.026	J	0.22	0.022	ug/L		10/19/18 14:52	10/22/18 21:12	1
2-Methylnaphthalene	ND		0.22	0.022	ug/L		10/19/18 14:52	10/22/18 21:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*106*		*33 - 138*	*10/19/18 14:52*	*10/22/18 21:12*	*1*
2-Fluorobiphenyl	*92*		*15 - 122*	*10/19/18 14:52*	*10/22/18 21:12*	*1*

Client Sample ID: MW5-ROX-101218

Date Collected: 10/12/18 09:10
Date Received: 10/13/18 08:36

Lab Sample ID: 400-160552-3
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	*77*		*19 - 130*	*10/19/18 14:52*	*10/22/18 21:12*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND	UJ	11	4.1	ug/L		10/19/18 14:52	10/22/18 22:36	1
Benzenethiol	ND	* UJ	11	1.8	ug/L		10/19/18 14:52	10/22/18 22:36	1
Benzoic acid	ND	* UJ	32	7.9	ug/L		10/19/18 14:52	10/22/18 22:36	1
Benzyl alcohol	ND	UJ	11	2.2	ug/L		10/19/18 14:52	10/22/18 22:36	1
Bis(2-chloroethoxy)methane	ND	UJ	11	0.74	ug/L		10/19/18 14:52	10/22/18 22:36	1
Bis(2-chloroethyl)ether	ND		11	0.80	ug/L		10/19/18 14:52	10/22/18 22:36	1
bis (2-chloroisopropyl) ether	ND		11	0.87	ug/L		10/19/18 14:52	10/22/18 22:36	1
Bis(2-ethylhexyl) phthalate	ND		11	2.4	ug/L		10/19/18 14:52	10/22/18 22:36	1
4-Bromophenyl phenyl ether	ND		11	0.34	ug/L		10/19/18 14:52	10/22/18 22:36	1
Butyl benzyl phthalate	ND		11	0.74	ug/L		10/19/18 14:52	10/22/18 22:36	1
4-Chloroaniline	ND		11	3.7	ug/L		10/19/18 14:52	10/22/18 22:36	1
4-Chloro-3-methylphenol	ND		11	4.1	ug/L		10/19/18 14:52	10/22/18 22:36	1
2-Chloronaphthalene	ND		11	0.56	ug/L		10/19/18 14:52	10/22/18 22:36	1
2-Chlorophenol	ND		11	2.4	ug/L		10/19/18 14:52	10/22/18 22:36	1
4-Chlorophenyl phenyl ether	ND		11	2.2	ug/L		10/19/18 14:52	10/22/18 22:36	1
Dibenz[a,h]acridine	ND		11	3.2	ug/L		10/19/18 14:52	10/22/18 22:36	1
Dibenzofuran	ND		11	0.56	ug/L		10/19/18 14:52	10/22/18 22:36	1
3,3'-Dichlorobenzidine	ND		11	2.8	ug/L		10/19/18 14:52	10/22/18 22:36	1
2,4-Dichlorophenol	ND		11	3.2	ug/L		10/19/18 14:52	10/22/18 22:36	1
Diethyl phthalate	ND		11	0.75	ug/L		10/19/18 14:52	10/22/18 22:36	1
2,4-Dimethylphenol	ND		11	3.8	ug/L		10/19/18 14:52	10/22/18 22:36	1
Dimethyl phthalate	ND		11	0.65	ug/L		10/19/18 14:52	10/22/18 22:36	1
Di-n-butyl phthalate	ND		11	2.9	ug/L		10/19/18 14:52	10/22/18 22:36	1
4,6-Dinitro-ortho-cresol	ND	*	11	2.2	ug/L		10/19/18 14:52	10/22/18 22:36	1
2,4-Dinitrophenol	ND	*	32	3.7	ug/L		10/19/18 14:52	10/22/18 22:36	1
2,4-Dinitrotoluene	ND		11	2.0	ug/L		10/19/18 14:52	10/22/18 22:36	1
2,6-Dinitrotoluene	ND		11	2.0	ug/L		10/19/18 14:52	10/22/18 22:36	1
Di-n-octyl phthalate	ND		11	0.47	ug/L		10/19/18 14:52	10/22/18 22:36	1
1,4-Dioxane	ND	UJ	11	1.1	ug/L		10/19/18 14:52	10/22/18 22:36	1
1,2-Diphenylhydrazine (as Azobenzene)	ND	UJ	11	1.1	ug/L		10/19/18 14:52	10/22/18 22:36	1
Hexachlorobenzene	ND		11	0.27	ug/L		10/19/18 14:52	10/22/18 22:36	1
Hexachlorocyclopentadiene	ND		22	2.8	ug/L		10/19/18 14:52	10/22/18 22:36	1
Hexachloroethane	ND		11	4.5	ug/L		10/19/18 14:52	10/22/18 22:36	1
Indene	ND		11	1.1	ug/L		10/19/18 14:52	10/22/18 22:36	1
Isophorone	ND	UJ	11	0.61	ug/L		10/19/18 14:52	10/22/18 22:36	1
2-Methylphenol	ND		11	1.9	ug/L		10/19/18 14:52	10/22/18 22:36	1
3 & 4 Methylphenol	ND		22	1.1	ug/L		10/19/18 14:52	10/22/18 22:36	1
2-Nitroaniline	ND		11	2.4	ug/L		10/19/18 14:52	10/22/18 22:36	1
3-Nitroaniline	ND		11	1.9	ug/L		10/19/18 14:52	10/22/18 22:36	1
4-Nitroaniline	ND		11	2.7	ug/L		10/19/18 14:52	10/22/18 22:36	1
Nitrobenzene	ND	UJ	11	0.59	ug/L		10/19/18 14:52	10/22/18 22:36	1
2-Nitrophenol	ND		11	0.70	ug/L		10/19/18 14:52	10/22/18 22:36	1
4-Nitrophenol	ND	*	11	2.3	ug/L		10/19/18 14:52	10/22/18 22:36	1
N-Nitrosodimethylamine	ND		11	3.8	ug/L		10/19/18 14:52	10/22/18 22:36	1

Client Sample ID: MW5-ROX-101218
Date Collected: 10/12/18 09:10
Date Received: 10/13/18 08:36

Lab Sample ID: 400-160552-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND	UJ	11	3.6	ug/L		10/19/18 14:52	10/22/18 22:36	1
N-Nitrosodiphenylamine	ND		11	0.51	ug/L		10/19/18 14:52	10/22/18 22:36	1
Pentachlorophenol	ND		22	2.0	ug/L		10/19/18 14:52	10/22/18 22:36	1
Phenol	ND	UJ	11	2.8	ug/L		10/19/18 14:52	10/22/18 22:36	1
Pyridine	ND	UJ	11	3.4	ug/L		10/19/18 14:52	10/22/18 22:36	1
Quinoline	ND		11	6.5	ug/L		10/19/18 14:52	10/22/18 22:36	1
2,4,5-Trichlorophenol	ND		11	4.0	ug/L		10/19/18 14:52	10/22/18 22:36	1
2,4,6-Trichlorophenol	ND		11	3.8	ug/L		10/19/18 14:52	10/22/18 22:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*50*		*34 - 120*	*10/19/18 14:52*	*10/22/18 22:36*	*1*
2-Fluorophenol	*30*		*10 - 120*	*10/19/18 14:52*	*10/22/18 22:36*	*1*
Nitrobenzene-d5	*45*		*27 - 120*	*10/19/18 14:52*	*10/22/18 22:36*	*1*
Phenol-d5	*45*		*10 - 120*	*10/19/18 14:52*	*10/22/18 22:36*	*1*
Terphenyl-d14	*66*		*53 - 125*	*10/19/18 14:52*	*10/22/18 22:36*	*1*
2,4,6-Tribromophenol	*79*		*15 - 135*	*10/19/18 14:52*	*10/22/18 22:36*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0055	ug/L		10/25/18 11:36	10/26/18 18:29	1
1,2-Dibromoethane	ND		0.020	0.0050	ug/L		10/25/18 11:36	10/26/18 18:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*108*	*p*	*51 - 149*	*10/25/18 11:36*	*10/26/18 18:29*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160552-1

Client Sample ID: ROST4PZC-ROX-101218-EB
Date Collected: 10/12/18 09:45
Date Received: 10/13/18 08:36

Lab Sample ID: 400-160552-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/26/18 12:53	1
Acrolein	ND		20	10	ug/L			10/26/18 12:53	1
Acrylonitrile	ND		10	2.8	ug/L			10/26/18 12:53	1
Benzene	ND		1.0	0.38	ug/L			10/26/18 12:53	1
Bromobenzene	ND		1.0	0.54	ug/L			10/26/18 12:53	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/26/18 12:53	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/26/18 12:53	1
Bromoform	ND		5.0	0.71	ug/L			10/26/18 12:53	1
Bromomethane	ND		1.0	0.98	ug/L			10/26/18 12:53	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/26/18 12:53	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/26/18 12:53	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/26/18 12:53	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/26/18 12:53	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/26/18 12:53	1
Chloroethane	ND		1.0	0.76	ug/L			10/26/18 12:53	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/26/18 12:53	1
Chloroform	ND		1.0	0.60	ug/L			10/26/18 12:53	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/26/18 12:53	1
Chloromethane	ND		1.0	0.83	ug/L			10/26/18 12:53	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/26/18 12:53	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/26/18 12:53	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/26/18 12:53	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/26/18 12:53	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/26/18 12:53	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/26/18 12:53	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/26/18 12:53	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/26/18 12:53	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/26/18 12:53	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/26/18 12:53	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/26/18 12:53	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/26/18 12:53	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/26/18 12:53	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/26/18 12:53	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/26/18 12:53	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/26/18 12:53	1
2-Hexanone	ND		25	3.1	ug/L			10/26/18 12:53	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/26/18 12:53	1
Methylene bromide	ND		5.0	0.59	ug/L			10/26/18 12:53	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/26/18 12:53	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/26/18 12:53	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/26/18 12:53	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/26/18 12:53	1
Naphthalene	ND		1.0	1.0	ug/L			10/26/18 12:53	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/26/18 12:53	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/26/18 12:53	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/26/18 12:53	1
o-Xylene	ND		5.0	0.60	ug/L			10/26/18 12:53	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/26/18 12:53	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/26/18 12:53	1

Client Sample ID: ROST4PZC-ROX-101218-EB
Date Collected: 10/12/18 09:45
Date Received: 10/13/18 08:36

Lab Sample ID: 400-160552-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/26/18 12:53	1
Styrene	ND		1.0	1.0	ug/L			10/26/18 12:53	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/26/18 12:53	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/26/18 12:53	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/26/18 12:53	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/26/18 12:53	1
Toluene	ND		1.0	0.70	ug/L			10/26/18 12:53	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/26/18 12:53	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/26/18 12:53	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/26/18 12:53	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/26/18 12:53	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/26/18 12:53	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/26/18 12:53	1
Trichloroethene	ND		1.0	0.50	ug/L			10/26/18 12:53	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/26/18 12:53	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/26/18 12:53	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/26/18 12:53	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/26/18 12:53	1
Vinyl acetate	ND		25	2.0	ug/L			10/26/18 12:53	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/26/18 12:53	1
Xylenes, Total	ND		10	1.6	ug/L			10/26/18 12:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*78 - 118*		*10/26/18 12:53*	*1*
Dibromofluoromethane	*99*		*81 - 121*		*10/26/18 12:53*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*10/26/18 12:53*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 21:28	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 21:28	1
Anthracene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 21:28	1
Benzo[a]anthracene	ND		0.20	0.039	ug/L		10/19/18 14:52	10/22/18 21:28	1
Benzo[a]pyrene	ND		0.20	0.039	ug/L		10/19/18 14:52	10/22/18 21:28	1
Benzo[b]fluoranthene	ND		0.20	0.039	ug/L		10/19/18 14:52	10/22/18 21:28	1
Benzo[g,h,i]perylene	ND		0.20	0.039	ug/L		10/19/18 14:52	10/22/18 21:28	1
Benzo[k]fluoranthene	ND		0.20	0.039	ug/L		10/19/18 14:52	10/22/18 21:28	1
Chrysene	ND		0.20	0.039	ug/L		10/19/18 14:52	10/22/18 21:28	1
Dibenz(a,h)anthracene	ND		0.20	0.039	ug/L		10/19/18 14:52	10/22/18 21:28	1
Fluoranthene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 21:28	1
Fluorene	ND		0.20	0.021	ug/L		10/19/18 14:52	10/22/18 21:28	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.039	ug/L		10/19/18 14:52	10/22/18 21:28	1
Phenanthrene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 21:28	1
Pyrene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 21:28	1
1-Methylnaphthalene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 21:28	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 21:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*144*	*X*	*33 - 138*	*10/19/18 14:52*	*10/22/18 21:28*	*1*
2-Fluorobiphenyl	*108*		*15 - 122*	*10/19/18 14:52*	*10/22/18 21:28*	*1*

Client Sample ID: ROST4PZC-ROX-101218-EB

Lab Sample ID: 400-160552-4

Date Collected: 10/12/18 09:45
Date Received: 10/13/18 08:36

Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	*81*		*19 - 130*	*10/19/18 14:52*	*10/22/18 21:28*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.9	3.8	ug/L		10/19/18 14:52	10/22/18 22:58	1
Benzenethiol	ND	*	9.9	1.7	ug/L		10/19/18 14:52	10/22/18 22:58	1
Benzoic acid	ND	*	30	7.2	ug/L		10/19/18 14:52	10/22/18 22:58	1
Benzyl alcohol	ND		9.9	2.0	ug/L		10/19/18 14:52	10/22/18 22:58	1
Bis(2-chloroethoxy)methane	ND		9.9	0.68	ug/L		10/19/18 14:52	10/22/18 22:58	1
Bis(2-chloroethyl)ether	ND		9.9	0.73	ug/L		10/19/18 14:52	10/22/18 22:58	1
bis (2-chloroisopropyl) ether	ND		9.9	0.80	ug/L		10/19/18 14:52	10/22/18 22:58	1
Bis(2-ethylhexyl) phthalate	ND		9.9	2.2	ug/L		10/19/18 14:52	10/22/18 22:58	1
4-Bromophenyl phenyl ether	ND		9.9	0.32	ug/L		10/19/18 14:52	10/22/18 22:58	1
Butyl benzyl phthalate	ND		9.9	0.68	ug/L		10/19/18 14:52	10/22/18 22:58	1
4-Chloroaniline	ND		9.9	3.4	ug/L		10/19/18 14:52	10/22/18 22:58	1
4-Chloro-3-methylphenol	ND		9.9	3.8	ug/L		10/19/18 14:52	10/22/18 22:58	1
2-Chloronaphthalene	ND		9.9	0.51	ug/L		10/19/18 14:52	10/22/18 22:58	1
2-Chlorophenol	ND		9.9	2.2	ug/L		10/19/18 14:52	10/22/18 22:58	1
4-Chlorophenyl phenyl ether	ND		9.9	2.0	ug/L		10/19/18 14:52	10/22/18 22:58	1
Dibenz[a,h]acridine	ND		9.9	3.0	ug/L		10/19/18 14:52	10/22/18 22:58	1
Dibenzofuran	ND		9.9	0.51	ug/L		10/19/18 14:52	10/22/18 22:58	1
3,3'-Dichlorobenzidine	ND		9.9	2.6	ug/L		10/19/18 14:52	10/22/18 22:58	1
2,4-Dichlorophenol	ND		9.9	3.0	ug/L		10/19/18 14:52	10/22/18 22:58	1
Diethyl phthalate	ND		9.9	0.69	ug/L		10/19/18 14:52	10/22/18 22:58	1
2,4-Dimethylphenol	ND		9.9	3.5	ug/L		10/19/18 14:52	10/22/18 22:58	1
Dimethyl phthalate	ND		9.9	0.59	ug/L		10/19/18 14:52	10/22/18 22:58	1
Di-n-butyl phthalate	ND		9.9	2.7	ug/L		10/19/18 14:52	10/22/18 22:58	1
4,6-Dinitro-ortho-cresol	ND	*	9.9	2.0	ug/L		10/19/18 14:52	10/22/18 22:58	1
2,4-Dinitrophenol	ND	*	30	3.4	ug/L		10/19/18 14:52	10/22/18 22:58	1
2,4-Dinitrotoluene	ND		9.9	1.9	ug/L		10/19/18 14:52	10/22/18 22:58	1
2,6-Dinitrotoluene	ND		9.9	1.9	ug/L		10/19/18 14:52	10/22/18 22:58	1
Di-n-octyl phthalate	ND		9.9	0.43	ug/L		10/19/18 14:52	10/22/18 22:58	1
1,4-Dioxane	ND		9.9	0.99	ug/L		10/19/18 14:52	10/22/18 22:58	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.9	0.99	ug/L		10/19/18 14:52	10/22/18 22:58	1
Hexachlorobenzene	ND		9.9	0.25	ug/L		10/19/18 14:52	10/22/18 22:58	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		10/19/18 14:52	10/22/18 22:58	1
Hexachloroethane	ND		9.9	4.1	ug/L		10/19/18 14:52	10/22/18 22:58	1
Indene	ND		9.9	0.99	ug/L		10/19/18 14:52	10/22/18 22:58	1
Isophorone	ND		9.9	0.56	ug/L		10/19/18 14:52	10/22/18 22:58	1
2-Methylphenol	ND		9.9	1.8	ug/L		10/19/18 14:52	10/22/18 22:58	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/19/18 14:52	10/22/18 22:58	1
2-Nitroaniline	ND		9.9	2.2	ug/L		10/19/18 14:52	10/22/18 22:58	1
3-Nitroaniline	ND		9.9	1.8	ug/L		10/19/18 14:52	10/22/18 22:58	1
4-Nitroaniline	ND		9.9	2.4	ug/L		10/19/18 14:52	10/22/18 22:58	1
Nitrobenzene	ND		9.9	0.54	ug/L		10/19/18 14:52	10/22/18 22:58	1
2-Nitrophenol	ND		9.9	0.64	ug/L		10/19/18 14:52	10/22/18 22:58	1
4-Nitrophenol	ND	*	9.9	2.1	ug/L		10/19/18 14:52	10/22/18 22:58	1
N-Nitrosodimethylamine	ND		9.9	3.5	ug/L		10/19/18 14:52	10/22/18 22:58	1

Client Sample ID: ROST4PZC-ROX-101218-EB
Lab Sample ID: 400-160552-4
Date Collected: 10/12/18 09:45
Matrix: Water
Date Received: 10/13/18 08:36

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.9	3.3	ug/L		10/19/18 14:52	10/22/18 22:58	1
N-Nitrosodiphenylamine	ND		9.9	0.46	ug/L		10/19/18 14:52	10/22/18 22:58	1
Pentachlorophenol	ND		20	1.8	ug/L		10/19/18 14:52	10/22/18 22:58	1
Phenol	ND		9.9	2.6	ug/L		10/19/18 14:52	10/22/18 22:58	1
Pyridine	ND		9.9	3.2	ug/L		10/19/18 14:52	10/22/18 22:58	1
Quinoline	ND		9.9	5.9	ug/L		10/19/18 14:52	10/22/18 22:58	1
2,4,5-Trichlorophenol	ND		9.9	3.7	ug/L		10/19/18 14:52	10/22/18 22:58	1
2,4,6-Trichlorophenol	ND		9.9	3.5	ug/L		10/19/18 14:52	10/22/18 22:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*57*		*34 - 120*	*10/19/18 14:52*	*10/22/18 22:58*	*1*
2-Fluorophenol	*40*		*10 - 120*	*10/19/18 14:52*	*10/22/18 22:58*	*1*
Nitrobenzene-d5	*56*		*27 - 120*	*10/19/18 14:52*	*10/22/18 22:58*	*1*
Phenol-d5	*55*		*10 - 120*	*10/19/18 14:52*	*10/22/18 22:58*	*1*
Terphenyl-d14	*82*		*53 - 125*	*10/19/18 14:52*	*10/22/18 22:58*	*1*
2,4,6-Tribromophenol	*71*		*15 - 135*	*10/19/18 14:52*	*10/22/18 22:58*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.031	0.0056	ug/L		10/25/18 11:36	10/26/18 18:05	1
1,2-Dibromoethane	ND		0.021	0.0051	ug/L		10/25/18 11:36	10/26/18 18:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*	*p*	*51 - 149*	*10/25/18 11:36*	*10/26/18 18:05*	*1*

Client Sample ID: ROST4PZC-ROX-101218
Date Collected: 10/12/18 10:15
Date Received: 10/13/18 08:36

Lab Sample ID: 400-160552-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	27		25	10	ug/L			10/25/18 17:28	1
Acrolein	ND		20	10	ug/L			10/25/18 17:28	1
Acrylonitrile	ND		10	2.8	ug/L			10/25/18 17:28	1
Benzene	8.5		1.0	0.38	ug/L			10/25/18 17:28	1
Bromobenzene	ND		1.0	0.54	ug/L			10/25/18 17:28	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/25/18 17:28	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/25/18 17:28	1
Bromoform	ND		5.0	0.71	ug/L			10/25/18 17:28	1
Bromomethane	ND		1.0	0.98	ug/L			10/25/18 17:28	1
2-Butanone (MEK)	8.3	J	25	2.6	ug/L			10/25/18 17:28	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/25/18 17:28	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/25/18 17:28	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/25/18 17:28	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/25/18 17:28	1
Chloroethane	ND		1.0	0.76	ug/L			10/25/18 17:28	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/25/18 17:28	1
Chloroform	ND		1.0	0.60	ug/L			10/25/18 17:28	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/25/18 17:28	1
Chloromethane	ND		1.0	0.83	ug/L			10/25/18 17:28	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/25/18 17:28	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/25/18 17:28	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/25/18 17:28	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/25/18 17:28	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/25/18 17:28	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/25/18 17:28	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/25/18 17:28	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/25/18 17:28	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/25/18 17:28	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/25/18 17:28	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/25/18 17:28	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/25/18 17:28	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/25/18 17:28	1
Ethylbenzene	61		1.0	0.50	ug/L			10/25/18 17:28	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/25/18 17:28	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/25/18 17:28	1
2-Hexanone	ND		25	3.1	ug/L			10/25/18 17:28	1
Isopropylbenzene	1.6		1.0	0.53	ug/L			10/25/18 17:28	1
Methylene bromide	ND		5.0	0.59	ug/L			10/25/18 17:28	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/25/18 17:28	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/25/18 17:28	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/25/18 17:28	1
m-Xylene & p-Xylene	55		5.0	1.6	ug/L			10/25/18 17:28	1
Naphthalene	31		1.0	1.0	ug/L			10/25/18 17:28	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/25/18 17:28	1
N-Propylbenzene	2.1		1.0	0.69	ug/L			10/25/18 17:28	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/25/18 17:28	1
o-Xylene	0.99	J	5.0	0.60	ug/L			10/25/18 17:28	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/25/18 17:28	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/25/18 17:28	1

Client Sample ID: ROST4PZC-ROX-101218

Lab Sample ID: 400-160552-5

Date Collected: 10/12/18 10:15
Date Received: 10/13/18 08:36

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/25/18 17:28	1
Styrene	ND		1.0	1.0	ug/L			10/25/18 17:28	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/25/18 17:28	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/25/18 17:28	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/25/18 17:28	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/25/18 17:28	1
Toluene	11		1.0	0.70	ug/L			10/25/18 17:28	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/25/18 17:28	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/25/18 17:28	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/25/18 17:28	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/25/18 17:28	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/25/18 17:28	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/25/18 17:28	1
Trichloroethene	ND		1.0	0.50	ug/L			10/25/18 17:28	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/25/18 17:28	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/25/18 17:28	1
1,2,4-Trimethylbenzene	6.9		1.0	0.82	ug/L			10/25/18 17:28	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/25/18 17:28	1
Vinyl acetate	ND		25	2.0	ug/L			10/25/18 17:28	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/25/18 17:28	1
Xylenes, Total	56		10	1.6	ug/L			10/25/18 17:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*78 - 118*		*10/25/18 17:28*	*1*
Dibromofluoromethane	*98*		*81 - 121*		*10/25/18 17:28*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*10/25/18 17:28*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.44		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 21:44	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 21:44	1
Anthracene	0.14	J	0.20	0.020	ug/L		10/19/18 14:52	10/22/18 21:44	1
Benzo[a]anthracene	ND		0.20	0.039	ug/L		10/19/18 14:52	10/22/18 21:44	1
Benzo[a]pyrene	ND		0.20	0.039	ug/L		10/19/18 14:52	10/22/18 21:44	1
Benzo[b]fluoranthene	ND		0.20	0.039	ug/L		10/19/18 14:52	10/22/18 21:44	1
Benzo[g,h,i]perylene	ND		0.20	0.039	ug/L		10/19/18 14:52	10/22/18 21:44	1
Benzo[k]fluoranthene	ND		0.20	0.039	ug/L		10/19/18 14:52	10/22/18 21:44	1
Chrysene	ND		0.20	0.039	ug/L		10/19/18 14:52	10/22/18 21:44	1
Dibenz(a,h)anthracene	ND		0.20	0.039	ug/L		10/19/18 14:52	10/22/18 21:44	1
Fluoranthene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 21:44	1
Fluorene	0.32		0.20	0.021	ug/L		10/19/18 14:52	10/22/18 21:44	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.039	ug/L		10/19/18 14:52	10/22/18 21:44	1
Phenanthrene	0.83		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 21:44	1
Pyrene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 21:44	1
1-Methylnaphthalene	6.4		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 21:44	1
2-Methylnaphthalene	0.58		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 21:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*80*		*33 - 138*	*10/19/18 14:52*	*10/22/18 21:44*	*1*
2-Fluorobiphenyl	*74*		*15 - 122*	*10/19/18 14:52*	*10/22/18 21:44*	*1*

Client Sample ID: ROST4PZC-ROX-101218

Lab Sample ID: 400-160552-5
Matrix: Water

Date Collected: 10/12/18 10:15
Date Received: 10/13/18 08:36

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	59		19 - 130	10/19/18 14:52	10/22/18 21:44	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND	UJ	9.8	3.7	ug/L		10/19/18 14:52	10/22/18 23:19	1
Benzenethiol	ND	* UJ	9.8	1.7	ug/L		10/19/18 14:52	10/22/18 23:19	1
Benzoic acid	ND	* UJ	29	7.1	ug/L		10/19/18 14:52	10/22/18 23:19	1
Benzyl alcohol	ND	UJ	9.8	2.0	ug/L		10/19/18 14:52	10/22/18 23:19	1
Bis(2-chloroethoxy)methane	ND	UJ	9.8	0.67	ug/L		10/19/18 14:52	10/22/18 23:19	1
Bis(2-chloroethyl)ether	ND		9.8	0.72	ug/L		10/19/18 14:52	10/22/18 23:19	1
bis (2-chloroisopropyl) ether	ND		9.8	0.79	ug/L		10/19/18 14:52	10/22/18 23:19	1
Bis(2-ethylhexyl) phthalate	ND		9.8	2.2	ug/L		10/19/18 14:52	10/22/18 23:19	1
4-Bromophenyl phenyl ether	ND		9.8	0.31	ug/L		10/19/18 14:52	10/22/18 23:19	1
Butyl benzyl phthalate	ND		9.8	0.67	ug/L		10/19/18 14:52	10/22/18 23:19	1
4-Chloroaniline	ND		9.8	3.3	ug/L		10/19/18 14:52	10/22/18 23:19	1
4-Chloro-3-methylphenol	ND		9.8	3.7	ug/L		10/19/18 14:52	10/22/18 23:19	1
2-Chloronaphthalene	ND		9.8	0.51	ug/L		10/19/18 14:52	10/22/18 23:19	1
2-Chlorophenol	ND		9.8	2.1	ug/L		10/19/18 14:52	10/22/18 23:19	1
4-Chlorophenyl phenyl ether	ND		9.8	2.0	ug/L		10/19/18 14:52	10/22/18 23:19	1
Dibenz[a,h]acridine	ND		9.8	2.9	ug/L		10/19/18 14:52	10/22/18 23:19	1
Dibenzofuran	ND		9.8	0.51	ug/L		10/19/18 14:52	10/22/18 23:19	1
3,3'-Dichlorobenzidine	ND		9.8	2.5	ug/L		10/19/18 14:52	10/22/18 23:19	1
2,4-Dichlorophenol	ND		9.8	2.9	ug/L		10/19/18 14:52	10/22/18 23:19	1
Diethyl phthalate	ND		9.8	0.68	ug/L		10/19/18 14:52	10/22/18 23:19	1
2,4-Dimethylphenol	ND		9.8	3.4	ug/L		10/19/18 14:52	10/22/18 23:19	1
Dimethyl phthalate	ND		9.8	0.59	ug/L		10/19/18 14:52	10/22/18 23:19	1
Di-n-butyl phthalate	ND		9.8	2.6	ug/L		10/19/18 14:52	10/22/18 23:19	1
4,6-Dinitro-ortho-cresol	ND	*	9.8	2.0	ug/L		10/19/18 14:52	10/22/18 23:19	1
2,4-Dinitrophenol	ND	*	29	3.3	ug/L		10/19/18 14:52	10/22/18 23:19	1
2,4-Dinitrotoluene	ND		9.8	1.9	ug/L		10/19/18 14:52	10/22/18 23:19	1
2,6-Dinitrotoluene	ND		9.8	1.9	ug/L		10/19/18 14:52	10/22/18 23:19	1
Di-n-octyl phthalate	ND		9.8	0.43	ug/L		10/19/18 14:52	10/22/18 23:19	1
1,4-Dioxane	ND	UJ	9.8	0.98	ug/L		10/19/18 14:52	10/22/18 23:19	1
1,2-Diphenylhydrazine (as Azobenzene)	ND	UJ	9.8	0.98	ug/L		10/19/18 14:52	10/22/18 23:19	1
Hexachlorobenzene	ND		9.8	0.24	ug/L		10/19/18 14:52	10/22/18 23:19	1
Hexachlorocyclopentadiene	ND		20	2.5	ug/L		10/19/18 14:52	10/22/18 23:19	1
Hexachloroethane	ND		9.8	4.1	ug/L		10/19/18 14:52	10/22/18 23:19	1
Indene	1.2	J	9.8	0.98	ug/L		10/19/18 14:52	10/22/18 23:19	1
Isophorone	ND	UJ	9.8	0.56	ug/L		10/19/18 14:52	10/22/18 23:19	1
2-Methylphenol	ND		9.8	1.8	ug/L		10/19/18 14:52	10/22/18 23:19	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/19/18 14:52	10/22/18 23:19	1
2-Nitroaniline	ND		9.8	2.1	ug/L		10/19/18 14:52	10/22/18 23:19	1
3-Nitroaniline	ND		9.8	1.8	ug/L		10/19/18 14:52	10/22/18 23:19	1
4-Nitroaniline	ND		9.8	2.4	ug/L		10/19/18 14:52	10/22/18 23:19	1
Nitrobenzene	ND	UJ	9.8	0.54	ug/L		10/19/18 14:52	10/22/18 23:19	1
2-Nitrophenol	ND		9.8	0.64	ug/L		10/19/18 14:52	10/22/18 23:19	1
4-Nitrophenol	ND	*	9.8	2.1	ug/L		10/19/18 14:52	10/22/18 23:19	1
N-Nitrosodimethylamine	ND		9.8	3.4	ug/L		10/19/18 14:52	10/22/18 23:19	1

Client Sample ID: ROST4PZC-ROX-101218

Lab Sample ID: 400-160552-5

Date Collected: 10/12/18 10:15
Date Received: 10/13/18 08:36

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND	UJ	9.8	3.2	ug/L		10/19/18 14:52	10/22/18 23:19	1
N-Nitrosodiphenylamine	ND		9.8	0.46	ug/L		10/19/18 14:52	10/22/18 23:19	1
Pentachlorophenol	ND		20	1.8	ug/L		10/19/18 14:52	10/22/18 23:19	1
Phenol	ND	UJ	9.8	2.5	ug/L		10/19/18 14:52	10/22/18 23:19	1
Pyridine	ND	UJ	9.8	3.1	ug/L		10/19/18 14:52	10/22/18 23:19	1
Quinoline	ND		9.8	5.9	ug/L		10/19/18 14:52	10/22/18 23:19	1
2,4,5-Trichlorophenol	ND		9.8	3.6	ug/L		10/19/18 14:52	10/22/18 23:19	1
2,4,6-Trichlorophenol	ND		9.8	3.4	ug/L		10/19/18 14:52	10/22/18 23:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*49*		*34 - 120*	*10/19/18 14:52*	*10/22/18 23:19*	*1*
2-Fluorophenol	*60*		*10 - 120*	*10/19/18 14:52*	*10/22/18 23:19*	*1*
Nitrobenzene-d5	*51*		*27 - 120*	*10/19/18 14:52*	*10/22/18 23:19*	*1*
Phenol-d5	*51*		*10 - 120*	*10/19/18 14:52*	*10/22/18 23:19*	*1*
Terphenyl-d14	*59*		*53 - 125*	*10/19/18 14:52*	*10/22/18 23:19*	*1*
2,4,6-Tribromophenol	*75*		*15 - 135*	*10/19/18 14:52*	*10/22/18 23:19*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0055	ug/L		10/25/18 11:36	10/26/18 17:40	1
1,2-Dibromoethane	ND		0.020	0.0050	ug/L		10/25/18 11:36	10/26/18 17:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*118*	*p*	*51 - 149*	*10/25/18 11:36*	*10/26/18 17:40*	*1*

Client Sample ID: ROST4PZG-ROX-101218
Date Collected: 10/12/18 11:10
Date Received: 10/13/18 08:36

Lab Sample ID: 400-160552-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/25/18 17:52	1
Acrolein	ND		20	10	ug/L			10/25/18 17:52	1
Acrylonitrile	ND		10	2.8	ug/L			10/25/18 17:52	1
Benzene	1.1		1.0	0.38	ug/L			10/25/18 17:52	1
Bromobenzene	ND		1.0	0.54	ug/L			10/25/18 17:52	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/25/18 17:52	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/25/18 17:52	1
Bromoform	ND		5.0	0.71	ug/L			10/25/18 17:52	1
Bromomethane	ND		1.0	0.98	ug/L			10/25/18 17:52	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/25/18 17:52	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/25/18 17:52	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/25/18 17:52	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/25/18 17:52	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/25/18 17:52	1
Chloroethane	ND		1.0	0.76	ug/L			10/25/18 17:52	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/25/18 17:52	1
Chloroform	ND		1.0	0.60	ug/L			10/25/18 17:52	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/25/18 17:52	1
Chloromethane	ND		1.0	0.83	ug/L			10/25/18 17:52	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/25/18 17:52	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/25/18 17:52	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/25/18 17:52	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/25/18 17:52	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/25/18 17:52	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/25/18 17:52	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/25/18 17:52	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/25/18 17:52	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/25/18 17:52	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/25/18 17:52	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/25/18 17:52	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/25/18 17:52	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/25/18 17:52	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/25/18 17:52	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/25/18 17:52	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/25/18 17:52	1
2-Hexanone	ND		25	3.1	ug/L			10/25/18 17:52	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/25/18 17:52	1
Methylene bromide	ND		5.0	0.59	ug/L			10/25/18 17:52	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/25/18 17:52	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/25/18 17:52	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/25/18 17:52	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/25/18 17:52	1
Naphthalene	ND		1.0	1.0	ug/L			10/25/18 17:52	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/25/18 17:52	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/25/18 17:52	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/25/18 17:52	1
o-Xylene	ND		5.0	0.60	ug/L			10/25/18 17:52	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/25/18 17:52	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/25/18 17:52	1

Client Sample ID: ROST4PZG-ROX-101218

Lab Sample ID: 400-160552-6

Date Collected: 10/12/18 11:10
Date Received: 10/13/18 08:36

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/25/18 17:52	1
Styrene	ND		1.0	1.0	ug/L			10/25/18 17:52	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/25/18 17:52	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/25/18 17:52	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/25/18 17:52	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/25/18 17:52	1
Toluene	ND		1.0	0.70	ug/L			10/25/18 17:52	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/25/18 17:52	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/25/18 17:52	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/25/18 17:52	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/25/18 17:52	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/25/18 17:52	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/25/18 17:52	1
Trichloroethene	ND		1.0	0.50	ug/L			10/25/18 17:52	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/25/18 17:52	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/25/18 17:52	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/25/18 17:52	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/25/18 17:52	1
Vinyl acetate	ND		25	2.0	ug/L			10/25/18 17:52	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/25/18 17:52	1
Xylenes, Total	ND		10	1.6	ug/L			10/25/18 17:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*78 - 118*		*10/25/18 17:52*	*1*
Dibromofluoromethane	*98*		*81 - 121*		*10/25/18 17:52*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*10/25/18 17:52*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.19	0.019	ug/L		10/19/18 14:52	10/22/18 22:00	1
Acenaphthylene	ND		0.19	0.019	ug/L		10/19/18 14:52	10/22/18 22:00	1
Anthracene	ND		0.19	0.019	ug/L		10/19/18 14:52	10/22/18 22:00	1
Benzo[a]anthracene	ND		0.19	0.039	ug/L		10/19/18 14:52	10/22/18 22:00	1
Benzo[a]pyrene	ND		0.19	0.039	ug/L		10/19/18 14:52	10/22/18 22:00	1
Benzo[b]fluoranthene	ND		0.19	0.039	ug/L		10/19/18 14:52	10/22/18 22:00	1
Benzo[g,h,i]perylene	ND		0.19	0.039	ug/L		10/19/18 14:52	10/22/18 22:00	1
Benzo[k]fluoranthene	ND		0.19	0.039	ug/L		10/19/18 14:52	10/22/18 22:00	1
Chrysene	ND		0.19	0.039	ug/L		10/19/18 14:52	10/22/18 22:00	1
Dibenz(a,h)anthracene	ND		0.19	0.039	ug/L		10/19/18 14:52	10/22/18 22:00	1
Fluoranthene	ND		0.19	0.019	ug/L		10/19/18 14:52	10/22/18 22:00	1
Fluorene	ND		0.19	0.020	ug/L		10/19/18 14:52	10/22/18 22:00	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.039	ug/L		10/19/18 14:52	10/22/18 22:00	1
Phenanthrene	0.13	J	0.19	0.019	ug/L		10/19/18 14:52	10/22/18 22:00	1
Pyrene	ND		0.19	0.019	ug/L		10/19/18 14:52	10/22/18 22:00	1
1-Methylnaphthalene	0.12	J	0.19	0.019	ug/L		10/19/18 14:52	10/22/18 22:00	1
2-Methylnaphthalene	0.14	J	0.19	0.019	ug/L		10/19/18 14:52	10/22/18 22:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*68*		*33 - 138*	*10/19/18 14:52*	*10/22/18 22:00*	*1*
2-Fluorobiphenyl	*84*		*15 - 122*	*10/19/18 14:52*	*10/22/18 22:00*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160552-1

Client Sample ID: ROST4PZG-ROX-101218
Date Collected: 10/12/18 11:10
Date Received: 10/13/18 08:36

Lab Sample ID: 400-160552-6
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	63		19 - 130	10/19/18 14:52	10/22/18 22:00	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND	UJ	9.7	3.7	ug/L		10/19/18 14:52	10/22/18 23:41	1
Benzenethiol	ND	* UJ	9.7	1.7	ug/L		10/19/18 14:52	10/22/18 23:41	1
Benzoic acid	ND	* UJ	29	7.1	ug/L		10/19/18 14:52	10/22/18 23:41	1
Benzyl alcohol	ND	UJ	9.7	1.9	ug/L		10/19/18 14:52	10/22/18 23:41	1
Bis(2-chloroethoxy)methane	ND	UJ	9.7	0.67	ug/L		10/19/18 14:52	10/22/18 23:41	1
Bis(2-chloroethyl)ether	ND		9.7	0.72	ug/L		10/19/18 14:52	10/22/18 23:41	1
bis (2-chloroisopropyl) ether	ND		9.7	0.79	ug/L		10/19/18 14:52	10/22/18 23:41	1
Bis(2-ethylhexyl) phthalate	ND		9.7	2.2	ug/L		10/19/18 14:52	10/22/18 23:41	1
4-Bromophenyl phenyl ether	ND		9.7	0.31	ug/L		10/19/18 14:52	10/22/18 23:41	1
Butyl benzyl phthalate	ND		9.7	0.67	ug/L		10/19/18 14:52	10/22/18 23:41	1
4-Chloroaniline	ND		9.7	3.3	ug/L		10/19/18 14:52	10/22/18 23:41	1
4-Chloro-3-methylphenol	ND		9.7	3.7	ug/L		10/19/18 14:52	10/22/18 23:41	1
2-Chloronaphthalene	ND		9.7	0.51	ug/L		10/19/18 14:52	10/22/18 23:41	1
2-Chlorophenol	ND		9.7	2.1	ug/L		10/19/18 14:52	10/22/18 23:41	1
4-Chlorophenyl phenyl ether	ND		9.7	1.9	ug/L		10/19/18 14:52	10/22/18 23:41	1
Dibenz[a,h]acridine	ND		9.7	2.9	ug/L		10/19/18 14:52	10/22/18 23:41	1
Dibenzofuran	ND		9.7	0.51	ug/L		10/19/18 14:52	10/22/18 23:41	1
3,3'-Dichlorobenzidine	ND		9.7	2.5	ug/L		10/19/18 14:52	10/22/18 23:41	1
2,4-Dichlorophenol	ND		9.7	2.9	ug/L		10/19/18 14:52	10/22/18 23:41	1
Diethyl phthalate	ND		9.7	0.66	ug/L		10/19/18 14:52	10/22/18 23:41	1
2,4-Dimethylphenol	ND		9.7	3.4	ug/L		10/19/18 14:52	10/22/18 23:41	1
Dimethyl phthalate	ND		9.7	0.58	ug/L		10/19/18 14:52	10/22/18 23:41	1
Di-n-butyl phthalate	ND		9.7	2.6	ug/L		10/19/18 14:52	10/22/18 23:41	1
4,6-Dinitro-ortho-cresol	ND	*	9.7	1.9	ug/L		10/19/18 14:52	10/22/18 23:41	1
2,4-Dinitrophenol	ND	*	29	3.3	ug/L		10/19/18 14:52	10/22/18 23:41	1
2,4-Dinitrotoluene	ND		9.7	1.8	ug/L		10/19/18 14:52	10/22/18 23:41	1
2,6-Dinitrotoluene	ND		9.7	1.8	ug/L		10/19/18 14:52	10/22/18 23:41	1
Di-n-octyl phthalate	ND		9.7	0.43	ug/L		10/19/18 14:52	10/22/18 23:41	1
1,4-Dioxane	ND	UJ	9.7	0.97	ug/L		10/19/18 14:52	10/22/18 23:41	1
1,2-Diphenylhydrazine (as Azobenzene)	ND	UJ	9.7	0.97	ug/L		10/19/18 14:52	10/22/18 23:41	1
Hexachlorobenzene	ND		9.7	0.24	ug/L		10/19/18 14:52	10/22/18 23:41	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		10/19/18 14:52	10/22/18 23:41	1
Hexachloroethane	ND		9.7	4.1	ug/L		10/19/18 14:52	10/22/18 23:41	1
Indene	ND		9.7	0.97	ug/L		10/19/18 14:52	10/22/18 23:41	1
Isophorone	ND	UJ	9.7	0.55	ug/L		10/19/18 14:52	10/22/18 23:41	1
2-Methylphenol	ND		9.7	1.7	ug/L		10/19/18 14:52	10/22/18 23:41	1
3 & 4 Methylphenol	ND		19	1.0	ug/L		10/19/18 14:52	10/22/18 23:41	1
2-Nitroaniline	ND		9.7	2.1	ug/L		10/19/18 14:52	10/22/18 23:41	1
3-Nitroaniline	ND		9.7	1.7	ug/L		10/19/18 14:52	10/22/18 23:41	1
4-Nitroaniline	ND		9.7	2.4	ug/L		10/19/18 14:52	10/22/18 23:41	1
Nitrobenzene	ND	UJ	9.7	0.53	ug/L		10/19/18 14:52	10/22/18 23:41	1
2-Nitrophenol	ND		9.7	0.63	ug/L		10/19/18 14:52	10/22/18 23:41	1
4-Nitrophenol	ND	*	9.7	2.0	ug/L		10/19/18 14:52	10/22/18 23:41	1
N-Nitrosodimethylamine	ND		9.7	3.4	ug/L		10/19/18 14:52	10/22/18 23:41	1

Client Sample ID: ROST4PZG-ROX-101218

Date Collected: 10/12/18 11:10
Date Received: 10/13/18 08:36

Lab Sample ID: 400-160552-6
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND	UJ	9.7	3.2	ug/L		10/19/18 14:52	10/22/18 23:41	1
N-Nitrosodiphenylamine	ND		9.7	0.46	ug/L		10/19/18 14:52	10/22/18 23:41	1
Pentachlorophenol	ND		19	1.8	ug/L		10/19/18 14:52	10/22/18 23:41	1
Phenol	ND	UJ	9.7	2.5	ug/L		10/19/18 14:52	10/22/18 23:41	1
Pyridine	ND	UJ	9.7	3.1	ug/L		10/19/18 14:52	10/22/18 23:41	1
Quinoline	ND		9.7	5.8	ug/L		10/19/18 14:52	10/22/18 23:41	1
2,4,5-Trichlorophenol	ND		9.7	3.6	ug/L		10/19/18 14:52	10/22/18 23:41	1
2,4,6-Trichlorophenol	ND		9.7	3.4	ug/L		10/19/18 14:52	10/22/18 23:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*44*		*34 - 120*	*10/19/18 14:52*	*10/22/18 23:41*	*1*
2-Fluorophenol	*31*		*10 - 120*	*10/19/18 14:52*	*10/22/18 23:41*	*1*
Nitrobenzene-d5	*43*		*27 - 120*	*10/19/18 14:52*	*10/22/18 23:41*	*1*
Phenol-d5	*34*		*10 - 120*	*10/19/18 14:52*	*10/22/18 23:41*	*1*
Terphenyl-d14	*41*	X	*53 - 125*	*10/19/18 14:52*	*10/22/18 23:41*	*1*
2,4,6-Tribromophenol	*50*		*15 - 135*	*10/19/18 14:52*	*10/22/18 23:41*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0056	ug/L		10/25/18 11:36	10/26/18 17:16	1
1,2-Dibromoethane	ND		0.020	0.0051	ug/L		10/25/18 11:36	10/26/18 17:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*110*	*p*	*51 - 149*	*10/25/18 11:36*	*10/26/18 17:16*	*1*

Client Sample ID: MW2-ROX-101218

Lab Sample ID: 400-160552-7

Date Collected: 10/12/18 12:05
Date Received: 10/13/18 08:36

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	21	J	25	10	ug/L			10/25/18 18:16	1
Acrolein	ND		20	10	ug/L			10/25/18 18:16	1
Acrylonitrile	ND		10	2.8	ug/L			10/25/18 18:16	1
Benzene	4.4		1.0	0.38	ug/L			10/25/18 18:16	1
Bromobenzene	ND		1.0	0.54	ug/L			10/25/18 18:16	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/25/18 18:16	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/25/18 18:16	1
Bromoform	ND		5.0	0.71	ug/L			10/25/18 18:16	1
Bromomethane	ND		1.0	0.98	ug/L			10/25/18 18:16	1
2-Butanone (MEK)	9.9	J	25	2.6	ug/L			10/25/18 18:16	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/25/18 18:16	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/25/18 18:16	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/25/18 18:16	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/25/18 18:16	1
Chloroethane	ND		1.0	0.76	ug/L			10/25/18 18:16	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/25/18 18:16	1
Chloroform	ND		1.0	0.60	ug/L			10/25/18 18:16	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/25/18 18:16	1
Chloromethane	ND		1.0	0.83	ug/L			10/25/18 18:16	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/25/18 18:16	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/25/18 18:16	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/25/18 18:16	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/25/18 18:16	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/25/18 18:16	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/25/18 18:16	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/25/18 18:16	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/25/18 18:16	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/25/18 18:16	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/25/18 18:16	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/25/18 18:16	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/25/18 18:16	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/25/18 18:16	1
Ethylbenzene	110		1.0	0.50	ug/L			10/25/18 18:16	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/25/18 18:16	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/25/18 18:16	1
2-Hexanone	ND		25	3.1	ug/L			10/25/18 18:16	1
Isopropylbenzene	35		1.0	0.53	ug/L			10/25/18 18:16	1
Methylene bromide	ND		5.0	0.59	ug/L			10/25/18 18:16	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/25/18 18:16	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/25/18 18:16	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/25/18 18:16	1
m-Xylene & p-Xylene	45	J	5.0	1.6	ug/L			10/25/18 18:16	1
Naphthalene	11		1.0	1.0	ug/L			10/25/18 18:16	1
n-Butylbenzene	2.2		1.0	0.76	ug/L			10/25/18 18:16	1
N-Propylbenzene	49		1.0	0.69	ug/L			10/25/18 18:16	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/25/18 18:16	1
o-Xylene	5.3		5.0	0.60	ug/L			10/25/18 18:16	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/25/18 18:16	1
p-Isopropyltoluene	3.6		1.0	0.71	ug/L			10/25/18 18:16	1

Client Sample ID: MW2-ROX-101218

Date Collected: 10/12/18 12:05
Date Received: 10/13/18 08:36

Lab Sample ID: 400-160552-7
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	4.0		1.0	0.70	ug/L			10/25/18 18:16	1
Styrene	ND		1.0	1.0	ug/L			10/25/18 18:16	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/25/18 18:16	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/25/18 18:16	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/25/18 18:16	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/25/18 18:16	1
Toluene	4.9		1.0	0.70	ug/L			10/25/18 18:16	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/25/18 18:16	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/25/18 18:16	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/25/18 18:16	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/25/18 18:16	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/25/18 18:16	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/25/18 18:16	1
Trichloroethene	ND		1.0	0.50	ug/L			10/25/18 18:16	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/25/18 18:16	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/25/18 18:16	1
1,2,4-Trimethylbenzene	9.1	J	1.0	0.82	ug/L			10/25/18 18:16	1
1,3,5-Trimethylbenzene	14		1.0	0.56	ug/L			10/25/18 18:16	1
Vinyl acetate	ND		25	2.0	ug/L			10/25/18 18:16	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/25/18 18:16	1
Xylenes, Total	50		10	1.6	ug/L			10/25/18 18:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*78 - 118*		*10/25/18 18:16*	*1*
Dibromofluoromethane	*98*		*81 - 121*		*10/25/18 18:16*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*10/25/18 18:16*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 22:15	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 22:15	1
Anthracene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 22:15	1
Benzo[a]anthracene	ND		0.20	0.039	ug/L		10/19/18 14:52	10/22/18 22:15	1
Benzo[a]pyrene	ND		0.20	0.039	ug/L		10/19/18 14:52	10/22/18 22:15	1
Benzo[b]fluoranthene	ND		0.20	0.039	ug/L		10/19/18 14:52	10/22/18 22:15	1
Benzo[g,h,i]perylene	ND		0.20	0.039	ug/L		10/19/18 14:52	10/22/18 22:15	1
Benzo[k]fluoranthene	ND		0.20	0.039	ug/L		10/19/18 14:52	10/22/18 22:15	1
Chrysene	ND		0.20	0.039	ug/L		10/19/18 14:52	10/22/18 22:15	1
Dibenz(a,h)anthracene	ND		0.20	0.039	ug/L		10/19/18 14:52	10/22/18 22:15	1
Fluoranthene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 22:15	1
Fluorene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 22:15	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.039	ug/L		10/19/18 14:52	10/22/18 22:15	1
Phenanthrene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 22:15	1
Pyrene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 22:15	1
1-Methylnaphthalene	4.8		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 22:15	1
2-Methylnaphthalene	3.0	J	0.20	0.020	ug/L		10/19/18 14:52	10/22/18 22:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*38*		*33 - 138*	*10/19/18 14:52*	*10/22/18 22:15*	*1*
2-Fluorobiphenyl	*64*		*15 - 122*	*10/19/18 14:52*	*10/22/18 22:15*	*1*

Client Sample ID: MW2-ROX-101218

Date Collected: 10/12/18 12:05
Date Received: 10/13/18 08:36

Lab Sample ID: 400-160552-7
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	60		19 - 130	10/19/18 14:52	10/22/18 22:15	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND	UJ	9.8	3.7	ug/L		10/19/18 14:52	10/23/18 00:02	1
Benzenethiol	ND	* UJ	9.8	1.7	ug/L		10/19/18 14:52	10/23/18 00:02	1
Benzoic acid	ND	* UJ	29	7.1	ug/L		10/19/18 14:52	10/23/18 00:02	1
Benzyl alcohol	ND	UJ	9.8	2.0	ug/L		10/19/18 14:52	10/23/18 00:02	1
Bis(2-chloroethoxy)methane	ND	UJ	9.8	0.67	ug/L		10/19/18 14:52	10/23/18 00:02	1
Bis(2-chloroethyl)ether	ND		9.8	0.72	ug/L		10/19/18 14:52	10/23/18 00:02	1
bis (2-chloroisopropyl) ether	ND		9.8	0.79	ug/L		10/19/18 14:52	10/23/18 00:02	1
Bis(2-ethylhexyl) phthalate	ND		9.8	2.2	ug/L		10/19/18 14:52	10/23/18 00:02	1
4-Bromophenyl phenyl ether	ND		9.8	0.31	ug/L		10/19/18 14:52	10/23/18 00:02	1
Butyl benzyl phthalate	ND		9.8	0.67	ug/L		10/19/18 14:52	10/23/18 00:02	1
4-Chloroaniline	ND		9.8	3.3	ug/L		10/19/18 14:52	10/23/18 00:02	1
4-Chloro-3-methylphenol	ND		9.8	3.7	ug/L		10/19/18 14:52	10/23/18 00:02	1
2-Chloronaphthalene	ND		9.8	0.51	ug/L		10/19/18 14:52	10/23/18 00:02	1
2-Chlorophenol	ND		9.8	2.1	ug/L		10/19/18 14:52	10/23/18 00:02	1
4-Chlorophenyl phenyl ether	ND		9.8	2.0	ug/L		10/19/18 14:52	10/23/18 00:02	1
Dibenz[a,h]acridine	ND		9.8	2.9	ug/L		10/19/18 14:52	10/23/18 00:02	1
Dibenzofuran	ND		9.8	0.51	ug/L		10/19/18 14:52	10/23/18 00:02	1
3,3'-Dichlorobenzidine	ND		9.8	2.5	ug/L		10/19/18 14:52	10/23/18 00:02	1
2,4-Dichlorophenol	ND		9.8	2.9	ug/L		10/19/18 14:52	10/23/18 00:02	1
Diethyl phthalate	ND		9.8	0.68	ug/L		10/19/18 14:52	10/23/18 00:02	1
2,4-Dimethylphenol	ND		9.8	3.4	ug/L		10/19/18 14:52	10/23/18 00:02	1
Dimethyl phthalate	ND		9.8	0.59	ug/L		10/19/18 14:52	10/23/18 00:02	1
Di-n-butyl phthalate	ND		9.8	2.6	ug/L		10/19/18 14:52	10/23/18 00:02	1
4,6-Dinitro-ortho-cresol	ND	*	9.8	2.0	ug/L		10/19/18 14:52	10/23/18 00:02	1
2,4-Dinitrophenol	ND	*	29	3.3	ug/L		10/19/18 14:52	10/23/18 00:02	1
2,4-Dinitrotoluene	ND		9.8	1.9	ug/L		10/19/18 14:52	10/23/18 00:02	1
2,6-Dinitrotoluene	ND		9.8	1.9	ug/L		10/19/18 14:52	10/23/18 00:02	1
Di-n-octyl phthalate	ND		9.8	0.43	ug/L		10/19/18 14:52	10/23/18 00:02	1
1,4-Dioxane	ND	UJ	9.8	0.98	ug/L		10/19/18 14:52	10/23/18 00:02	1
1,2-Diphenylhydrazine (as Azobenzene)	ND	UJ	9.8	0.98	ug/L		10/19/18 14:52	10/23/18 00:02	1
Hexachlorobenzene	ND		9.8	0.24	ug/L		10/19/18 14:52	10/23/18 00:02	1
Hexachlorocyclopentadiene	ND		20	2.5	ug/L		10/19/18 14:52	10/23/18 00:02	1
Hexachloroethane	ND		9.8	4.1	ug/L		10/19/18 14:52	10/23/18 00:02	1
Indene	ND		9.8	0.98	ug/L		10/19/18 14:52	10/23/18 00:02	1
Isophorone	ND	UJ	9.8	0.56	ug/L		10/19/18 14:52	10/23/18 00:02	1
2-Methylphenol	ND		9.8	1.8	ug/L		10/19/18 14:52	10/23/18 00:02	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/19/18 14:52	10/23/18 00:02	1
2-Nitroaniline	ND		9.8	2.1	ug/L		10/19/18 14:52	10/23/18 00:02	1
3-Nitroaniline	ND		9.8	1.8	ug/L		10/19/18 14:52	10/23/18 00:02	1
4-Nitroaniline	ND		9.8	2.4	ug/L		10/19/18 14:52	10/23/18 00:02	1
Nitrobenzene	ND	UJ	9.8	0.54	ug/L		10/19/18 14:52	10/23/18 00:02	1
2-Nitrophenol	ND		9.8	0.63	ug/L		10/19/18 14:52	10/23/18 00:02	1
4-Nitrophenol	ND	*	9.8	2.0	ug/L		10/19/18 14:52	10/23/18 00:02	1
N-Nitrosodimethylamine	ND		9.8	3.4	ug/L		10/19/18 14:52	10/23/18 00:02	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160552-1

Client Sample ID: MW2-ROX-101218
Date Collected: 10/12/18 12:05
Date Received: 10/13/18 08:36

Lab Sample ID: 400-160552-7
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND	UJ	9.8	3.2	ug/L		10/19/18 14:52	10/23/18 00:02	1
N-Nitrosodiphenylamine	ND		9.8	0.46	ug/L		10/19/18 14:52	10/23/18 00:02	1
Pentachlorophenol	ND		20	1.8	ug/L		10/19/18 14:52	10/23/18 00:02	1
Phenol	ND	UJ	9.8	2.5	ug/L		10/19/18 14:52	10/23/18 00:02	1
Pyridine	ND	UJ	9.8	3.1	ug/L		10/19/18 14:52	10/23/18 00:02	1
Quinoline	ND		9.8	5.9	ug/L		10/19/18 14:52	10/23/18 00:02	1
2,4,5-Trichlorophenol	ND		9.8	3.6	ug/L		10/19/18 14:52	10/23/18 00:02	1
2,4,6-Trichlorophenol	ND		9.8	3.4	ug/L		10/19/18 14:52	10/23/18 00:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*43*		*34 - 120*	*10/19/18 14:52*	*10/23/18 00:02*	*1*
2-Fluorophenol	*42*		*10 - 120*	*10/19/18 14:52*	*10/23/18 00:02*	*1*
Nitrobenzene-d5	*48*		*27 - 120*	*10/19/18 14:52*	*10/23/18 00:02*	*1*
Phenol-d5	*38*		*10 - 120*	*10/19/18 14:52*	*10/23/18 00:02*	*1*
Terphenyl-d14	*31*	*X*	*53 - 125*	*10/19/18 14:52*	*10/23/18 00:02*	*1*
2,4,6-Tribromophenol	*59*		*15 - 135*	*10/19/18 14:52*	*10/23/18 00:02*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0055	ug/L		10/25/18 11:36	10/26/18 16:51	1
1,2-Dibromoethane	ND		0.020	0.0050	ug/L		10/25/18 11:36	10/26/18 16:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*121*	*p*	*51 - 149*	*10/25/18 11:36*	*10/26/18 16:51*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160552-1

Client Sample ID: MW2-ROX-101218-DUP
Date Collected: 10/12/18 12:05
Date Received: 10/13/18 08:36

Lab Sample ID: 400-160552-8
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	17	J	25	10	ug/L			10/25/18 18:40	1
Acrolein	ND		20	10	ug/L			10/25/18 18:40	1
Acrylonitrile	ND		10	2.8	ug/L			10/25/18 18:40	1
Benzene	4.5		1.0	0.38	ug/L			10/25/18 18:40	1
Bromobenzene	ND		1.0	0.54	ug/L			10/25/18 18:40	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/25/18 18:40	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/25/18 18:40	1
Bromoform	ND		5.0	0.71	ug/L			10/25/18 18:40	1
Bromomethane	ND		1.0	0.98	ug/L			10/25/18 18:40	1
2-Butanone (MEK)	9.5	J	25	2.6	ug/L			10/25/18 18:40	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/25/18 18:40	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/25/18 18:40	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/25/18 18:40	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/25/18 18:40	1
Chloroethane	ND		1.0	0.76	ug/L			10/25/18 18:40	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/25/18 18:40	1
Chloroform	ND		1.0	0.60	ug/L			10/25/18 18:40	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/25/18 18:40	1
Chloromethane	ND		1.0	0.83	ug/L			10/25/18 18:40	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/25/18 18:40	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/25/18 18:40	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/25/18 18:40	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/25/18 18:40	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/25/18 18:40	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/25/18 18:40	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/25/18 18:40	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/25/18 18:40	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/25/18 18:40	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/25/18 18:40	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/25/18 18:40	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/25/18 18:40	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/25/18 18:40	1
Ethylbenzene	130		1.0	0.50	ug/L			10/25/18 18:40	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/25/18 18:40	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/25/18 18:40	1
2-Hexanone	ND		25	3.1	ug/L			10/25/18 18:40	1
Isopropylbenzene	35		1.0	0.53	ug/L			10/25/18 18:40	1
Methylene bromide	ND		5.0	0.59	ug/L			10/25/18 18:40	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/25/18 18:40	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/25/18 18:40	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/25/18 18:40	1
m-Xylene & p-Xylene	58	J	5.0	1.6	ug/L			10/25/18 18:40	1
Naphthalene	13		1.0	1.0	ug/L			10/25/18 18:40	1
n-Butylbenzene	2.2		1.0	0.76	ug/L			10/25/18 18:40	1
N-Propylbenzene	50		1.0	0.69	ug/L			10/25/18 18:40	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/25/18 18:40	1
o-Xylene	6.7		5.0	0.60	ug/L			10/25/18 18:40	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/25/18 18:40	1
p-Isopropyltoluene	3.7		1.0	0.71	ug/L			10/25/18 18:40	1

Client Sample ID: MW2-ROX-101218-DUP
Date Collected: 10/12/18 12:05
Date Received: 10/13/18 08:36

Lab Sample ID: 400-160552-8
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	4.1		1.0	0.70	ug/L			10/25/18 18:40	1
Styrene	ND		1.0	1.0	ug/L			10/25/18 18:40	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/25/18 18:40	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/25/18 18:40	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/25/18 18:40	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/25/18 18:40	1
Toluene	5.4		1.0	0.70	ug/L			10/25/18 18:40	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/25/18 18:40	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/25/18 18:40	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/25/18 18:40	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/25/18 18:40	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/25/18 18:40	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/25/18 18:40	1
Trichloroethene	ND		1.0	0.50	ug/L			10/25/18 18:40	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/25/18 18:40	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/25/18 18:40	1
1,2,4-Trimethylbenzene	12	J	1.0	0.82	ug/L			10/25/18 18:40	1
1,3,5-Trimethylbenzene	14		1.0	0.56	ug/L			10/25/18 18:40	1
Vinyl acetate	ND		25	2.0	ug/L			10/25/18 18:40	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/25/18 18:40	1
Xylenes, Total	65		10	1.6	ug/L			10/25/18 18:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*78 - 118*		*10/25/18 18:40*	*1*
Dibromofluoromethane	*97*		*81 - 121*		*10/25/18 18:40*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*10/25/18 18:40*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.19	0.019	ug/L		10/19/18 14:52	10/22/18 22:31	1
Acenaphthylene	ND		0.19	0.019	ug/L		10/19/18 14:52	10/22/18 22:31	1
Anthracene	ND		0.19	0.019	ug/L		10/19/18 14:52	10/22/18 22:31	1
Benzo[a]anthracene	ND		0.19	0.039	ug/L		10/19/18 14:52	10/22/18 22:31	1
Benzo[a]pyrene	ND		0.19	0.039	ug/L		10/19/18 14:52	10/22/18 22:31	1
Benzo[b]fluoranthene	ND		0.19	0.039	ug/L		10/19/18 14:52	10/22/18 22:31	1
Benzo[g,h,i]perylene	ND		0.19	0.039	ug/L		10/19/18 14:52	10/22/18 22:31	1
Benzo[k]fluoranthene	ND		0.19	0.039	ug/L		10/19/18 14:52	10/22/18 22:31	1
Chrysene	ND		0.19	0.039	ug/L		10/19/18 14:52	10/22/18 22:31	1
Dibenz(a,h)anthracene	ND		0.19	0.039	ug/L		10/19/18 14:52	10/22/18 22:31	1
Fluoranthene	ND		0.19	0.019	ug/L		10/19/18 14:52	10/22/18 22:31	1
Fluorene	ND		0.19	0.020	ug/L		10/19/18 14:52	10/22/18 22:31	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.039	ug/L		10/19/18 14:52	10/22/18 22:31	1
Phenanthrene	ND		0.19	0.019	ug/L		10/19/18 14:52	10/22/18 22:31	1
Pyrene	ND		0.19	0.019	ug/L		10/19/18 14:52	10/22/18 22:31	1
1-Methylnaphthalene	5.1		0.19	0.019	ug/L		10/19/18 14:52	10/22/18 22:31	1
2-Methylnaphthalene	1.8	J	0.19	0.019	ug/L		10/19/18 14:52	10/22/18 22:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*54*		*33 - 138*	*10/19/18 14:52*	*10/22/18 22:31*	*1*
2-Fluorobiphenyl	*67*		*15 - 122*	*10/19/18 14:52*	*10/22/18 22:31*	*1*

Client Sample ID: MW2-ROX-101218-DUP

Date Collected: 10/12/18 12:05
Date Received: 10/13/18 08:36

Lab Sample ID: 400-160552-8
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	70		19 - 130	10/19/18 14:52	10/22/18 22:31	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND	UJ	9.7	3.7	ug/L		10/19/18 14:52	10/23/18 00:24	1
Benzenethiol	ND	* UJ	9.7	1.7	ug/L		10/19/18 14:52	10/23/18 00:24	1
Benzoic acid	ND	* UJ	29	7.1	ug/L		10/19/18 14:52	10/23/18 00:24	1
Benzyl alcohol	ND	UJ	9.7	1.9	ug/L		10/19/18 14:52	10/23/18 00:24	1
Bis(2-chloroethoxy)methane	ND	UJ	9.7	0.67	ug/L		10/19/18 14:52	10/23/18 00:24	1
Bis(2-chloroethyl)ether	ND		9.7	0.72	ug/L		10/19/18 14:52	10/23/18 00:24	1
bis (2-chloroisopropyl) ether	ND		9.7	0.79	ug/L		10/19/18 14:52	10/23/18 00:24	1
Bis(2-ethylhexyl) phthalate	ND		9.7	2.2	ug/L		10/19/18 14:52	10/23/18 00:24	1
4-Bromophenyl phenyl ether	ND		9.7	0.31	ug/L		10/19/18 14:52	10/23/18 00:24	1
Butyl benzyl phthalate	ND		9.7	0.67	ug/L		10/19/18 14:52	10/23/18 00:24	1
4-Chloroaniline	ND		9.7	3.3	ug/L		10/19/18 14:52	10/23/18 00:24	1
4-Chloro-3-methylphenol	ND		9.7	3.7	ug/L		10/19/18 14:52	10/23/18 00:24	1
2-Chloronaphthalene	ND		9.7	0.51	ug/L		10/19/18 14:52	10/23/18 00:24	1
2-Chlorophenol	ND		9.7	2.1	ug/L		10/19/18 14:52	10/23/18 00:24	1
4-Chlorophenyl phenyl ether	ND		9.7	1.9	ug/L		10/19/18 14:52	10/23/18 00:24	1
Dibenz[a,h]acridine	ND		9.7	2.9	ug/L		10/19/18 14:52	10/23/18 00:24	1
Dibenzofuran	ND		9.7	0.51	ug/L		10/19/18 14:52	10/23/18 00:24	1
3,3'-Dichlorobenzidine	ND		9.7	2.5	ug/L		10/19/18 14:52	10/23/18 00:24	1
2,4-Dichlorophenol	ND		9.7	2.9	ug/L		10/19/18 14:52	10/23/18 00:24	1
Diethyl phthalate	ND		9.7	0.68	ug/L		10/19/18 14:52	10/23/18 00:24	1
2,4-Dimethylphenol	ND		9.7	3.4	ug/L		10/19/18 14:52	10/23/18 00:24	1
Dimethyl phthalate	ND		9.7	0.58	ug/L		10/19/18 14:52	10/23/18 00:24	1
Di-n-butyl phthalate	ND		9.7	2.6	ug/L		10/19/18 14:52	10/23/18 00:24	1
4,6-Dinitro-ortho-cresol	ND	*	9.7	1.9	ug/L		10/19/18 14:52	10/23/18 00:24	1
2,4-Dinitrophenol	ND	*	29	3.3	ug/L		10/19/18 14:52	10/23/18 00:24	1
2,4-Dinitrotoluene	ND		9.7	1.8	ug/L		10/19/18 14:52	10/23/18 00:24	1
2,6-Dinitrotoluene	ND		9.7	1.8	ug/L		10/19/18 14:52	10/23/18 00:24	1
Di-n-octyl phthalate	ND		9.7	0.43	ug/L		10/19/18 14:52	10/23/18 00:24	1
1,4-Dioxane	ND	UJ	9.7	0.97	ug/L		10/19/18 14:52	10/23/18 00:24	1
1,2-Diphenylhydrazine (as Azobenzene)	ND	UJ	9.7	0.97	ug/L		10/19/18 14:52	10/23/18 00:24	1
Hexachlorobenzene	ND		9.7	0.24	ug/L		10/19/18 14:52	10/23/18 00:24	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		10/19/18 14:52	10/23/18 00:24	1
Hexachloroethane	ND		9.7	4.1	ug/L		10/19/18 14:52	10/23/18 00:24	1
Indene	ND		9.7	0.97	ug/L		10/19/18 14:52	10/23/18 00:24	1
Isophorone	ND	UJ	9.7	0.55	ug/L		10/19/18 14:52	10/23/18 00:24	1
2-Methylphenol	ND		9.7	1.7	ug/L		10/19/18 14:52	10/23/18 00:24	1
3 & 4 Methylphenol	ND		19	1.0	ug/L		10/19/18 14:52	10/23/18 00:24	1
2-Nitroaniline	ND		9.7	2.1	ug/L		10/19/18 14:52	10/23/18 00:24	1
3-Nitroaniline	ND		9.7	1.7	ug/L		10/19/18 14:52	10/23/18 00:24	1
4-Nitroaniline	ND		9.7	2.4	ug/L		10/19/18 14:52	10/23/18 00:24	1
Nitrobenzene	ND	UJ	9.7	0.53	ug/L		10/19/18 14:52	10/23/18 00:24	1
2-Nitrophenol	ND		9.7	0.63	ug/L		10/19/18 14:52	10/23/18 00:24	1
4-Nitrophenol	ND	*	9.7	2.0	ug/L		10/19/18 14:52	10/23/18 00:24	1
N-Nitrosodimethylamine	ND		9.7	3.4	ug/L		10/19/18 14:52	10/23/18 00:24	1

Client Sample ID: MW2-ROX-101218-DUP

Date Collected: 10/12/18 12:05
Date Received: 10/13/18 08:36

Lab Sample ID: 400-160552-8
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND	UJ	9.7	3.2	ug/L		10/19/18 14:52	10/23/18 00:24	1
N-Nitrosodiphenylamine	ND		9.7	0.46	ug/L		10/19/18 14:52	10/23/18 00:24	1
Pentachlorophenol	ND		19	1.8	ug/L		10/19/18 14:52	10/23/18 00:24	1
Phenol	ND	UJ	9.7	2.5	ug/L		10/19/18 14:52	10/23/18 00:24	1
Pyridine	ND	UJ	9.7	3.1	ug/L		10/19/18 14:52	10/23/18 00:24	1
Quinoline	ND		9.7	5.8	ug/L		10/19/18 14:52	10/23/18 00:24	1
2,4,5-Trichlorophenol	ND		9.7	3.6	ug/L		10/19/18 14:52	10/23/18 00:24	1
2,4,6-Trichlorophenol	ND		9.7	3.4	ug/L		10/19/18 14:52	10/23/18 00:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*45*		*34 - 120*	*10/19/18 14:52*	*10/23/18 00:24*	*1*
2-Fluorophenol	*42*		*10 - 120*	*10/19/18 14:52*	*10/23/18 00:24*	*1*
Nitrobenzene-d5	*52*		*27 - 120*	*10/19/18 14:52*	*10/23/18 00:24*	*1*
Phenol-d5	*48*		*10 - 120*	*10/19/18 14:52*	*10/23/18 00:24*	*1*
Terphenyl-d14	*40*	*X*	*53 - 125*	*10/19/18 14:52*	*10/23/18 00:24*	*1*
2,4,6-Tribromophenol	*75*		*15 - 135*	*10/19/18 14:52*	*10/23/18 00:24*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0055	ug/L		10/25/18 11:36	10/26/18 16:27	1
1,2-Dibromoethane	ND		0.020	0.0050	ug/L		10/25/18 11:36	10/26/18 16:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*164*	*p X*	*51 - 149*	*10/25/18 11:36*	*10/26/18 16:27*	*1*

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD is outside acceptance limits.
X	Surrogate is outside control limits

GC Semi VOA

Qualifier	Qualifier Description
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160552-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(78-118)	(81-121)	(80-120)
400-160552-2	TB-ROX-101218-8260	100	96	100
400-160552-3	MW5-ROX-101218	101	97	100
400-160552-4	ROST4PZC-ROX-101218-EB	100	99	98
400-160552-5	ROST4PZC-ROX-101218	99	98	100
400-160552-6	ROST4PZG-ROX-101218	99	98	100
400-160552-7	MW2-ROX-101218	100	98	101
400-160552-8	MW2-ROX-101218-DUP	101	97	102
LCS 400-416887/1002	Lab Control Sample	101	99	100
LCS 400-417069/1003	Lab Control Sample	99	101	99
MB 400-416887/4	Method Blank	100	98	99
MB 400-417069/5	Method Blank	98	100	98

Surrogate Legend

BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPHL	TBP
Lab Sample ID	Client Sample ID	(34-120)	(10-120)	(27-120)	(10-120)	(53-125)	(15-135)
400-160552-3	MW5-ROX-101218	50	30	45	45	66	79
400-160552-4	ROST4PZC-ROX-101218-EB	57	40	56	55	82	71
400-160552-5	ROST4PZC-ROX-101218	49	60	51	51	59	75
400-160552-6	ROST4PZG-ROX-101218	44	31	43	34	41 X	50
400-160552-7	MW2-ROX-101218	43	42	48	38	31 X	59
400-160552-8	MW2-ROX-101218-DUP	45	42	52	48	40 X	75
LCS 400-416151/2-A	Lab Control Sample	60	47	46	56	71	85
LCS 400-416151/4-A	Lab Control Sample	50	51	51	56	79	76
LCSD 400-416151/3-A	Lab Control Sample Dup	67	52	51	62	77	89
LCSD 400-416151/5-A	Lab Control Sample Dup	52	53	50	54	78	73
MB 400-416151/1-A	Method Blank	45	38	43	46	70	64

Surrogate Legend

FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPHL = Terphenyl-d14
TBP = 2,4,6-Tribromophenol

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		TPHL	FBP	NBZ
Lab Sample ID	Client Sample ID	(33-138)	(15-122)	(19-130)
400-160552-3	MW5-ROX-101218	106	92	77

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		TPHL	FBP	NBZ
Lab Sample ID	Client Sample ID	(33-138)	(15-122)	(19-130)
400-160552-4	ROST4PZC-ROX-101218-EB	144 X	108	81
400-160552-5	ROST4PZC-ROX-101218	80	74	59
400-160552-6	ROST4PZG-ROX-101218	68	84	63
400-160552-7	MW2-ROX-101218	38	64	60
400-160552-8	MW2-ROX-101218-DUP	54	67	70
LCS 400-416151/2-A	Lab Control Sample	89	89	63
LCSD 400-416151/3-A	Lab Control Sample Dup	78	79	61
MB 400-416151/1-A	Method Blank	84	66	54

Surrogate Legend

TPHL = Terphenyl-d14
FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5

Method: 8011 - EDB and DBCP in Water by Microextraction

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		BFB2
Lab Sample ID	Client Sample ID	(51-149)
400-160552-1	TB-ROX-101218-8011	104 p
400-160552-3	MW5-ROX-101218	108 p
400-160552-4	ROST4PZC-ROX-101218-EB	98 p
400-160552-5	ROST4PZC-ROX-101218	118 p
400-160552-6	ROST4PZG-ROX-101218	110 p
400-160552-7	MW2-ROX-101218	121 p
400-160552-8	MW2-ROX-101218-DUP	164 p X
LCS 400-416931/2-A	Lab Control Sample	104
LCSD 400-416931/3-A	Lab Control Sample Dup	98
MB 400-416931/1-A	Method Blank	94 p

Surrogate Legend

BFB = 4-Bromofluorobenzene

Method Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160552-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL PEN
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	TAL PEN
8011	EDB and DBCP in Water by Microextraction	EPA	TAL PEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL PEN
5030B	Purge and Trap	SW846	TAL PEN
8011	Microextraction	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Client Sample ID: TB-ROX-101218-8011

Lab Sample ID: 400-160552-1
Matrix: Water
Date Collected: 10/12/18 00:00
Date Received: 10/13/18 08:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			32.8 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/26/18 18:53	DS	TAL PEN

Client Sample ID: TB-ROX-101218-8260

Lab Sample ID: 400-160552-2
Matrix: Water
Date Collected: 10/12/18 00:00
Date Received: 10/13/18 08:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416887	10/25/18 14:40	BSW	TAL PEN

Client Sample ID: MW5-ROX-101218

Lab Sample ID: 400-160552-3
Matrix: Water
Date Collected: 10/12/18 09:10
Date Received: 10/13/18 08:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416887	10/25/18 17:04	BSW	TAL PEN
Total/NA	Prep	3520C			928.2 mL	1.0 mL	416151	10/19/18 14:52	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416437	10/22/18 22:36	VC1	TAL PEN
Total/NA	Prep	3520C			928.2 mL	1.0 mL	416151	10/19/18 14:52	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416415	10/22/18 21:12	RM	TAL PEN
Total/NA	Prep	8011			34.9 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/26/18 18:29	DS	TAL PEN

Client Sample ID: ROST4PZC-ROX-101218-EB

Lab Sample ID: 400-160552-4
Matrix: Water
Date Collected: 10/12/18 09:45
Date Received: 10/13/18 08:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417069	10/26/18 12:53	RS	TAL PEN
Total/NA	Prep	3520C			1013 mL	1.0 mL	416151	10/19/18 14:52	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416437	10/22/18 22:58	VC1	TAL PEN
Total/NA	Prep	3520C			1013 mL	1.0 mL	416151	10/19/18 14:52	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416415	10/22/18 21:28	RM	TAL PEN
Total/NA	Prep	8011			34.1 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/26/18 18:05	DS	TAL PEN

Client Sample ID: ROST4PZC-ROX-101218

Lab Sample ID: 400-160552-5
Matrix: Water
Date Collected: 10/12/18 10:15
Date Received: 10/13/18 08:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416887	10/25/18 17:28	BSW	TAL PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160552-1

Client Sample ID: ROST4PZC-ROX-101218

Lab Sample ID: 400-160552-5
Matrix: Water

Date Collected: 10/12/18 10:15
Date Received: 10/13/18 08:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1023.4 mL	1.0 mL	416151	10/19/18 14:52	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416437	10/22/18 23:19	VC1	TAL PEN
Total/NA	Prep	3520C			1023.4 mL	1.0 mL	416151	10/19/18 14:52	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416415	10/22/18 21:44	RM	TAL PEN
Total/NA	Prep	8011			35.3 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/26/18 17:40	DS	TAL PEN

Client Sample ID: ROST4PZG-ROX-101218

Lab Sample ID: 400-160552-6
Matrix: Water

Date Collected: 10/12/18 11:10
Date Received: 10/13/18 08:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416887	10/25/18 17:52	BSW	TAL PEN
Total/NA	Prep	3520C			1028.6 mL	1.0 mL	416151	10/19/18 14:52	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416437	10/22/18 23:41	VC1	TAL PEN
Total/NA	Prep	3520C			1028.6 mL	1.0 mL	416151	10/19/18 14:52	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416415	10/22/18 22:00	RM	TAL PEN
Total/NA	Prep	8011			34.5 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/26/18 17:16	DS	TAL PEN

Client Sample ID: MW2-ROX-101218

Lab Sample ID: 400-160552-7
Matrix: Water

Date Collected: 10/12/18 12:05
Date Received: 10/13/18 08:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416887	10/25/18 18:16	BSW	TAL PEN
Total/NA	Prep	3520C			1025.6 mL	1.0 mL	416151	10/19/18 14:52	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416437	10/23/18 00:02	VC1	TAL PEN
Total/NA	Prep	3520C			1025.6 mL	1.0 mL	416151	10/19/18 14:52	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416415	10/22/18 22:15	RM	TAL PEN
Total/NA	Prep	8011			34.9 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/26/18 16:51	DS	TAL PEN

Client Sample ID: MW2-ROX-101218-DUP

Lab Sample ID: 400-160552-8
Matrix: Water

Date Collected: 10/12/18 12:05
Date Received: 10/13/18 08:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416887	10/25/18 18:40	BSW	TAL PEN
Total/NA	Prep	3520C			1029.4 mL	1.0 mL	416151	10/19/18 14:52	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416437	10/23/18 00:24	VC1	TAL PEN
Total/NA	Prep	3520C			1029.4 mL	1.0 mL	416151	10/19/18 14:52	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416415	10/22/18 22:31	RM	TAL PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160552-1

Client Sample ID: MW2-ROX-101218-DUP

Lab Sample ID: 400-160552-8
Matrix: Water

Date Collected: 10/12/18 12:05
Date Received: 10/13/18 08:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			34.8 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/26/18 16:27	DS	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-416151/1-A
Matrix: Water

Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	416151	10/19/18 14:52	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416437	10/22/18 20:49	VC1	TAL PEN
Total/NA	Prep	3520C			1000 mL	1.0 mL	416151	10/19/18 14:52	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416415	10/22/18 14:38	RM	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-416887/4
Matrix: Water

Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416887	10/25/18 10:36	BSW	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-416931/1-A
Matrix: Water

Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/25/18 19:05	DS	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-417069/5
Matrix: Water

Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417069	10/26/18 12:10	RS	TAL PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-416151/2-A
Matrix: Water

Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	416151	10/19/18 14:52	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416437	10/22/18 21:10	VC1	TAL PEN

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 400-416151/2-A**
Date Collected: N/A — Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	416151	10/19/18 14:52	JJA	TAL PEN
Total/NA	Analysis	8270D LL		5			416415	10/22/18 14:54	RM	TAL PEN

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 400-416151/4-A**
Date Collected: N/A — Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	416151	10/19/18 14:52	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416437	10/22/18 21:53	VC1	TAL PEN

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 400-416887/1002**
Date Collected: N/A — Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	416887	10/25/18 09:41	BSW	TAL PEN

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 400-416931/2-A**
Date Collected: N/A — Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/25/18 20:09	DS	TAL PEN

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 400-417069/1003**
Date Collected: N/A — Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417069	10/26/18 10:49	RS	TAL PEN

Client Sample ID: Lab Control Sample Dup — **Lab Sample ID: LCSD 400-416151/3-A**
Date Collected: N/A — Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	416151	10/19/18 14:52	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416437	10/22/18 21:32	VC1	TAL PEN
Total/NA	Prep	3520C			1000 mL	1.0 mL	416151	10/19/18 14:52	JJA	TAL PEN
Total/NA	Analysis	8270D LL		5			416415	10/22/18 15:09	RM	TAL PEN

Client Sample ID: Lab Control Sample Dup — **Lab Sample ID: LCSD 400-416151/5-A**
Date Collected: N/A — Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	416151	10/19/18 14:52	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416437	10/22/18 22:15	VC1	TAL PEN

Client Sample ID: Lab Control Sample Dup — **Lab Sample ID: LCSD 400-416931/3-A**
Date Collected: N/A — Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/25/18 20:39	DS	TAL PEN

Laboratory References:
TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

GC/MS VOA

Analysis Batch: 416887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160552-2	TB-ROX-101218-8260	Total/NA	Water	8260B	
400-160552-3	MW5-ROX-101218	Total/NA	Water	8260B	
400-160552-5	ROST4PZC-ROX-101218	Total/NA	Water	8260B	
400-160552-6	ROST4PZG-ROX-101218	Total/NA	Water	8260B	
400-160552-7	MW2-ROX-101218	Total/NA	Water	8260B	
400-160552-8	MW2-ROX-101218-DUP	Total/NA	Water	8260B	
MB 400-416887/4	Method Blank	Total/NA	Water	8260B	
LCS 400-416887/1002	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 417069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160552-4	ROST4PZC-ROX-101218-EB	Total/NA	Water	8260B	
MB 400-417069/5	Method Blank	Total/NA	Water	8260B	
LCS 400-417069/1003	Lab Control Sample	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 416151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160552-3	MW5-ROX-101218	Total/NA	Water	3520C	
400-160552-4	ROST4PZC-ROX-101218-EB	Total/NA	Water	3520C	
400-160552-5	ROST4PZC-ROX-101218	Total/NA	Water	3520C	
400-160552-6	ROST4PZG-ROX-101218	Total/NA	Water	3520C	
400-160552-7	MW2-ROX-101218	Total/NA	Water	3520C	
400-160552-8	MW2-ROX-101218-DUP	Total/NA	Water	3520C	
MB 400-416151/1-A	Method Blank	Total/NA	Water	3520C	
LCS 400-416151/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 400-416151/4-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-416151/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
LCSD 400-416151/5-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 416415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160552-3	MW5-ROX-101218	Total/NA	Water	8270D LL	416151
400-160552-4	ROST4PZC-ROX-101218-EB	Total/NA	Water	8270D LL	416151
400-160552-5	ROST4PZC-ROX-101218	Total/NA	Water	8270D LL	416151
400-160552-6	ROST4PZG-ROX-101218	Total/NA	Water	8270D LL	416151
400-160552-7	MW2-ROX-101218	Total/NA	Water	8270D LL	416151
400-160552-8	MW2-ROX-101218-DUP	Total/NA	Water	8270D LL	416151
MB 400-416151/1-A	Method Blank	Total/NA	Water	8270D LL	416151
LCS 400-416151/2-A	Lab Control Sample	Total/NA	Water	8270D LL	416151
LCSD 400-416151/3-A	Lab Control Sample Dup	Total/NA	Water	8270D LL	416151

Analysis Batch: 416437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160552-3	MW5-ROX-101218	Total/NA	Water	8270D	416151
400-160552-4	ROST4PZC-ROX-101218-EB	Total/NA	Water	8270D	416151
400-160552-5	ROST4PZC-ROX-101218	Total/NA	Water	8270D	416151
400-160552-6	ROST4PZG-ROX-101218	Total/NA	Water	8270D	416151
400-160552-7	MW2-ROX-101218	Total/NA	Water	8270D	416151

GC/MS Semi VOA (Continued)

Analysis Batch: 416437 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160552-8	MW2-ROX-101218-DUP	Total/NA	Water	8270D	416151
MB 400-416151/1-A	Method Blank	Total/NA	Water	8270D	416151
LCS 400-416151/2-A	Lab Control Sample	Total/NA	Water	8270D	416151
LCS 400-416151/4-A	Lab Control Sample	Total/NA	Water	8270D	416151
LCSD 400-416151/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	416151
LCSD 400-416151/5-A	Lab Control Sample Dup	Total/NA	Water	8270D	416151

GC Semi VOA

Prep Batch: 416931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160552-1	TB-ROX-101218-8011	Total/NA	Water	8011	
400-160552-3	MW5-ROX-101218	Total/NA	Water	8011	
400-160552-4	ROST4PZC-ROX-101218-EB	Total/NA	Water	8011	
400-160552-5	ROST4PZC-ROX-101218	Total/NA	Water	8011	
400-160552-6	ROST4PZG-ROX-101218	Total/NA	Water	8011	
400-160552-7	MW2-ROX-101218	Total/NA	Water	8011	
400-160552-8	MW2-ROX-101218-DUP	Total/NA	Water	8011	
MB 400-416931/1-A	Method Blank	Total/NA	Water	8011	
LCS 400-416931/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 400-416931/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 417027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160552-1	TB-ROX-101218-8011	Total/NA	Water	8011	416931
400-160552-3	MW5-ROX-101218	Total/NA	Water	8011	416931
400-160552-4	ROST4PZC-ROX-101218-EB	Total/NA	Water	8011	416931
400-160552-5	ROST4PZC-ROX-101218	Total/NA	Water	8011	416931
400-160552-6	ROST4PZG-ROX-101218	Total/NA	Water	8011	416931
400-160552-7	MW2-ROX-101218	Total/NA	Water	8011	416931
400-160552-8	MW2-ROX-101218-DUP	Total/NA	Water	8011	416931
MB 400-416931/1-A	Method Blank	Total/NA	Water	8011	416931
LCS 400-416931/2-A	Lab Control Sample	Total/NA	Water	8011	416931
LCSD 400-416931/3-A	Lab Control Sample Dup	Total/NA	Water	8011	416931

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-416887/4
Matrix: Water
Analysis Batch: 416887

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/25/18 10:36	1
Acrolein	ND		20	10	ug/L			10/25/18 10:36	1
Acrylonitrile	ND		10	2.8	ug/L			10/25/18 10:36	1
Benzene	ND		1.0	0.38	ug/L			10/25/18 10:36	1
Bromobenzene	ND		1.0	0.54	ug/L			10/25/18 10:36	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/25/18 10:36	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/25/18 10:36	1
Bromoform	ND		5.0	0.71	ug/L			10/25/18 10:36	1
Bromomethane	ND		1.0	0.98	ug/L			10/25/18 10:36	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/25/18 10:36	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/25/18 10:36	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/25/18 10:36	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/25/18 10:36	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/25/18 10:36	1
Chloroethane	ND		1.0	0.76	ug/L			10/25/18 10:36	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/25/18 10:36	1
Chloroform	ND		1.0	0.60	ug/L			10/25/18 10:36	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/25/18 10:36	1
Chloromethane	ND		1.0	0.83	ug/L			10/25/18 10:36	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/25/18 10:36	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/25/18 10:36	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/25/18 10:36	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/25/18 10:36	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/25/18 10:36	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/25/18 10:36	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/25/18 10:36	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/25/18 10:36	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/25/18 10:36	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/25/18 10:36	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/25/18 10:36	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/25/18 10:36	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/25/18 10:36	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/25/18 10:36	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/25/18 10:36	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/25/18 10:36	1
2-Hexanone	ND		25	3.1	ug/L			10/25/18 10:36	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/25/18 10:36	1
Methylene bromide	ND		5.0	0.59	ug/L			10/25/18 10:36	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/25/18 10:36	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/25/18 10:36	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/25/18 10:36	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/25/18 10:36	1
Naphthalene	ND		1.0	1.0	ug/L			10/25/18 10:36	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/25/18 10:36	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/25/18 10:36	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/25/18 10:36	1
o-Xylene	ND		5.0	0.60	ug/L			10/25/18 10:36	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/25/18 10:36	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-416887/4
Matrix: Water
Analysis Batch: 416887

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/25/18 10:36	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/25/18 10:36	1
Styrene	ND		1.0	1.0	ug/L			10/25/18 10:36	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/25/18 10:36	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/25/18 10:36	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/25/18 10:36	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/25/18 10:36	1
Toluene	ND		1.0	0.70	ug/L			10/25/18 10:36	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/25/18 10:36	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/25/18 10:36	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/25/18 10:36	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/25/18 10:36	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/25/18 10:36	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/25/18 10:36	1
Trichloroethene	ND		1.0	0.50	ug/L			10/25/18 10:36	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/25/18 10:36	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/25/18 10:36	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/25/18 10:36	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/25/18 10:36	1
Vinyl acetate	ND		25	2.0	ug/L			10/25/18 10:36	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/25/18 10:36	1
Xylenes, Total	ND		10	1.6	ug/L			10/25/18 10:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*78 - 118*		*10/25/18 10:36*	*1*
Dibromofluoromethane	*98*		*81 - 121*		*10/25/18 10:36*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*10/25/18 10:36*	*1*

Lab Sample ID: LCS 400-416887/1002
Matrix: Water
Analysis Batch: 416887

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	200	243		ug/L		122	43 - 160
Acrolein	500	430		ug/L		86	38 - 160
Acrylonitrile	500	636		ug/L		127	64 - 142
Benzene	50.0	50.2		ug/L		100	70 - 130
Bromobenzene	50.0	58.1		ug/L		116	70 - 132
Bromochloromethane	50.0	58.3		ug/L		117	70 - 130
Bromodichloromethane	50.0	53.2		ug/L		106	67 - 133
Bromoform	50.0	55.2		ug/L		110	57 - 140
Bromomethane	50.0	49.9		ug/L		100	10 - 160
2-Butanone (MEK)	200	201		ug/L		100	61 - 145
Carbon disulfide	50.0	46.8		ug/L		94	61 - 137
Carbon tetrachloride	50.0	52.4		ug/L		105	61 - 137
Chlorobenzene	50.0	53.5		ug/L		107	70 - 130
Dibromochloromethane	50.0	55.3		ug/L		111	67 - 135
Chloroethane	50.0	43.4		ug/L		87	55 - 141

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-416887/1002
Matrix: Water
Analysis Batch: 416887

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloroethyl vinyl ether	50.0	43.5		ug/L		87	10 - 160
Chloroform	50.0	54.7		ug/L		109	69 - 130
1-Chlorohexane	50.0	53.7		ug/L		107	69 - 130
Chloromethane	50.0	44.3		ug/L		89	58 - 137
cis-1,2-Dichloroethene	50.0	55.4		ug/L		111	68 - 130
cis-1,3-Dichloropropene	50.0	48.7		ug/L		97	69 - 132
1,2-Dichlorobenzene	50.0	60.0		ug/L		120	67 - 130
1,3-Dichlorobenzene	50.0	60.4		ug/L		121	70 - 130
1,4-Dichlorobenzene	50.0	60.1		ug/L		120	70 - 130
Dichlorodifluoromethane	50.0	35.0		ug/L		70	41 - 146
1,1-Dichloroethane	50.0	53.6		ug/L		107	70 - 130
1,2-Dichloroethane	50.0	58.6		ug/L		117	69 - 130
1,1-Dichloroethene	50.0	51.5		ug/L		103	63 - 134
1,2-Dichloropropane	50.0	52.8		ug/L		106	70 - 130
1,3-Dichloropropane	50.0	53.9		ug/L		108	70 - 130
2,2-Dichloropropane	50.0	42.3		ug/L		85	52 - 135
1,1-Dichloropropene	50.0	51.5		ug/L		103	70 - 130
Ethylbenzene	50.0	54.2		ug/L		108	70 - 130
Ethyl methacrylate	50.0	52.4		ug/L		105	68 - 130
Hexachlorobutadiene	50.0	59.0		ug/L		118	53 - 140
2-Hexanone	200	245		ug/L		122	65 - 137
Isopropylbenzene	50.0	52.5		ug/L		105	70 - 130
Methylene bromide	50.0	54.6		ug/L		109	70 - 130
Methylene Chloride	50.0	52.6		ug/L		105	66 - 135
4-Methyl-2-pentanone (MIBK)	200	232		ug/L		116	69 - 138
Methyl tert-butyl ether	50.0	48.5		ug/L		97	66 - 130
m-Xylene & p-Xylene	50.0	52.7		ug/L		105	70 - 130
Naphthalene	50.0	53.2		ug/L		106	47 - 149
n-Butylbenzene	50.0	56.3		ug/L		113	67 - 130
N-Propylbenzene	50.0	57.2		ug/L		114	70 - 130
o-Chlorotoluene	50.0	55.7		ug/L		111	70 - 130
o-Xylene	50.0	53.4		ug/L		107	70 - 130
p-Chlorotoluene	50.0	57.4		ug/L		115	70 - 130
p-Isopropyltoluene	50.0	57.9		ug/L		116	65 - 130
sec-Butylbenzene	50.0	54.9		ug/L		110	66 - 130
Styrene	50.0	50.0		ug/L		100	70 - 130
tert-Butylbenzene	50.0	56.4		ug/L		113	64 - 139
1,1,1,2-Tetrachloroethane	50.0	56.0		ug/L		112	67 - 131
1,1,2,2-Tetrachloroethane	50.0	56.6		ug/L		113	70 - 131
Tetrachloroethene	50.0	55.9		ug/L		112	65 - 130
Toluene	50.0	52.6		ug/L		105	70 - 130
trans-1,2-Dichloroethene	50.0	53.4		ug/L		107	70 - 130
trans-1,3-Dichloropropene	50.0	49.1		ug/L		98	63 - 130
1,2,3-Trichlorobenzene	50.0	58.0		ug/L		116	60 - 138
1,2,4-Trichlorobenzene	50.0	58.4		ug/L		117	60 - 140
1,1,1-Trichloroethane	50.0	53.6		ug/L		107	68 - 130
1,1,2-Trichloroethane	50.0	53.9		ug/L		108	70 - 130
Trichloroethene	50.0	54.8		ug/L		110	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-416887/1002
Matrix: Water
Analysis Batch: 416887

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	50.0	48.0		ug/L		96	65 - 138
1,2,3-Trichloropropane	50.0	60.2		ug/L		120	70 - 130
1,2,4-Trimethylbenzene	50.0	56.2		ug/L		112	70 - 130
1,3,5-Trimethylbenzene	50.0	56.1		ug/L		112	69 - 130
Vinyl acetate	100	93.2		ug/L		93	26 - 160
Vinyl chloride	50.0	41.2		ug/L		82	59 - 136
Xylenes, Total	100	106		ug/L		106	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*78 - 118*
Dibromofluoromethane	*99*		*81 - 121*
Toluene-d8 (Surr)	*100*		*80 - 120*

Lab Sample ID: MB 400-417069/5
Matrix: Water
Analysis Batch: 417069

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/26/18 12:10	1
Acrolein	ND		20	10	ug/L			10/26/18 12:10	1
Acrylonitrile	ND		10	2.8	ug/L			10/26/18 12:10	1
Benzene	ND		1.0	0.38	ug/L			10/26/18 12:10	1
Bromobenzene	ND		1.0	0.54	ug/L			10/26/18 12:10	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/26/18 12:10	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/26/18 12:10	1
Bromoform	ND		5.0	0.71	ug/L			10/26/18 12:10	1
Bromomethane	ND		1.0	0.98	ug/L			10/26/18 12:10	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/26/18 12:10	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/26/18 12:10	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/26/18 12:10	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/26/18 12:10	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/26/18 12:10	1
Chloroethane	ND		1.0	0.76	ug/L			10/26/18 12:10	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/26/18 12:10	1
Chloroform	ND		1.0	0.60	ug/L			10/26/18 12:10	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/26/18 12:10	1
Chloromethane	ND		1.0	0.83	ug/L			10/26/18 12:10	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/26/18 12:10	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/26/18 12:10	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/26/18 12:10	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/26/18 12:10	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/26/18 12:10	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/26/18 12:10	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/26/18 12:10	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/26/18 12:10	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/26/18 12:10	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/26/18 12:10	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/26/18 12:10	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-417069/5
Matrix: Water
Analysis Batch: 417069

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/26/18 12:10	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/26/18 12:10	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/26/18 12:10	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/26/18 12:10	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/26/18 12:10	1
2-Hexanone	ND		25	3.1	ug/L			10/26/18 12:10	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/26/18 12:10	1
Methylene bromide	ND		5.0	0.59	ug/L			10/26/18 12:10	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/26/18 12:10	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/26/18 12:10	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/26/18 12:10	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/26/18 12:10	1
Naphthalene	ND		1.0	1.0	ug/L			10/26/18 12:10	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/26/18 12:10	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/26/18 12:10	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/26/18 12:10	1
o-Xylene	ND		5.0	0.60	ug/L			10/26/18 12:10	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/26/18 12:10	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/26/18 12:10	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/26/18 12:10	1
Styrene	ND		1.0	1.0	ug/L			10/26/18 12:10	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/26/18 12:10	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/26/18 12:10	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/26/18 12:10	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/26/18 12:10	1
Toluene	ND		1.0	0.70	ug/L			10/26/18 12:10	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/26/18 12:10	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/26/18 12:10	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/26/18 12:10	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/26/18 12:10	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/26/18 12:10	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/26/18 12:10	1
Trichloroethene	ND		1.0	0.50	ug/L			10/26/18 12:10	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/26/18 12:10	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/26/18 12:10	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/26/18 12:10	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/26/18 12:10	1
Vinyl acetate	ND		25	2.0	ug/L			10/26/18 12:10	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/26/18 12:10	1
Xylenes, Total	ND		10	1.6	ug/L			10/26/18 12:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*78 - 118*		*10/26/18 12:10*	*1*
Dibromofluoromethane	*100*		*81 - 121*		*10/26/18 12:10*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*10/26/18 12:10*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-417069/1003
Matrix: Water
Analysis Batch: 417069

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	200	234		ug/L		117	43 - 160
Acrolein	500	457		ug/L		91	38 - 160
Acrylonitrile	500	609		ug/L		122	64 - 142
Benzene	50.0	48.8		ug/L		98	70 - 130
Bromobenzene	50.0	56.0		ug/L		112	70 - 132
Bromochloromethane	50.0	57.2		ug/L		114	70 - 130
Bromodichloromethane	50.0	52.4		ug/L		105	67 - 133
Bromoform	50.0	51.7		ug/L		103	57 - 140
Bromomethane	50.0	48.6		ug/L		97	10 - 160
2-Butanone (MEK)	200	191		ug/L		95	61 - 145
Carbon disulfide	50.0	46.2		ug/L		92	61 - 137
Carbon tetrachloride	50.0	52.5		ug/L		105	61 - 137
Chlorobenzene	50.0	51.6		ug/L		103	70 - 130
Dibromochloromethane	50.0	54.0		ug/L		108	67 - 135
Chloroethane	50.0	46.6		ug/L		93	55 - 141
2-Chloroethyl vinyl ether	50.0	45.7		ug/L		91	10 - 160
Chloroform	50.0	53.8		ug/L		108	69 - 130
1-Chlorohexane	50.0	52.4		ug/L		105	69 - 130
Chloromethane	50.0	52.0		ug/L		104	58 - 137
cis-1,2-Dichloroethene	50.0	53.5		ug/L		107	68 - 130
cis-1,3-Dichloropropene	50.0	46.7		ug/L		93	69 - 132
1,2-Dichlorobenzene	50.0	56.9		ug/L		114	67 - 130
1,3-Dichlorobenzene	50.0	56.7		ug/L		113	70 - 130
1,4-Dichlorobenzene	50.0	57.5		ug/L		115	70 - 130
Dichlorodifluoromethane	50.0	52.0		ug/L		104	41 - 146
1,1-Dichloroethane	50.0	51.6		ug/L		103	70 - 130
1,2-Dichloroethane	50.0	59.1		ug/L		118	69 - 130
1,1-Dichloroethene	50.0	49.7		ug/L		99	63 - 134
1,2-Dichloropropane	50.0	50.6		ug/L		101	70 - 130
1,3-Dichloropropane	50.0	51.4		ug/L		103	70 - 130
2,2-Dichloropropane	50.0	41.8		ug/L		84	52 - 135
1,1-Dichloropropene	50.0	50.0		ug/L		100	70 - 130
Ethylbenzene	50.0	51.8		ug/L		104	70 - 130
Ethyl methacrylate	50.0	48.4		ug/L		97	68 - 130
Hexachlorobutadiene	50.0	56.0		ug/L		112	53 - 140
2-Hexanone	200	222		ug/L		111	65 - 137
Isopropylbenzene	50.0	50.7		ug/L		101	70 - 130
Methylene bromide	50.0	53.8		ug/L		108	70 - 130
Methylene Chloride	50.0	52.3		ug/L		105	66 - 135
4-Methyl-2-pentanone (MIBK)	200	216		ug/L		108	69 - 138
Methyl tert-butyl ether	50.0	46.5		ug/L		93	66 - 130
m-Xylene & p-Xylene	50.0	51.3		ug/L		103	70 - 130
Naphthalene	50.0	50.0		ug/L		100	47 - 149
n-Butylbenzene	50.0	54.1		ug/L		108	67 - 130
N-Propylbenzene	50.0	54.7		ug/L		109	70 - 130
o-Chlorotoluene	50.0	53.7		ug/L		107	70 - 130
o-Xylene	50.0	51.7		ug/L		103	70 - 130
p-Chlorotoluene	50.0	54.5		ug/L		109	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-417069/1003
Matrix: Water
Analysis Batch: 417069

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
p-Isopropyltoluene	50.0	54.4		ug/L		109	65 - 130
sec-Butylbenzene	50.0	51.3		ug/L		103	66 - 130
Styrene	50.0	48.2		ug/L		96	70 - 130
tert-Butylbenzene	50.0	53.2		ug/L		106	64 - 139
1,1,1,2-Tetrachloroethane	50.0	54.9		ug/L		110	67 - 131
1,1,2,2-Tetrachloroethane	50.0	53.7		ug/L		107	70 - 131
Tetrachloroethene	50.0	54.6		ug/L		109	65 - 130
Toluene	50.0	50.6		ug/L		101	70 - 130
trans-1,2-Dichloroethene	50.0	52.2		ug/L		104	70 - 130
trans-1,3-Dichloropropene	50.0	45.8		ug/L		92	63 - 130
1,2,3-Trichlorobenzene	50.0	54.3		ug/L		109	60 - 138
1,2,4-Trichlorobenzene	50.0	54.4		ug/L		109	60 - 140
1,1,1-Trichloroethane	50.0	53.3		ug/L		107	68 - 130
1,1,2-Trichloroethane	50.0	51.8		ug/L		104	70 - 130
Trichloroethene	50.0	52.4		ug/L		105	70 - 130
Trichlorofluoromethane	50.0	55.4		ug/L		111	65 - 138
1,2,3-Trichloropropane	50.0	56.8		ug/L		114	70 - 130
1,2,4-Trimethylbenzene	50.0	52.8		ug/L		106	70 - 130
1,3,5-Trimethylbenzene	50.0	52.4		ug/L		105	69 - 130
Vinyl acetate	100	97.3		ug/L		97	26 - 160
Vinyl chloride	50.0	45.9		ug/L		92	59 - 136
Xylenes, Total	100	103		ug/L		103	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*99*		*78 - 118*
Dibromofluoromethane	*101*		*81 - 121*
Toluene-d8 (Surr)	*99*		*80 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-416151/1-A
Matrix: Water
Analysis Batch: 416437

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416151

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.8	ug/L		10/19/18 14:52	10/22/18 20:49	1
Benzenethiol	ND		10	1.7	ug/L		10/19/18 14:52	10/22/18 20:49	1
Benzoic acid	ND		30	7.3	ug/L		10/19/18 14:52	10/22/18 20:49	1
Benzyl alcohol	ND		10	2.0	ug/L		10/19/18 14:52	10/22/18 20:49	1
Bis(2-chloroethoxy)methane	ND		10	0.69	ug/L		10/19/18 14:52	10/22/18 20:49	1
Bis(2-chloroethyl)ether	ND		10	0.74	ug/L		10/19/18 14:52	10/22/18 20:49	1
bis (2-chloroisopropyl) ether	ND		10	0.81	ug/L		10/19/18 14:52	10/22/18 20:49	1
Bis(2-ethylhexyl) phthalate	ND		10	2.3	ug/L		10/19/18 14:52	10/22/18 20:49	1
4-Bromophenyl phenyl ether	ND		10	0.32	ug/L		10/19/18 14:52	10/22/18 20:49	1
Butyl benzyl phthalate	ND		10	0.69	ug/L		10/19/18 14:52	10/22/18 20:49	1
4-Chloroaniline	ND		10	3.4	ug/L		10/19/18 14:52	10/22/18 20:49	1
4-Chloro-3-methylphenol	ND		10	3.8	ug/L		10/19/18 14:52	10/22/18 20:49	1
2-Chloronaphthalene	ND		10	0.52	ug/L		10/19/18 14:52	10/22/18 20:49	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-416151/1-A
Matrix: Water
Analysis Batch: 416437

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416151

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	ND		10	2.2	ug/L		10/19/18 14:52	10/22/18 20:49	1
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		10/19/18 14:52	10/22/18 20:49	1
Dibenz[a,h]acridine	ND		10	3.0	ug/L		10/19/18 14:52	10/22/18 20:49	1
Dibenzofuran	ND		10	0.52	ug/L		10/19/18 14:52	10/22/18 20:49	1
3,3'-Dichlorobenzidine	ND		10	2.6	ug/L		10/19/18 14:52	10/22/18 20:49	1
2,4-Dichlorophenol	ND		10	3.0	ug/L		10/19/18 14:52	10/22/18 20:49	1
Diethyl phthalate	ND		10	0.70	ug/L		10/19/18 14:52	10/22/18 20:49	1
2,4-Dimethylphenol	ND		10	3.5	ug/L		10/19/18 14:52	10/22/18 20:49	1
Dimethyl phthalate	ND		10	0.60	ug/L		10/19/18 14:52	10/22/18 20:49	1
Di-n-butyl phthalate	ND		10	2.7	ug/L		10/19/18 14:52	10/22/18 20:49	1
4,6-Dinitro-ortho-cresol	ND		10	2.0	ug/L		10/19/18 14:52	10/22/18 20:49	1
2,4-Dinitrophenol	ND		30	3.4	ug/L		10/19/18 14:52	10/22/18 20:49	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		10/19/18 14:52	10/22/18 20:49	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		10/19/18 14:52	10/22/18 20:49	1
Di-n-octyl phthalate	ND		10	0.44	ug/L		10/19/18 14:52	10/22/18 20:49	1
1,4-Dioxane	ND		10	1.0	ug/L		10/19/18 14:52	10/22/18 20:49	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		10/19/18 14:52	10/22/18 20:49	1
Hexachlorobenzene	ND		10	0.25	ug/L		10/19/18 14:52	10/22/18 20:49	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		10/19/18 14:52	10/22/18 20:49	1
Hexachloroethane	ND		10	4.2	ug/L		10/19/18 14:52	10/22/18 20:49	1
Indene	ND		10	1.0	ug/L		10/19/18 14:52	10/22/18 20:49	1
Isophorone	ND		10	0.57	ug/L		10/19/18 14:52	10/22/18 20:49	1
2-Methylphenol	ND		10	1.8	ug/L		10/19/18 14:52	10/22/18 20:49	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/19/18 14:52	10/22/18 20:49	1
2-Nitroaniline	ND		10	2.2	ug/L		10/19/18 14:52	10/22/18 20:49	1
3-Nitroaniline	ND		10	1.8	ug/L		10/19/18 14:52	10/22/18 20:49	1
4-Nitroaniline	ND		10	2.5	ug/L		10/19/18 14:52	10/22/18 20:49	1
Nitrobenzene	ND		10	0.55	ug/L		10/19/18 14:52	10/22/18 20:49	1
2-Nitrophenol	ND		10	0.65	ug/L		10/19/18 14:52	10/22/18 20:49	1
4-Nitrophenol	ND		10	2.1	ug/L		10/19/18 14:52	10/22/18 20:49	1
N-Nitrosodimethylamine	ND		10	3.5	ug/L		10/19/18 14:52	10/22/18 20:49	1
N-Nitrosodi-n-propylamine	ND		10	3.3	ug/L		10/19/18 14:52	10/22/18 20:49	1
N-Nitrosodiphenylamine	ND		10	0.47	ug/L		10/19/18 14:52	10/22/18 20:49	1
Pentachlorophenol	ND		20	1.8	ug/L		10/19/18 14:52	10/22/18 20:49	1
Phenol	ND		10	2.6	ug/L		10/19/18 14:52	10/22/18 20:49	1
Pyridine	ND		10	3.2	ug/L		10/19/18 14:52	10/22/18 20:49	1
Quinoline	ND		10	6.0	ug/L		10/19/18 14:52	10/22/18 20:49	1
2,4,5-Trichlorophenol	ND		10	3.7	ug/L		10/19/18 14:52	10/22/18 20:49	1
2,4,6-Trichlorophenol	ND		10	3.5	ug/L		10/19/18 14:52	10/22/18 20:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*45*		*34 - 120*	*10/19/18 14:52*	*10/22/18 20:49*	*1*
2-Fluorophenol	*38*		*10 - 120*	*10/19/18 14:52*	*10/22/18 20:49*	*1*
Nitrobenzene-d5	*43*		*27 - 120*	*10/19/18 14:52*	*10/22/18 20:49*	*1*
Phenol-d5	*46*		*10 - 120*	*10/19/18 14:52*	*10/22/18 20:49*	*1*
Terphenyl-d14	*70*		*53 - 125*	*10/19/18 14:52*	*10/22/18 20:49*	*1*
2,4,6-Tribromophenol	*64*		*15 - 135*	*10/19/18 14:52*	*10/22/18 20:49*	*1*

Lab Sample ID: LCS 400-416151/2-A
Matrix: Water
Analysis Batch: 416437

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416151

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aniline	30.0	17.1		ug/L		57	29 - 120
Benzoic acid	118	63.4		ug/L		54	10 - 150
Benzyl alcohol	30.0	20.8		ug/L		69	19 - 125
Bis(2-chloroethoxy)methane	30.0	18.5		ug/L		62	45 - 120
Bis(2-chloroethyl)ether	30.0	18.3		ug/L		61	48 - 120
bis (2-chloroisopropyl) ether	30.0	15.9		ug/L		53	30 - 125
Bis(2-ethylhexyl) phthalate	30.0	24.1		ug/L		80	48 - 150
4-Bromophenyl phenyl ether	30.0	27.7		ug/L		92	55 - 122
Butyl benzyl phthalate	30.0	22.8		ug/L		76	46 - 145
4-Chloroaniline	30.0	12.2		ug/L		41	30 - 120
4-Chloro-3-methylphenol	30.0	22.9		ug/L		76	39 - 140
2-Chloronaphthalene	30.0	20.3		ug/L		68	52 - 120
2-Chlorophenol	30.0	23.5		ug/L		78	34 - 120
4-Chlorophenyl phenyl ether	30.0	24.3		ug/L		81	58 - 124
Dibenz[a,h]acridine	30.0	16.0		ug/L		53	46 - 149
Dibenzofuran	30.0	22.3		ug/L		74	58 - 123
3,3'-Dichlorobenzidine	40.0	37.4		ug/L		94	39 - 135
2,4-Dichlorophenol	30.0	26.8		ug/L		89	39 - 128
Diethyl phthalate	30.0	26.6		ug/L		89	44 - 146
2,4-Dimethylphenol	30.0	24.0		ug/L		80	44 - 120
Dimethyl phthalate	30.0	24.4		ug/L		81	50 - 131
Di-n-butyl phthalate	30.0	28.8		ug/L		96	55 - 131
4,6-Dinitro-ortho-cresol	60.0	62.1		ug/L		104	10 - 150
2,4-Dinitrophenol	60.0	69.4		ug/L		116	10 - 150
2,4-Dinitrotoluene	30.0	25.3		ug/L		84	58 - 140
2,6-Dinitrotoluene	30.0	24.6		ug/L		82	57 - 130
Di-n-octyl phthalate	30.0	25.0		ug/L		83	50 - 150
1,4-Dioxane	30.0	11.2		ug/L		37	25 - 120
1,2-Diphenylhydrazine (as Azobenzene)	30.0	17.7		ug/L		59	47 - 123
Hexachlorobenzene	30.0	33.0		ug/L		110	52 - 131
Hexachlorocyclopentadiene	30.0	8.94	J	ug/L		30	10 - 129
Hexachloroethane	30.0	14.4		ug/L		48	41 - 120
Indene	30.0	17.4		ug/L		58	47 - 120
Isophorone	30.0	18.3		ug/L		61	49 - 120
2-Methylphenol	30.0	25.7		ug/L		86	39 - 123
3 & 4 Methylphenol	30.0	26.6		ug/L		89	38 - 121
2-Nitroaniline	30.0	18.7		ug/L		62	47 - 150
3-Nitroaniline	30.0	17.6		ug/L		59	34 - 132
4-Nitroaniline	30.0	23.0		ug/L		77	41 - 135
Nitrobenzene	30.0	17.2		ug/L		57	47 - 120
2-Nitrophenol	30.0	28.1		ug/L		94	28 - 136
4-Nitrophenol	60.0	60.0		ug/L		100	10 - 150
N-Nitrosodimethylamine	30.0	21.0		ug/L		70	22 - 148
N-Nitrosodi-n-propylamine	30.0	22.3		ug/L		74	44 - 120
N-Nitrosodiphenylamine	29.8	24.8		ug/L		83	56 - 120
Pentachlorophenol	60.0	60.4		ug/L		101	15 - 141
Phenol	30.0	19.2		ug/L		64	33 - 120
Pyridine	60.0	23.5		ug/L		39	26 - 120
Quinoline	30.0	18.3		ug/L		61	51 - 129

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-416151/2-A
Matrix: Water
Analysis Batch: 416437

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416151

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-Trichlorophenol	30.0	27.7		ug/L		92	38 - 147
2,4,6-Trichlorophenol	30.0	26.9		ug/L		90	36 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*60*		*34 - 120*
2-Fluorophenol	*47*		*10 - 120*
Nitrobenzene-d5	*46*		*27 - 120*
Phenol-d5	*56*		*10 - 120*
Terphenyl-d14	*71*		*53 - 125*
2,4,6-Tribromophenol	*85*		*15 - 135*

Lab Sample ID: LCS 400-416151/4-A
Matrix: Water
Analysis Batch: 416437

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416151

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzenethiol	30.0	ND	*	ug/L		1	10 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*50*		*34 - 120*
2-Fluorophenol	*51*		*10 - 120*
Nitrobenzene-d5	*51*		*27 - 120*
Phenol-d5	*56*		*10 - 120*
Terphenyl-d14	*79*		*53 - 125*
2,4,6-Tribromophenol	*76*		*15 - 135*

Lab Sample ID: LCSD 400-416151/3-A
Matrix: Water
Analysis Batch: 416437

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416151

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aniline	30.0	19.1		ug/L		64	29 - 120	11	30
Benzoic acid	118	ND	*	ug/L		0	10 - 150	200	30
Benzyl alcohol	30.0	22.2		ug/L		74	19 - 125	7	30
Bis(2-chloroethoxy)methane	30.0	19.4		ug/L		65	45 - 120	5	30
Bis(2-chloroethyl)ether	30.0	20.6		ug/L		69	48 - 120	12	30
bis (2-chloroisopropyl) ether	30.0	17.3		ug/L		58	30 - 125	8	30
Bis(2-ethylhexyl) phthalate	30.0	24.7		ug/L		82	48 - 150	3	30
4-Bromophenyl phenyl ether	30.0	26.2		ug/L		87	55 - 122	5	30
Butyl benzyl phthalate	30.0	22.8		ug/L		76	46 - 145	0	30
4-Chloroaniline	30.0	15.0		ug/L		50	30 - 120	20	30
4-Chloro-3-methylphenol	30.0	22.9		ug/L		76	39 - 140	0	30
2-Chloronaphthalene	30.0	21.2		ug/L		71	52 - 120	4	30
2-Chlorophenol	30.0	24.6		ug/L		82	34 - 120	5	30
4-Chlorophenyl phenyl ether	30.0	25.0		ug/L		83	58 - 124	3	30
Dibenz[a,h]acridine	30.0	14.4		ug/L		48	46 - 149	10	30
Dibenzofuran	30.0	23.3		ug/L		78	58 - 123	4	30
3,3'-Dichlorobenzidine	40.0	39.4		ug/L		99	39 - 135	5	30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-416151/3-A
Matrix: Water
Analysis Batch: 416437

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416151

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4-Dichlorophenol	30.0	25.5		ug/L		85	39 - 128	5	30
Diethyl phthalate	30.0	28.4		ug/L		95	44 - 146	6	30
2,4-Dimethylphenol	30.0	25.0		ug/L		83	44 - 120	4	30
Dimethyl phthalate	30.0	25.6		ug/L		85	50 - 131	5	30
Di-n-butyl phthalate	30.0	27.8		ug/L		93	55 - 131	3	30
4,6-Dinitro-ortho-cresol	60.0	42.0	*	ug/L		70	10 - 150	39	30
2,4-Dinitrophenol	60.0	24.8	J *	ug/L		41	10 - 150	95	30
2,4-Dinitrotoluene	30.0	26.0		ug/L		87	58 - 140	3	30
2,6-Dinitrotoluene	30.0	25.5		ug/L		85	57 - 130	3	30
Di-n-octyl phthalate	30.0	23.5		ug/L		78	50 - 150	6	30
1,4-Dioxane	30.0	12.6		ug/L		42	25 - 120	12	30
1,2-Diphenylhydrazine (as Azobenzene)	30.0	18.3		ug/L		61	47 - 123	3	30
Hexachlorobenzene	30.0	30.9		ug/L		103	52 - 131	6	30
Hexachlorocyclopentadiene	30.0	10.4	J	ug/L		35	10 - 129	16	30
Hexachloroethane	30.0	16.4		ug/L		55	41 - 120	13	30
Indene	30.0	20.6		ug/L		69	47 - 120	17	30
Isophorone	30.0	19.1		ug/L		64	49 - 120	4	30
2-Methylphenol	30.0	27.8		ug/L		93	39 - 123	8	30
3 & 4 Methylphenol	30.0	28.4		ug/L		95	38 - 121	7	30
2-Nitroaniline	30.0	19.9		ug/L		66	47 - 150	7	30
3-Nitroaniline	30.0	18.6		ug/L		62	34 - 132	6	30
4-Nitroaniline	30.0	23.1		ug/L		77	41 - 135	0	30
Nitrobenzene	30.0	18.4		ug/L		61	47 - 120	6	30
2-Nitrophenol	30.0	24.3		ug/L		81	28 - 136	15	30
4-Nitrophenol	60.0	33.7	*	ug/L		56	10 - 150	56	30
N-Nitrosodimethylamine	30.0	23.1		ug/L		77	22 - 148	9	30
N-Nitrosodi-n-propylamine	30.0	24.0		ug/L		80	44 - 120	7	30
N-Nitrosodiphenylamine	29.8	25.1		ug/L		84	56 - 120	1	30
Pentachlorophenol	60.0	44.7		ug/L		75	15 - 141	30	30
Phenol	30.0	20.0		ug/L		67	33 - 120	4	30
Pyridine	60.0	25.4		ug/L		42	26 - 120	8	30
Quinoline	30.0	23.9		ug/L		80	51 - 129	26	30
2,4,5-Trichlorophenol	30.0	26.3		ug/L		88	38 - 147	5	30
2,4,6-Trichlorophenol	30.0	26.4		ug/L		88	36 - 139	2	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*67*		*34 - 120*
2-Fluorophenol	*52*		*10 - 120*
Nitrobenzene-d5	*51*		*27 - 120*
Phenol-d5	*62*		*10 - 120*
Terphenyl-d14	*77*		*53 - 125*
2,4,6-Tribromophenol	*89*		*15 - 135*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-416151/5-A
Matrix: Water
Analysis Batch: 416437

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416151

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzenethiol	30.0	ND	*	ug/L		1	10 - 120	11	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*52*		*34 - 120*
2-Fluorophenol	*53*		*10 - 120*
Nitrobenzene-d5	*50*		*27 - 120*
Phenol-d5	*54*		*10 - 120*
Terphenyl-d14	*78*		*53 - 125*
2,4,6-Tribromophenol	*73*		*15 - 135*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 400-416151/1-A
Matrix: Water
Analysis Batch: 416415

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416151

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 14:38	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 14:38	1
Anthracene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 14:38	1
Benzo[a]anthracene	ND		0.20	0.040	ug/L		10/19/18 14:52	10/22/18 14:38	1
Benzo[a]pyrene	ND		0.20	0.040	ug/L		10/19/18 14:52	10/22/18 14:38	1
Benzo[b]fluoranthene	ND		0.20	0.040	ug/L		10/19/18 14:52	10/22/18 14:38	1
Benzo[g,h,i]perylene	ND		0.20	0.040	ug/L		10/19/18 14:52	10/22/18 14:38	1
Benzo[k]fluoranthene	ND		0.20	0.040	ug/L		10/19/18 14:52	10/22/18 14:38	1
Chrysene	ND		0.20	0.040	ug/L		10/19/18 14:52	10/22/18 14:38	1
Dibenz(a,h)anthracene	ND		0.20	0.040	ug/L		10/19/18 14:52	10/22/18 14:38	1
Fluoranthene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 14:38	1
Fluorene	ND		0.20	0.021	ug/L		10/19/18 14:52	10/22/18 14:38	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.040	ug/L		10/19/18 14:52	10/22/18 14:38	1
Phenanthrene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 14:38	1
Pyrene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 14:38	1
1-Methylnaphthalene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 14:38	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		10/19/18 14:52	10/22/18 14:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*84*		*33 - 138*	*10/19/18 14:52*	*10/22/18 14:38*	*1*
2-Fluorobiphenyl	*66*		*15 - 122*	*10/19/18 14:52*	*10/22/18 14:38*	*1*
Nitrobenzene-d5	*54*		*19 - 130*	*10/19/18 14:52*	*10/22/18 14:38*	*1*

Lab Sample ID: LCS 400-416151/2-A
Matrix: Water
Analysis Batch: 416415

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416151

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	30.0	32.5		ug/L		108	41 - 120
Acenaphthylene	30.0	31.2		ug/L		104	44 - 120

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCS 400-416151/2-A
Matrix: Water
Analysis Batch: 416415

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416151

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Anthracene	30.0	31.3		ug/L		104	49 - 120
Benzo[a]anthracene	30.0	29.4		ug/L		98	61 - 135
Benzo[a]pyrene	30.0	28.9		ug/L		96	52 - 120
Benzo[b]fluoranthene	30.0	30.4		ug/L		101	53 - 134
Benzo[g,h,i]perylene	30.0	29.9		ug/L		100	47 - 133
Benzo[k]fluoranthene	30.0	26.7		ug/L		89	57 - 134
Chrysene	30.0	28.4		ug/L		95	55 - 122
Dibenz(a,h)anthracene	30.0	29.7		ug/L		99	48 - 146
Fluoranthene	30.0	30.5		ug/L		102	54 - 128
Fluorene	30.0	34.7		ug/L		116	45 - 125
Indeno[1,2,3-cd]pyrene	30.0	30.9		ug/L		103	43 - 142
Phenanthrene	30.0	31.2		ug/L		104	48 - 120
Pyrene	30.0	28.1		ug/L		94	48 - 132
1-Methylnaphthalene	30.0	17.1		ug/L		57	41 - 120
2-Methylnaphthalene	30.0	17.1		ug/L		57	32 - 124

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14	*89*		*33 - 138*
2-Fluorobiphenyl	*89*		*15 - 122*
Nitrobenzene-d5	*63*		*19 - 130*

Lab Sample ID: LCSD 400-416151/3-A
Matrix: Water
Analysis Batch: 416415

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416151

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	30.0	26.6		ug/L		89	41 - 120	20	56
Acenaphthylene	30.0	26.6		ug/L		89	44 - 120	16	56
Anthracene	30.0	25.9		ug/L		86	49 - 120	19	51
Benzo[a]anthracene	30.0	23.2		ug/L		77	61 - 135	23	49
Benzo[a]pyrene	30.0	23.5		ug/L		78	52 - 120	20	50
Benzo[b]fluoranthene	30.0	25.0		ug/L		83	53 - 134	19	54
Benzo[g,h,i]perylene	30.0	25.5		ug/L		85	47 - 133	16	50
Benzo[k]fluoranthene	30.0	22.3		ug/L		74	57 - 134	18	52
Chrysene	30.0	23.3		ug/L		78	55 - 122	20	50
Dibenz(a,h)anthracene	30.0	25.8		ug/L		86	48 - 146	14	50
Fluoranthene	30.0	25.1		ug/L		84	54 - 128	19	52
Fluorene	30.0	30.9		ug/L		103	45 - 125	12	56
Indeno[1,2,3-cd]pyrene	30.0	27.0		ug/L		90	43 - 142	14	51
Phenanthrene	30.0	25.8		ug/L		86	48 - 120	19	56
Pyrene	30.0	22.5		ug/L		75	48 - 132	22	52
1-Methylnaphthalene	30.0	15.5		ug/L		52	41 - 120	10	55
2-Methylnaphthalene	30.0	14.9		ug/L		50	32 - 124	14	57

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Terphenyl-d14	*78*		*33 - 138*
2-Fluorobiphenyl	*79*		*15 - 122*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCSD 400-416151/3-A
Matrix: Water
Analysis Batch: 416415

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416151

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Nitrobenzene-d5	61		19 - 130

Method: 8011 - EDB and DBCP in Water by Microextraction

Lab Sample ID: MB 400-416931/1-A
Matrix: Water
Analysis Batch: 417027

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416931

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0055	ug/L		10/25/18 11:36	10/25/18 19:05	1
1,2-Dibromoethane	ND		0.020	0.0050	ug/L		10/25/18 11:36	10/25/18 19:05	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94	p	51 - 149	10/25/18 11:36	10/25/18 19:05	1

Lab Sample ID: LCS 400-416931/2-A
Matrix: Water
Analysis Batch: 417027

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416931

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	0.100	0.0882		ug/L		88	60 - 140
1,2-Dibromoethane	0.100	0.121		ug/L		121	60 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	104		51 - 149

Lab Sample ID: LCSD 400-416931/3-A
Matrix: Water
Analysis Batch: 417027

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416931

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane	0.100	0.0809		ug/L		81	60 - 140	9	30
1,2-Dibromoethane	0.100	0.120		ug/L		120	60 - 140	1	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	98		51 - 149

LAB (LOCATION)

☐ ACCUTEST (_____)
☐ CALSCIENCE (_____)
☑ TESTAMERICA (TestAmerica Pensacola; 3355 McLemore Dr Pensacola, FL 32514 (850-474-1001))
☐ Other Lab Vendor # 1364383 (TestAmerica)

Shell Oil Products US Chain Of Custody Record

AECOM

Please Check Appropriate Box:		
☐ SGW FDG	☐ PIPELINE	☐ RETAIL
☐ CHEMICALS	☐ CONSULTANT	☐ LUBES
☐ TRANSPORTATION	☑ OTHER _ENV. SERVICES_____	

Print Bill To Contact Name:	PlaNet Site or Project ID
Bob Billman	25278
PO #	GSAP Project ID
60527968 - 01.03.004 / 60527968 - 01.03.0044	USPC/00114/R/02

☐ CHECK IF NO INCIDENT # APPLIES
DATE: 10/12/18
PAGE: 1 of 1

SAMPLING COMPANY: AECOM
LOG CODE:
SITE ADDRESS: Street and City: 900 South Central Ave; ROXANA
State: IL
AECOM Project / Task Number: Roxana Quarterly GW — 60527968 - 01.03.004 / 60527968 - 01.03.0044
ADDRESS: 100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA
LDF DELIVERABLE TO (Name, Company, Office Location):
PHONE NO:
E-MAIL:
ACCUM Oper ID:
PROJECT CONTACT (Hardcopy or PDF Report to): Elizabeth Kunkel, Bob Billman, Melissa Remiger
SAMPLER NAME(S) (Print): T. Jones M. Karrick
LAB USE ONLY
TELEPHONE: 314-429-0100
FAX: 314-429-0462
Bill To Contact E-MAIL: bob.billman@aecom.com; elizabeth.kunkel@aecom.com, melissa.remiger@aecom.com

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAY ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ IA - RWQCB REPORT FORMAT

DELIVERABLES: ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
* Please include "J" values on Reports
* Please provide sample receipt upon login

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO OF CONT.	NON-UNIT COST 60527968 - 01.03.004: VOC 8260	SVOC 8270	UNIT COST 60527968 - 01.03.0044: VOC 8011	PAH 8270LL
	TB-ROX-101218-8011	10/12/18	0000	Water	2					2			✓	
	TB-ROX-101218-8260		0000		2					2	✓			
	MW5-ROX-101218		0910		4			2		6	✓	✓	✓	✓
	ROST4P2C-ROX-101218-FB		0945		4			2		6	✓	✓	✓	✓
	ROST4P2C-ROX-101218		1015		4			2		6	✓	✓	✓	✓
	ROST4P2G-ROX-101218		1110		4			2		6	✓	✓	✓	✓
	MW2-ROX-101218		1205		4			2		6	✓	✓	✓	✓
	MW2-ROX-10128-DUP		1205		4			2		6	✓	✓	✓	✓

FIELD NOTES:
TEMPERATURE ON RECEIPT C°
400-160552 COC
Container PID Readings or Laboratory Notes

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Megan Karrick	Fedex: 4535 0239 0670 ; 4535 0239 0660	10/12/18	1445
Relinquished by: (Signature)	Received by: (Signature) 4535 0239 0659	Date	Time
Relinquished by: (Signature)	Received by: (Signature)	Date: 10.13.18	Time: 8:36

Version 14Dec15

Custody Seals: 572498, 572499, 572496, 572497, 572500, 572501

4.5°C IR7, 0.4°C, 3.0°C, IR8

Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 400-160552-1

Login Number: 160552
List Number: 1
Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.5°C, 0.4°C, 3.0°C IR-8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160552-1

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-16	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

Roxana Groundwater Quarterly – 4th Quarter 2018 Data Review

Laboratory SDG: 400-160656-1

Data Reviewer: Melissa Remiger

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 11/7/2018

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2017

Sample Identification	Sample Identification
TB-ROX-101518-8011-SS	TB-ROX-101518-8260-SS
P93D-ROX-101518	P93B-ROX-101518
P93B-ROX-101518-Dup	P93C-ROX-101518
P56-ROX-101518	

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated SVOC LCS/LCSD recoveries for benzenethiol and 3,3'-dichlorobenzidine, and several LCS/LCSD RPDs, were outside evaluation criteria. Several SVOC surrogate recoveries were outside criteria in several investigative and quality control samples. VOCs and phenol in field duplicate pair P93B-ROX-101518/P93B-ROX-101518-Dup, and VOCs in sample P93C-ROX-101518, were diluted to bring target analytes into calibration range of the instrument. The continuing calibration verifications for several analytes were outside evaluation criteria, biased low. These issues are addressed further in the appropriate sections of this data review.

Three of 69 (2-chloroethyl vinyl ether, acrolein, and acrylonitrile) 8260 VOCs are acid-reactive compounds; results may be biased low due to the presence of HCl in the preservative.

The cooler receipt form did not indicate any problems.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS/LCSD ID	Parameter	Analyte	LCS/ LCSD Recovery	RPD	LCS/LCSD/ RPD Criteria
LCS/LCSD 400-416425/4-A/5-A	SVOCs	Benzenethiol	**3/0.6**	**131**	10-120/30
LCS/LCSD 400-416425/2-A/3-A	SVOCs	Benzoic acid	86/17	**133**	10-150/30
LCS/LCSD 400-416425/2-A/3-A	SVOCs	bis(2-Ethylhexyl)phthalate	120/72	**50**	48-150/30
LCS/LCSD 400-416425/2-A/3-A	SVOCs	2-Chlorophenol	80/45	**55**	34-120/30
LCS/LCSD 400-416425/2-A/3-A	SVOCs	3,3'-Dichlorobenzidine	**150**/114	27	39-135/30
LCS/LCSD 400-416425/2-A/3-A	SVOCs	2,4-Dichlorophenol	86/62	**33**	39-128/30
LCS/LCSD 400-416425/2-A/3-A	SVOCs	2,4-Dinitrophenol	92/66	**33**	10-150/30
LCS/LCSD 400-416425/2-A/3-A	SVOCs	1,4-Dioxane	64/41	**43**	25-120/30
LCS/LCSD 400-416425/2-A/3-A	SVOCs	3&4-Methylphenol	84/62	**31**	38-121/30
LCS/LCSD 400-416425/2-A/3-A	SVOCs	2-Nitrophenol	89/64	**33**	28-136/30
LCS/LCSD 400-416425/2-A/3-A	SVOCs	Phenol	82/49	**51**	33-120/30
LCS/LCSD 400-416425/2-A/3-A	SVOCs	Pyridine	62/45	**32**	26-120/30

Analytical data that required qualification based on LCS/LCSD data are included in the table below. Professional judgment was used to qualify, however not reject, data associated with benzenethiol in LCS/LCSD 400-416425/4-A/5-A; benzenethiol has been identified as a poor performing analyte under Method 8270. Analytical data associated with RPD alone outside evaluation criteria did not require qualification. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Sample ID	Parameter	Analyte	Qualification
P93D-ROX-101518	SVOCs	Benzenethiol	**UJ**
P93B-ROX-101518	SVOCs	Benzenethiol	**UJ**
P93B-ROX-101518-Dup	SVOCs	Benzenethiol	**UJ**
P93C-ROX-101518	SVOCs	Benzenethiol	**UJ**
P56-ROX-101518	SVOCs	Benzenethiol	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
P93D-ROX-101518	SVOCs	Terphenyl-d_{14}	**40**	53-125

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
P93B-ROX-101518	SVOCs	Terphenyl-d_{14}	**45**	53-125
P93B-ROX-101518-Dup	SVOCs	Terphenyl-d_{14}	**26**	53-125
P93C-ROX-101518	SVOCs	Terphenyl-d_{14}	**41**	53-125
P56-ROX-101518	SVOCs	Terphenyl-d_{14}	**26**	53-125
LCS 400-416425/4-A	SVOCs	2-Fluorophenol	**7**	10-120
LCS 400-416425/4-A	SVOCs	Terphenyl-d_{14}	**48**	53-125

Qualifications due to surrogate recoveries were not required if only one of three base/neutral fraction surrogate recoveries were outside evaluation criteria in the associated SVOC samples. Quality control samples do not require qualification. No qualification of data was required.

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
P93B-ROX-101518	P93B-ROX-101518-Dup

Were field duplicates within evaluation criteria?

Yes

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; analytes were detected in samples that were diluted, with the exception of VOCs in field duplicate pair P93B-ROX-101518/P93B-ROX-101518-Dup. VOCs were non-detect at a dilution factor of 2,000X, with raised reporting limits of 2,000 to 50,000 µg/L. Due to historical VOC detections, please see section 12.0 of the data review for additional qualifications.

12.0 Additional Qualifications

Were additional qualifications applied?

Yes, the continuing calibration verifications for several analytes were below acceptance criteria and are qualified as summarized in the following table.

Sample ID	Parameter	Analyte	Qualification
P93D-ROX-101518	SVOCs	Benzyl alcohol	**UJ**
P93D-ROX-101518	SVOCs	bis(2-Chloroethyl)ether	**UJ**
P93D-ROX-101518	SVOCs	Quinoline	**UJ**
P93B-ROX-101518	SVOCs	Benzyl alcohol	**UJ**
P93B-ROX-101518	SVOCs	bis(2-Chloroethyl)ether	**UJ**
P93B-ROX-101518	SVOCs	Quinoline	**UJ**
P93B-ROX-101518-Dup	SVOCs	Benzyl alcohol	**UJ**
P93B-ROX-101518-Dup	SVOCs	bis(2-Chloroethyl)ether	**UJ**
P93B-ROX-101518-Dup	SVOCs	Quinoline	**UJ**
P93C-ROX-101518	SVOCs	Benzyl alcohol	**UJ**
P93C-ROX-101518	SVOCs	bis(2-Chloroethyl)ether	**UJ**
P93C-ROX-101518	SVOCs	Quinoline	**UJ**
P56-ROX-101518	SVOCs	Benzyl alcohol	**UJ**
P56-ROX-101518	SVOCs	bis(2-Chloroethyl)ether	**UJ**
P56-ROX-101518	SVOCs	Quinoline	**UJ**

Additionally, VOCs in field duplicate pair P93B-ROX-101518/P93B-ROX-101518-Dup were qualified as estimated non-detect due to sample dilution and historical detections.

Sample ID	Parameter	Analyte	Qualification
P93B-ROX-101518	VOCs	All non-detects	**UJ**
P93B-ROX-101518-Dup	VOCs	All non-detects	**UJ**

TestAmerica

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ANALYTICAL REPORT



TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-160656-1
TestAmerica Sample Delivery Group: 60527968
Client Project/Site: ROXANA QUARTERLY

For:
AECOM Technical Services Inc.
100 N. Broadway
20th Floor
St. Louis, Missouri 63102

Attn: Elizabeth Kunkel

Authorized for release by:
10/31/2018 12:55:00 PM

Leah Klingensmith, Senior Project Manager
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LINKS

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Reviewed 11/7/18

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-160656-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-160656-1

Comments
No additional comments.

Receipt
The samples were received on 10/16/2018 9:11 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 0.1° C, 0.9° C, 2.0° C and 2.2° C.

GC/MS VOA
Method(s) 8260B: The initial calibration verification (ICV) analyzed in batch 400-390317 was outside method criteria for the following analytes: Acrolein and Dichlorodifluoromethane. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analytes are considered estimated.

Method(s) 8260B: The following samples were diluted to bring the concentration of target analytes within the calibration range: P93B-ROX-101518 (400-160656-4), P93B-ROX-101518-DUP (400-160656-5) and P93C-ROX-101518 (400-160656-6). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: The preservative used in the sample containers provided is not compatible with some of the Method 8260 analytes requested. The following samples were received preserved with hydrochloric acid: TB-ROX-101518-8260-SS (400-160656-2), P93D-ROX-101518 (400-160656-3), P93B-ROX-101518 (400-160656-4), P93B-ROX-101518-DUP (400-160656-5), P93C-ROX-101518 (400-160656-6) and P56-ROX-101518 (400-160656-7). The requested target analyte list includes 2-chloroethyl vinyl ether, Acrolein and Acrylonitrile, which are acid-labile compounds that degrade in an acidic medium.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 400-416425 and analytical batch 400-416989 recovered outside control limits for the following analytes: 3,3'-Dichlorobenzidine. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 400-416425 and analytical batch 400-416989 recovered outside control limits for the following analytes: Benzoic acid, 3 & 4 Methylphenol, 2,4-Dinitrophenol, Phenol, Bis(2-ethylhexyl) phthalate, 2,4-Dichlorophenol, 2-Chlorophenol, 2-Nitrophenol, Pyridine and 1,4-Dioxane.

Method(s) 8270D: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 400-416425 and analytical batch 400-416716 recovered outside control limits for the following analyte(s): Benzenethiol. Benzenethiol has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

Method(s) 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 400-416425 and analytical batch 400-416716 recovered outside control limits for the following analytes: Benzenethiol.

Method(s) 8270D: Six surrogates are used for this analysis. The laboratory's SOP allows one acid and one base of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: (LCS 400-416425/4-A). These results have been reported and qualified.

Method(s) 8270D: Six surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following samples contained an allowable number of surrogate compounds outside limits: P93D-ROX-101518 (400-160656-3), P93B-ROX-101518 (400-160656-4), P93B-ROX-101518-DUP (400-160656-5), P93C-ROX-101518 (400-160656-6) and P56-ROX-101518 (400-160656-7). These results have been reported and qualified.

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 400-416716 recovered outside acceptance criteria,

Job ID: 400-160656-1 (Continued)

Laboratory: TestAmerica Pensacola (Continued)

low biased, for Benzyl alcohol, Bis(2-chloroethyl)ether and Quinoline. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 400-416716 recovered above the upper control limit for 4-Nitrophenol, Di-n-butyl phthalate, Hexachlorobenzene, 4,6-Dinitro-ortho-cresol, 4-Bromophenyl phenyl ether and 2-Nitrophenol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: P93D-ROX-101518 (400-160656-3), P93B-ROX-101518 (400-160656-4), P93B-ROX-101518-DUP (400-160656-5), P93C-ROX-101518 (400-160656-6), P56-ROX-101518 (400-160656-7) and (MB 400-416425/1-A).

Method(s) 8270D: The following samples were diluted to bring the concentration of target analytes within the calibration range: P93B-ROX-101518 (400-160656-4) and P93B-ROX-101518-DUP (400-160656-5). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

Method(s) 8011: The continuing calibration verification (CCV) associated with batch 400-417027 recovered above the upper control limit for 1,2-Dibromo-3-Chloropropane and 1,2-Dibromoethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: TB-ROX-101518-8011-SS (400-160656-1), P93D-ROX-101518 (400-160656-3), P93B-ROX-101518 (400-160656-4), P93B-ROX-101518-DUP (400-160656-5), P93C-ROX-101518 (400-160656-6), P56-ROX-101518 (400-160656-7) and (MB 400-416931/1-A).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160656-1
SDG: 60527968

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-160656-1	TB-ROX-101518-8011-SS	Water	10/15/18 00:00	10/16/18 09:11
400-160656-2	TB-ROX-101518-8260-SS	Water	10/15/18 00:00	10/16/18 09:11
400-160656-3	P93D-ROX-101518	Water	10/15/18 09:55	10/16/18 09:11
400-160656-4	P93B-ROX-101518	Water	10/15/18 10:45	10/16/18 09:11
400-160656-5	P93B-ROX-101518-DUP	Water	10/15/18 10:45	10/16/18 09:11
400-160656-6	P93C-ROX-101518	Water	10/15/18 12:05	10/16/18 09:11
400-160656-7	P56-ROX-101518	Water	10/15/18 13:05	10/16/18 09:11

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160656-1
SDG: 60527968

Client Sample ID: TB-ROX-101518-8011-SS — Lab Sample ID: 400-160656-1

No Detections.

Client Sample ID: TB-ROX-101518-8260-SS — Lab Sample ID: 400-160656-2

No Detections.

Client Sample ID: P93D-ROX-101518 — Lab Sample ID: 400-160656-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	4.4		1.0	0.38	ug/L	1		8260B	Total/NA
Methyl tert-butyl ether	3.1		1.0	0.74	ug/L	1		8260B	Total/NA
Benzo[a]pyrene	0.051	J	0.19	0.039	ug/L	1		8270D LL	Total/NA
Benzo[g,h,i]perylene	0.043	J	0.19	0.039	ug/L	1		8270D LL	Total/NA
Dibenz(a,h)anthracene	0.097	J	0.19	0.039	ug/L	1		8270D LL	Total/NA
Fluoranthene	0.035	J	0.19	0.019	ug/L	1		8270D LL	Total/NA
Indeno[1,2,3-cd]pyrene	0.073	J	0.19	0.039	ug/L	1		8270D LL	Total/NA
Pyrene	0.035	J	0.19	0.019	ug/L	1		8270D LL	Total/NA
Di-n-octyl phthalate	0.57	J	9.7	0.43	ug/L	1		8270D	Total/NA

Client Sample ID: P93B-ROX-101518 — Lab Sample ID: 400-160656-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene - DL	1100000		5000	1900	ug/L	5000		8260B	Total/NA
2-Methylphenol	2.1	J	9.7	1.8	ug/L	1		8270D	Total/NA
3 & 4 Methylphenol	5.8	J	19	1.0	ug/L	1		8270D	Total/NA
Phenol - DL	220	*	49	13	ug/L	5		8270D	Total/NA

Client Sample ID: P93B-ROX-101518-DUP — Lab Sample ID: 400-160656-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene - DL	1200000		5000	1900	ug/L	5000		8260B	Total/NA
2-Methylphenol	2.3	J	9.6	1.7	ug/L	1		8270D	Total/NA
3 & 4 Methylphenol	6.1	J	19	1.0	ug/L	1		8270D	Total/NA
Phenol - DL	250	*	48	13	ug/L	5		8270D	Total/NA

Client Sample ID: P93C-ROX-101518 — Lab Sample ID: 400-160656-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1900		10	3.8	ug/L	10		8260B	Total/NA
Methyl tert-butyl ether	8.6	J	10	7.4	ug/L	10		8260B	Total/NA
Phenol	13		9.8	2.5	ug/L	1		8270D	Total/NA

Client Sample ID: P56-ROX-101518 — Lab Sample ID: 400-160656-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.0		1.0	0.38	ug/L	1		8260B	Total/NA
Ethylbenzene	1.2		1.0	0.50	ug/L	1		8260B	Total/NA
Isopropylbenzene	14		1.0	0.53	ug/L	1		8260B	Total/NA
m-Xylene & p-Xylene	5.9		5.0	1.6	ug/L	1		8260B	Total/NA
N-Propylbenzene	16		1.0	0.69	ug/L	1		8260B	Total/NA
p-Isopropyltoluene	0.82	J	1.0	0.71	ug/L	1		8260B	Total/NA
sec-Butylbenzene	1.1		1.0	0.70	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: P56-ROX-101518 (Continued)

Lab Sample ID: 400-160656-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.76	J	1.0	0.70	ug/L	1		8260B	Total/NA
1,2,4-Trimethylbenzene	1.3		1.0	0.82	ug/L	1		8260B	Total/NA
Xylenes, Total	6.2	J	10	1.6	ug/L	1		8260B	Total/NA
Acenaphthene	0.37		0.20	0.020	ug/L	1		8270D LL	Total/NA
Anthracene	0.069	J	0.20	0.020	ug/L	1		8270D LL	Total/NA
Fluorene	0.19	J	0.20	0.021	ug/L	1		8270D LL	Total/NA
Phenanthrene	0.57		0.20	0.020	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene	24		0.20	0.020	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	17		0.20	0.020	ug/L	1		8270D LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160656-1
SDG: 60527968

Client Sample ID: TB-ROX-101518-8011-SS
Date Collected: 10/15/18 00:00
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160656-1
Matrix: Water

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.031	0.0056	ug/L		10/25/18 11:36	10/26/18 15:54	1
1,2-Dibromoethane	ND		0.020	0.0051	ug/L		10/25/18 11:36	10/26/18 15:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*	*p*	*51 - 149*	*10/25/18 11:36*	*10/26/18 15:54*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160656-1
SDG: 60527968

Client Sample ID: TB-ROX-101518-8260-SS
Date Collected: 10/15/18 00:00
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160656-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/27/18 08:34	1
Acrolein	ND		20	10	ug/L			10/27/18 08:34	1
Acrylonitrile	ND		10	2.8	ug/L			10/27/18 08:34	1
Benzene	ND		1.0	0.38	ug/L			10/27/18 08:34	1
Bromobenzene	ND		1.0	0.54	ug/L			10/27/18 08:34	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/27/18 08:34	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/27/18 08:34	1
Bromoform	ND		5.0	0.71	ug/L			10/27/18 08:34	1
Bromomethane	ND		1.0	0.98	ug/L			10/27/18 08:34	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/27/18 08:34	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/27/18 08:34	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/27/18 08:34	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/27/18 08:34	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/27/18 08:34	1
Chloroethane	ND		1.0	0.76	ug/L			10/27/18 08:34	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/27/18 08:34	1
Chloroform	ND		1.0	0.60	ug/L			10/27/18 08:34	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/27/18 08:34	1
Chloromethane	ND		1.0	0.83	ug/L			10/27/18 08:34	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 08:34	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/27/18 08:34	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/27/18 08:34	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/27/18 08:34	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/27/18 08:34	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/27/18 08:34	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/27/18 08:34	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/27/18 08:34	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 08:34	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 08:34	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 08:34	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 08:34	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/27/18 08:34	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/27/18 08:34	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/27/18 08:34	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/27/18 08:34	1
2-Hexanone	ND		25	3.1	ug/L			10/27/18 08:34	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/27/18 08:34	1
Methylene bromide	ND		5.0	0.59	ug/L			10/27/18 08:34	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/27/18 08:34	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/27/18 08:34	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/27/18 08:34	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/27/18 08:34	1
Naphthalene	ND		1.0	1.0	ug/L			10/27/18 08:34	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/27/18 08:34	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/27/18 08:34	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/27/18 08:34	1
o-Xylene	ND		5.0	0.60	ug/L			10/27/18 08:34	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/27/18 08:34	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/27/18 08:34	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160656-1
SDG: 60527968

Client Sample ID: TB-ROX-101518-8260-SS
Date Collected: 10/15/18 00:00
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160656-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/27/18 08:34	1
Styrene	ND		1.0	1.0	ug/L			10/27/18 08:34	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/27/18 08:34	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/27/18 08:34	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/27/18 08:34	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/27/18 08:34	1
Toluene	ND		1.0	0.70	ug/L			10/27/18 08:34	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 08:34	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/27/18 08:34	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/27/18 08:34	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/27/18 08:34	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/27/18 08:34	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/27/18 08:34	1
Trichloroethene	ND		1.0	0.50	ug/L			10/27/18 08:34	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/27/18 08:34	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/27/18 08:34	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/27/18 08:34	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/27/18 08:34	1
Vinyl acetate	ND		25	2.0	ug/L			10/27/18 08:34	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/27/18 08:34	1
Xylenes, Total	ND		10	1.6	ug/L			10/27/18 08:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*78 - 118*		*10/27/18 08:34*	*1*
Dibromofluoromethane	*103*		*81 - 121*		*10/27/18 08:34*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*10/27/18 08:34*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160656-1
SDG: 60527968

Client Sample ID: P93D-ROX-101518
Date Collected: 10/15/18 09:55
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160656-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/27/18 12:17	1
Acrolein	ND		20	10	ug/L			10/27/18 12:17	1
Acrylonitrile	ND		10	2.8	ug/L			10/27/18 12:17	1
Benzene	4.4		1.0	0.38	ug/L			10/27/18 12:17	1
Bromobenzene	ND		1.0	0.54	ug/L			10/27/18 12:17	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/27/18 12:17	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/27/18 12:17	1
Bromoform	ND		5.0	0.71	ug/L			10/27/18 12:17	1
Bromomethane	ND		1.0	0.98	ug/L			10/27/18 12:17	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/27/18 12:17	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/27/18 12:17	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/27/18 12:17	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/27/18 12:17	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/27/18 12:17	1
Chloroethane	ND		1.0	0.76	ug/L			10/27/18 12:17	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/27/18 12:17	1
Chloroform	ND		1.0	0.60	ug/L			10/27/18 12:17	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/27/18 12:17	1
Chloromethane	ND		1.0	0.83	ug/L			10/27/18 12:17	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 12:17	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/27/18 12:17	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/27/18 12:17	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/27/18 12:17	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/27/18 12:17	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/27/18 12:17	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/27/18 12:17	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/27/18 12:17	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 12:17	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 12:17	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 12:17	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 12:17	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/27/18 12:17	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/27/18 12:17	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/27/18 12:17	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/27/18 12:17	1
2-Hexanone	ND		25	3.1	ug/L			10/27/18 12:17	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/27/18 12:17	1
Methylene bromide	ND		5.0	0.59	ug/L			10/27/18 12:17	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/27/18 12:17	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/27/18 12:17	1
Methyl tert-butyl ether	3.1		1.0	0.74	ug/L			10/27/18 12:17	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/27/18 12:17	1
Naphthalene	ND		1.0	1.0	ug/L			10/27/18 12:17	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/27/18 12:17	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/27/18 12:17	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/27/18 12:17	1
o-Xylene	ND		5.0	0.60	ug/L			10/27/18 12:17	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/27/18 12:17	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/27/18 12:17	1

Client Sample ID: P93D-ROX-101518
Date Collected: 10/15/18 09:55
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160656-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/27/18 12:17	1
Styrene	ND		1.0	1.0	ug/L			10/27/18 12:17	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/27/18 12:17	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/27/18 12:17	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/27/18 12:17	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/27/18 12:17	1
Toluene	ND		1.0	0.70	ug/L			10/27/18 12:17	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 12:17	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/27/18 12:17	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/27/18 12:17	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/27/18 12:17	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/27/18 12:17	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/27/18 12:17	1
Trichloroethene	ND		1.0	0.50	ug/L			10/27/18 12:17	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/27/18 12:17	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/27/18 12:17	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/27/18 12:17	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/27/18 12:17	1
Vinyl acetate	ND		25	2.0	ug/L			10/27/18 12:17	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/27/18 12:17	1
Xylenes, Total	ND		10	1.6	ug/L			10/27/18 12:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*78 - 118*		*10/27/18 12:17*	*1*
Dibromofluoromethane	*96*		*81 - 121*		*10/27/18 12:17*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*10/27/18 12:17*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/24/18 22:47	1
Acenaphthylene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/24/18 22:47	1
Anthracene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/24/18 22:47	1
Benzo[a]anthracene	ND		0.19	0.039	ug/L		10/22/18 13:25	10/24/18 22:47	1
Benzo[a]pyrene	0.051	J	0.19	0.039	ug/L		10/22/18 13:25	10/24/18 22:47	1
Benzo[b]fluoranthene	ND		0.19	0.039	ug/L		10/22/18 13:25	10/24/18 22:47	1
Benzo[g,h,i]perylene	0.043	J	0.19	0.039	ug/L		10/22/18 13:25	10/24/18 22:47	1
Benzo[k]fluoranthene	ND		0.19	0.039	ug/L		10/22/18 13:25	10/24/18 22:47	1
Chrysene	ND		0.19	0.039	ug/L		10/22/18 13:25	10/24/18 22:47	1
Dibenz(a,h)anthracene	0.097	J	0.19	0.039	ug/L		10/22/18 13:25	10/24/18 22:47	1
Fluoranthene	0.035	J	0.19	0.019	ug/L		10/22/18 13:25	10/24/18 22:47	1
Fluorene	ND		0.19	0.020	ug/L		10/22/18 13:25	10/24/18 22:47	1
Indeno[1,2,3-cd]pyrene	0.073	J	0.19	0.039	ug/L		10/22/18 13:25	10/24/18 22:47	1
Phenanthrene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/24/18 22:47	1
Pyrene	0.035	J	0.19	0.019	ug/L		10/22/18 13:25	10/24/18 22:47	1
1-Methylnaphthalene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/24/18 22:47	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/24/18 22:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*87*		*33 - 138*	*10/22/18 13:25*	*10/24/18 22:47*	*1*
2-Fluorobiphenyl	*69*		*15 - 122*	*10/22/18 13:25*	*10/24/18 22:47*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	77		19 - 130	10/22/18 13:25	10/24/18 22:47	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.7	3.7	ug/L		10/22/18 13:25	10/24/18 14:39	1
Benzenethiol	ND	* UJ	9.7	1.7	ug/L		10/22/18 13:25	10/24/18 14:39	1
Benzoic acid	ND	*	29	7.1	ug/L		10/22/18 13:25	10/24/18 14:39	1
Benzyl alcohol	ND	UJ	9.7	1.9	ug/L		10/22/18 13:25	10/24/18 14:39	1
Bis(2-chloroethoxy)methane	ND		9.7	0.67	ug/L		10/22/18 13:25	10/24/18 14:39	1
Bis(2-chloroethyl)ether	ND	UJ	9.7	0.72	ug/L		10/22/18 13:25	10/24/18 14:39	1
bis (2-chloroisopropyl) ether	ND		9.7	0.79	ug/L		10/22/18 13:25	10/24/18 14:39	1
Bis(2-ethylhexyl) phthalate	ND	*	9.7	4.9	ug/L		10/22/18 13:25	10/24/18 14:39	1
4-Bromophenyl phenyl ether	ND		9.7	0.31	ug/L		10/22/18 13:25	10/24/18 14:39	1
Butyl benzyl phthalate	ND		9.7	0.67	ug/L		10/22/18 13:25	10/24/18 14:39	1
4-Chloroaniline	ND		9.7	3.3	ug/L		10/22/18 13:25	10/24/18 14:39	1
4-Chloro-3-methylphenol	ND		9.7	3.7	ug/L		10/22/18 13:25	10/24/18 14:39	1
2-Chloronaphthalene	ND		9.7	0.51	ug/L		10/22/18 13:25	10/24/18 14:39	1
2-Chlorophenol	ND	*	9.7	2.1	ug/L		10/22/18 13:25	10/24/18 14:39	1
4-Chlorophenyl phenyl ether	ND		9.7	1.9	ug/L		10/22/18 13:25	10/24/18 14:39	1
Dibenz[a,h]acridine	ND		9.7	2.9	ug/L		10/22/18 13:25	10/24/18 14:39	1
Dibenzofuran	ND		9.7	0.51	ug/L		10/22/18 13:25	10/24/18 14:39	1
3,3'-Dichlorobenzidine	ND	*	9.7	2.5	ug/L		10/22/18 13:25	10/24/18 14:39	1
2,4-Dichlorophenol	ND	*	9.7	2.9	ug/L		10/22/18 13:25	10/24/18 14:39	1
Diethyl phthalate	ND		9.7	0.68	ug/L		10/22/18 13:25	10/24/18 14:39	1
2,4-Dimethylphenol	ND		9.7	3.4	ug/L		10/22/18 13:25	10/24/18 14:39	1
Dimethyl phthalate	ND		9.7	0.58	ug/L		10/22/18 13:25	10/24/18 14:39	1
Di-n-butyl phthalate	ND		9.7	2.6	ug/L		10/22/18 13:25	10/24/18 14:39	1
4,6-Dinitro-ortho-cresol	ND		9.7	1.9	ug/L		10/22/18 13:25	10/24/18 14:39	1
2,4-Dinitrophenol	ND	*	29	3.3	ug/L		10/22/18 13:25	10/24/18 14:39	1
2,4-Dinitrotoluene	ND		9.7	1.9	ug/L		10/22/18 13:25	10/24/18 14:39	1
2,6-Dinitrotoluene	ND		9.7	1.9	ug/L		10/22/18 13:25	10/24/18 14:39	1
Di-n-octyl phthalate	0.57	J	9.7	0.43	ug/L		10/22/18 13:25	10/24/18 14:39	1
1,4-Dioxane	ND	*	9.7	0.97	ug/L		10/22/18 13:25	10/24/18 14:39	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.7	0.97	ug/L		10/22/18 13:25	10/24/18 14:39	1
Hexachlorobenzene	ND		9.7	0.24	ug/L		10/22/18 13:25	10/24/18 14:39	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		10/22/18 13:25	10/24/18 14:39	1
Hexachloroethane	ND		9.7	4.1	ug/L		10/22/18 13:25	10/24/18 14:39	1
Indene	ND		9.7	0.97	ug/L		10/22/18 13:25	10/24/18 14:39	1
Isophorone	ND		9.7	0.56	ug/L		10/22/18 13:25	10/24/18 14:39	1
2-Methylphenol	ND		9.7	1.8	ug/L		10/22/18 13:25	10/24/18 14:39	1
3 & 4 Methylphenol	ND	*	19	1.0	ug/L		10/22/18 13:25	10/24/18 14:39	1
2-Nitroaniline	ND		9.7	2.1	ug/L		10/22/18 13:25	10/24/18 14:39	1
3-Nitroaniline	ND		9.7	1.8	ug/L		10/22/18 13:25	10/24/18 14:39	1
4-Nitroaniline	ND		9.7	2.4	ug/L		10/22/18 13:25	10/24/18 14:39	1
Nitrobenzene	ND		9.7	0.54	ug/L		10/22/18 13:25	10/24/18 14:39	1
2-Nitrophenol	ND	*	9.7	0.63	ug/L		10/22/18 13:25	10/24/18 14:39	1
4-Nitrophenol	ND		9.7	2.0	ug/L		10/22/18 13:25	10/24/18 14:39	1
N-Nitrosodimethylamine	ND		9.7	3.4	ug/L		10/22/18 13:25	10/24/18 14:39	1

Client Sample ID: P93D-ROX-101518

Date Collected: 10/15/18 09:55
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160656-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.7	3.2	ug/L		10/22/18 13:25	10/24/18 14:39	1
N-Nitrosodiphenylamine	ND		9.7	0.46	ug/L		10/22/18 13:25	10/24/18 14:39	1
Pentachlorophenol	ND		19	1.8	ug/L		10/22/18 13:25	10/24/18 14:39	1
Phenol	ND	*	9.7	2.5	ug/L		10/22/18 13:25	10/24/18 14:39	1
Pyridine	ND	*	9.7	3.1	ug/L		10/22/18 13:25	10/24/18 14:39	1
Quinoline	ND	UJ	9.7	5.8	ug/L		10/22/18 13:25	10/24/18 14:39	1
2,4,5-Trichlorophenol	ND		9.7	3.6	ug/L		10/22/18 13:25	10/24/18 14:39	1
2,4,6-Trichlorophenol	ND		9.7	3.4	ug/L		10/22/18 13:25	10/24/18 14:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*38*		*34 - 120*	*10/22/18 13:25*	*10/24/18 14:39*	*1*
2-Fluorophenol	*25*		*10 - 120*	*10/22/18 13:25*	*10/24/18 14:39*	*1*
Nitrobenzene-d5	*35*		*27 - 120*	*10/22/18 13:25*	*10/24/18 14:39*	*1*
Phenol-d5	*30*		*10 - 120*	*10/22/18 13:25*	*10/24/18 14:39*	*1*
Terphenyl-d14	*40*	X	*53 - 125*	*10/22/18 13:25*	*10/24/18 14:39*	*1*
2,4,6-Tribromophenol	*51*		*15 - 135*	*10/22/18 13:25*	*10/24/18 14:39*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0054	ug/L		10/25/18 11:36	10/26/18 15:30	1
1,2-Dibromoethane	ND		0.020	0.0049	ug/L		10/25/18 11:36	10/26/18 15:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*109*	*p*	*51 - 149*	*10/25/18 11:36*	*10/26/18 15:30*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160656-1
SDG: 60527968

Client Sample ID: P93B-ROX-101518
Date Collected: 10/15/18 10:45
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160656-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	U	50000	20000	ug/L			10/27/18 09:48	2000
Acrolein	ND		40000	20000	ug/L			10/27/18 09:48	2000
Acrylonitrile	ND		20000	5600	ug/L			10/27/18 09:48	2000
Bromobenzene	ND		2000	1100	ug/L			10/27/18 09:48	2000
Bromochloromethane	ND		2000	1000	ug/L			10/27/18 09:48	2000
Bromodichloromethane	ND		2000	1000	ug/L			10/27/18 09:48	2000
Bromoform	ND		10000	1400	ug/L			10/27/18 09:48	2000
Bromomethane	ND		2000	2000	ug/L			10/27/18 09:48	2000
2-Butanone (MEK)	ND		50000	5200	ug/L			10/27/18 09:48	2000
Carbon disulfide	ND		2000	1000	ug/L			10/27/18 09:48	2000
Carbon tetrachloride	ND		2000	1000	ug/L			10/27/18 09:48	2000
Chlorobenzene	ND		2000	1000	ug/L			10/27/18 09:48	2000
Dibromochloromethane	ND		2000	1000	ug/L			10/27/18 09:48	2000
Chloroethane	ND		2000	1500	ug/L			10/27/18 09:48	2000
2-Chloroethyl vinyl ether	ND		10000	4000	ug/L			10/27/18 09:48	2000
Chloroform	ND		2000	1200	ug/L			10/27/18 09:48	2000
1-Chlorohexane	ND		2000	1400	ug/L			10/27/18 09:48	2000
Chloromethane	ND		2000	1700	ug/L			10/27/18 09:48	2000
cis-1,2-Dichloroethene	ND		2000	1000	ug/L			10/27/18 09:48	2000
cis-1,3-Dichloropropene	ND		10000	1000	ug/L			10/27/18 09:48	2000
1,2-Dichlorobenzene	ND		2000	1000	ug/L			10/27/18 09:48	2000
1,3-Dichlorobenzene	ND		2000	1100	ug/L			10/27/18 09:48	2000
1,4-Dichlorobenzene	ND		2000	1300	ug/L			10/27/18 09:48	2000
Dichlorodifluoromethane	ND		2000	1700	ug/L			10/27/18 09:48	2000
1,1-Dichloroethane	ND		2000	1000	ug/L			10/27/18 09:48	2000
1,2-Dichloroethane	ND		2000	1000	ug/L			10/27/18 09:48	2000
1,1-Dichloroethene	ND		2000	1000	ug/L			10/27/18 09:48	2000
1,2-Dichloropropane	ND		2000	1000	ug/L			10/27/18 09:48	2000
1,3-Dichloropropane	ND		2000	1000	ug/L			10/27/18 09:48	2000
2,2-Dichloropropane	ND		2000	1000	ug/L			10/27/18 09:48	2000
1,1-Dichloropropene	ND		2000	1000	ug/L			10/27/18 09:48	2000
Ethylbenzene	ND		2000	1000	ug/L			10/27/18 09:48	2000
Ethyl methacrylate	ND		2000	1200	ug/L			10/27/18 09:48	2000
Hexachlorobutadiene	ND		10000	1800	ug/L			10/27/18 09:48	2000
2-Hexanone	ND		50000	6200	ug/L			10/27/18 09:48	2000
Isopropylbenzene	ND		2000	1100	ug/L			10/27/18 09:48	2000
Methylene bromide	ND		10000	1200	ug/L			10/27/18 09:48	2000
Methylene Chloride	ND		10000	6000	ug/L			10/27/18 09:48	2000
4-Methyl-2-pentanone (MIBK)	ND		50000	3600	ug/L			10/27/18 09:48	2000
Methyl tert-butyl ether	ND		2000	1500	ug/L			10/27/18 09:48	2000
m-Xylene & p-Xylene	ND		10000	3200	ug/L			10/27/18 09:48	2000
Naphthalene	ND		2000	2000	ug/L			10/27/18 09:48	2000
n-Butylbenzene	ND		2000	1500	ug/L			10/27/18 09:48	2000
N-Propylbenzene	ND		2000	1400	ug/L			10/27/18 09:48	2000
o-Chlorotoluene	ND		2000	1100	ug/L			10/27/18 09:48	2000
o-Xylene	ND		10000	1200	ug/L			10/27/18 09:48	2000
p-Chlorotoluene	ND		2000	1100	ug/L			10/27/18 09:48	2000
p-Isopropyltoluene	ND		2000	1400	ug/L			10/27/18 09:48	2000
sec-Butylbenzene	ND		2000	1400	ug/L			10/27/18 09:48	2000

Client Sample ID: P93B-ROX-101518

Date Collected: 10/15/18 10:45
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160656-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		2000	2000	ug/L			10/27/18 09:48	2000
tert-Butylbenzene	ND		2000	1300	ug/L			10/27/18 09:48	2000
1,1,1,2-Tetrachloroethane	ND		2000	1000	ug/L			10/27/18 09:48	2000
1,1,2,2-Tetrachloroethane	ND		2000	1000	ug/L			10/27/18 09:48	2000
Tetrachloroethene	ND		2000	1200	ug/L			10/27/18 09:48	2000
Toluene	ND		2000	1400	ug/L			10/27/18 09:48	2000
trans-1,2-Dichloroethene	ND		2000	1000	ug/L			10/27/18 09:48	2000
trans-1,3-Dichloropropene	ND		10000	1000	ug/L			10/27/18 09:48	2000
1,2,3-Trichlorobenzene	ND		2000	1400	ug/L			10/27/18 09:48	2000
1,2,4-Trichlorobenzene	ND		2000	1600	ug/L			10/27/18 09:48	2000
1,1,1-Trichloroethane	ND		2000	1000	ug/L			10/27/18 09:48	2000
1,1,2-Trichloroethane	ND		10000	1000	ug/L			10/27/18 09:48	2000
Trichloroethene	ND		2000	1000	ug/L			10/27/18 09:48	2000
Trichlorofluoromethane	ND		2000	1000	ug/L			10/27/18 09:48	2000
1,2,3-Trichloropropane	ND		10000	1700	ug/L			10/27/18 09:48	2000
1,2,4-Trimethylbenzene	ND		2000	1600	ug/L			10/27/18 09:48	2000
1,3,5-Trimethylbenzene	ND		2000	1100	ug/L			10/27/18 09:48	2000
Vinyl acetate	ND		50000	4000	ug/L			10/27/18 09:48	2000
Vinyl chloride	ND		2000	1000	ug/L			10/27/18 09:48	2000
Xylenes, Total	ND		20000	3200	ug/L			10/27/18 09:48	2000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*78 - 118*		*10/27/18 09:48*	*2000*
Dibromofluoromethane	*96*		*81 - 121*		*10/27/18 09:48*	*2000*
Toluene-d8 (Surr)	*97*		*80 - 120*		*10/27/18 09:48*	*2000*

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1100000		5000	1900	ug/L			10/27/18 16:36	5000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*78 - 118*		*10/27/18 16:36*	*5000*
Dibromofluoromethane	*93*		*81 - 121*		*10/27/18 16:36*	*5000*
Toluene-d8 (Surr)	*98*		*80 - 120*		*10/27/18 16:36*	*5000*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/24/18 23:04	1
Acenaphthylene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/24/18 23:04	1
Anthracene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/24/18 23:04	1
Benzo[a]anthracene	ND		0.19	0.039	ug/L		10/22/18 13:25	10/24/18 23:04	1
Benzo[a]pyrene	ND		0.19	0.039	ug/L		10/22/18 13:25	10/24/18 23:04	1
Benzo[b]fluoranthene	ND		0.19	0.039	ug/L		10/22/18 13:25	10/24/18 23:04	1
Benzo[g,h,i]perylene	ND		0.19	0.039	ug/L		10/22/18 13:25	10/24/18 23:04	1
Benzo[k]fluoranthene	ND		0.19	0.039	ug/L		10/22/18 13:25	10/24/18 23:04	1
Chrysene	ND		0.19	0.039	ug/L		10/22/18 13:25	10/24/18 23:04	1
Dibenz(a,h)anthracene	ND		0.19	0.039	ug/L		10/22/18 13:25	10/24/18 23:04	1
Fluoranthene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/24/18 23:04	1
Fluorene	ND		0.19	0.020	ug/L		10/22/18 13:25	10/24/18 23:04	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.039	ug/L		10/22/18 13:25	10/24/18 23:04	1

Client Sample ID: P93B-ROX-101518

Date Collected: 10/15/18 10:45
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160656-4
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/24/18 23:04	1
Pyrene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/24/18 23:04	1
1-Methylnaphthalene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/24/18 23:04	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/24/18 23:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*58*		*33 - 138*	*10/22/18 13:25*	*10/24/18 23:04*	*1*
2-Fluorobiphenyl	*46*		*15 - 122*	*10/22/18 13:25*	*10/24/18 23:04*	*1*
Nitrobenzene-d5	*29*		*19 - 130*	*10/22/18 13:25*	*10/24/18 23:04*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.7	3.7	ug/L		10/22/18 13:25	10/24/18 15:01	1
Benzenethiol	ND	* UJ	9.7	1.7	ug/L		10/22/18 13:25	10/24/18 15:01	1
Benzoic acid	ND		29	7.1	ug/L		10/22/18 13:25	10/24/18 15:01	1
Benzyl alcohol	ND	UJ	9.7	1.9	ug/L		10/22/18 13:25	10/24/18 15:01	1
Bis(2-chloroethoxy)methane	ND		9.7	0.67	ug/L		10/22/18 13:25	10/24/18 15:01	1
Bis(2-chloroethyl)ether	ND	UJ	9.7	0.72	ug/L		10/22/18 13:25	10/24/18 15:01	1
bis (2-chloroisopropyl) ether	ND		9.7	0.79	ug/L		10/22/18 13:25	10/24/18 15:01	1
Bis(2-ethylhexyl) phthalate	ND		9.7	4.9	ug/L		10/22/18 13:25	10/24/18 15:01	1
4-Bromophenyl phenyl ether	ND		9.7	0.31	ug/L		10/22/18 13:25	10/24/18 15:01	1
Butyl benzyl phthalate	ND		9.7	0.67	ug/L		10/22/18 13:25	10/24/18 15:01	1
4-Chloroaniline	ND		9.7	3.3	ug/L		10/22/18 13:25	10/24/18 15:01	1
4-Chloro-3-methylphenol	ND		9.7	3.7	ug/L		10/22/18 13:25	10/24/18 15:01	1
2-Chloronaphthalene	ND		9.7	0.51	ug/L		10/22/18 13:25	10/24/18 15:01	1
2-Chlorophenol	ND		9.7	2.1	ug/L		10/22/18 13:25	10/24/18 15:01	1
4-Chlorophenyl phenyl ether	ND		9.7	1.9	ug/L		10/22/18 13:25	10/24/18 15:01	1
Dibenz[a,h]acridine	ND		9.7	2.9	ug/L		10/22/18 13:25	10/24/18 15:01	1
Dibenzofuran	ND		9.7	0.51	ug/L		10/22/18 13:25	10/24/18 15:01	1
3,3'-Dichlorobenzidine	ND		9.7	2.5	ug/L		10/22/18 13:25	10/24/18 15:01	1
2,4-Dichlorophenol	ND		9.7	2.9	ug/L		10/22/18 13:25	10/24/18 15:01	1
Diethyl phthalate	ND		9.7	0.68	ug/L		10/22/18 13:25	10/24/18 15:01	1
2,4-Dimethylphenol	ND		9.7	3.4	ug/L		10/22/18 13:25	10/24/18 15:01	1
Dimethyl phthalate	ND		9.7	0.58	ug/L		10/22/18 13:25	10/24/18 15:01	1
Di-n-butyl phthalate	ND		9.7	2.6	ug/L		10/22/18 13:25	10/24/18 15:01	1
4,6-Dinitro-ortho-cresol	ND		9.7	1.9	ug/L		10/22/18 13:25	10/24/18 15:01	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		10/22/18 13:25	10/24/18 15:01	1
2,4-Dinitrotoluene	ND		9.7	1.8	ug/L		10/22/18 13:25	10/24/18 15:01	1
2,6-Dinitrotoluene	ND		9.7	1.8	ug/L		10/22/18 13:25	10/24/18 15:01	1
Di-n-octyl phthalate	ND		9.7	0.43	ug/L		10/22/18 13:25	10/24/18 15:01	1
1,4-Dioxane	ND		9.7	0.97	ug/L		10/22/18 13:25	10/24/18 15:01	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.7	0.97	ug/L		10/22/18 13:25	10/24/18 15:01	1
Hexachlorobenzene	ND		9.7	0.24	ug/L		10/22/18 13:25	10/24/18 15:01	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		10/22/18 13:25	10/24/18 15:01	1
Hexachloroethane	ND		9.7	4.1	ug/L		10/22/18 13:25	10/24/18 15:01	1
Indene	ND		9.7	0.97	ug/L		10/22/18 13:25	10/24/18 15:01	1
Isophorone	ND		9.7	0.55	ug/L		10/22/18 13:25	10/24/18 15:01	1
2-Methylphenol	2.1	J	9.7	1.8	ug/L		10/22/18 13:25	10/24/18 15:01	1
3 & 4 Methylphenol	5.8	J	19	1.0	ug/L		10/22/18 13:25	10/24/18 15:01	1

Client Sample ID: P93B-ROX-101518

Date Collected: 10/15/18 10:45
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160656-4

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	ND		9.7	2.1	ug/L		10/22/18 13:25	10/24/18 15:01	1
3-Nitroaniline	ND		9.7	1.8	ug/L		10/22/18 13:25	10/24/18 15:01	1
4-Nitroaniline	ND		9.7	2.4	ug/L		10/22/18 13:25	10/24/18 15:01	1
Nitrobenzene	ND		9.7	0.54	ug/L		10/22/18 13:25	10/24/18 15:01	1
2-Nitrophenol	ND		9.7	0.63	ug/L		10/22/18 13:25	10/24/18 15:01	1
4-Nitrophenol	ND		9.7	2.0	ug/L		10/22/18 13:25	10/24/18 15:01	1
N-Nitrosodimethylamine	ND		9.7	3.4	ug/L		10/22/18 13:25	10/24/18 15:01	1
N-Nitrosodi-n-propylamine	ND		9.7	3.2	ug/L		10/22/18 13:25	10/24/18 15:01	1
N-Nitrosodiphenylamine	ND		9.7	0.46	ug/L		10/22/18 13:25	10/24/18 15:01	1
Pentachlorophenol	ND		19	1.8	ug/L		10/22/18 13:25	10/24/18 15:01	1
Pyridine	ND		9.7	3.1	ug/L		10/22/18 13:25	10/24/18 15:01	1
Quinoline	ND	U5	9.7	5.8	ug/L		10/22/18 13:25	10/24/18 15:01	1
2,4,5-Trichlorophenol	ND		9.7	3.6	ug/L		10/22/18 13:25	10/24/18 15:01	1
2,4,6-Trichlorophenol	ND		9.7	3.4	ug/L		10/22/18 13:25	10/24/18 15:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*34*		*10 - 120*	*10/22/18 13:25*	*10/24/18 15:01*	*1*
Phenol-d5	*35*		*10 - 120*	*10/22/18 13:25*	*10/24/18 15:01*	*1*
2,4,6-Tribromophenol	*55*		*15 - 135*	*10/22/18 13:25*	*10/24/18 15:01*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	220	*	49	13	ug/L		10/22/18 13:25	10/25/18 21:09	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*46*		*34 - 120*	*10/22/18 13:25*	*10/25/18 21:09*	*5*
Nitrobenzene-d5	*39*		*27 - 120*	*10/22/18 13:25*	*10/25/18 21:09*	*5*
Terphenyl-d14	*45*	*X*	*53 - 125*	*10/22/18 13:25*	*10/25/18 21:09*	*5*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.029	0.0054	ug/L		10/25/18 11:36	10/26/18 14:57	1
1,2-Dibromoethane	ND		0.020	0.0049	ug/L		10/25/18 11:36	10/26/18 14:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*139*	*p*	*51 - 149*	*10/25/18 11:36*	*10/26/18 14:57*	*1*

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160656-1
SDG: 60527968

Client Sample ID: P93B-ROX-101518-DUP

Date Collected: 10/15/18 10:45
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160656-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	U	50000	20000	ug/L			10/27/18 10:13	2000
Acrolein	ND		40000	20000	ug/L			10/27/18 10:13	2000
Acrylonitrile	ND		20000	5600	ug/L			10/27/18 10:13	2000
Bromobenzene	ND		2000	1100	ug/L			10/27/18 10:13	2000
Bromochloromethane	ND		2000	1000	ug/L			10/27/18 10:13	2000
Bromodichloromethane	ND		2000	1000	ug/L			10/27/18 10:13	2000
Bromoform	ND		10000	1400	ug/L			10/27/18 10:13	2000
Bromomethane	ND		2000	2000	ug/L			10/27/18 10:13	2000
2-Butanone (MEK)	ND		50000	5200	ug/L			10/27/18 10:13	2000
Carbon disulfide	ND		2000	1000	ug/L			10/27/18 10:13	2000
Carbon tetrachloride	ND		2000	1000	ug/L			10/27/18 10:13	2000
Chlorobenzene	ND		2000	1000	ug/L			10/27/18 10:13	2000
Dibromochloromethane	ND		2000	1000	ug/L			10/27/18 10:13	2000
Chloroethane	ND		2000	1500	ug/L			10/27/18 10:13	2000
2-Chloroethyl vinyl ether	ND		10000	4000	ug/L			10/27/18 10:13	2000
Chloroform	ND		2000	1200	ug/L			10/27/18 10:13	2000
1-Chlorohexane	ND		2000	1400	ug/L			10/27/18 10:13	2000
Chloromethane	ND		2000	1700	ug/L			10/27/18 10:13	2000
cis-1,2-Dichloroethene	ND		2000	1000	ug/L			10/27/18 10:13	2000
cis-1,3-Dichloropropene	ND		10000	1000	ug/L			10/27/18 10:13	2000
1,2-Dichlorobenzene	ND		2000	1000	ug/L			10/27/18 10:13	2000
1,3-Dichlorobenzene	ND		2000	1100	ug/L			10/27/18 10:13	2000
1,4-Dichlorobenzene	ND		2000	1300	ug/L			10/27/18 10:13	2000
Dichlorodifluoromethane	ND		2000	1700	ug/L			10/27/18 10:13	2000
1,1-Dichloroethane	ND		2000	1000	ug/L			10/27/18 10:13	2000
1,2-Dichloroethane	ND		2000	1000	ug/L			10/27/18 10:13	2000
1,1-Dichloroethene	ND		2000	1000	ug/L			10/27/18 10:13	2000
1,2-Dichloropropane	ND		2000	1000	ug/L			10/27/18 10:13	2000
1,3-Dichloropropane	ND		2000	1000	ug/L			10/27/18 10:13	2000
2,2-Dichloropropane	ND		2000	1000	ug/L			10/27/18 10:13	2000
1,1-Dichloropropene	ND		2000	1000	ug/L			10/27/18 10:13	2000
Ethylbenzene	ND		2000	1000	ug/L			10/27/18 10:13	2000
Ethyl methacrylate	ND		2000	1200	ug/L			10/27/18 10:13	2000
Hexachlorobutadiene	ND		10000	1800	ug/L			10/27/18 10:13	2000
2-Hexanone	ND		50000	6200	ug/L			10/27/18 10:13	2000
Isopropylbenzene	ND		2000	1100	ug/L			10/27/18 10:13	2000
Methylene bromide	ND		10000	1200	ug/L			10/27/18 10:13	2000
Methylene Chloride	ND		10000	6000	ug/L			10/27/18 10:13	2000
4-Methyl-2-pentanone (MIBK)	ND		50000	3600	ug/L			10/27/18 10:13	2000
Methyl tert-butyl ether	ND		2000	1500	ug/L			10/27/18 10:13	2000
m-Xylene & p-Xylene	ND		10000	3200	ug/L			10/27/18 10:13	2000
Naphthalene	ND		2000	2000	ug/L			10/27/18 10:13	2000
n-Butylbenzene	ND		2000	1500	ug/L			10/27/18 10:13	2000
N-Propylbenzene	ND		2000	1400	ug/L			10/27/18 10:13	2000
o-Chlorotoluene	ND		2000	1100	ug/L			10/27/18 10:13	2000
o-Xylene	ND		10000	1200	ug/L			10/27/18 10:13	2000
p-Chlorotoluene	ND		2000	1100	ug/L			10/27/18 10:13	2000
p-Isopropyltoluene	ND		2000	1400	ug/L			10/27/18 10:13	2000
sec-Butylbenzene	ND		2000	1400	ug/L			10/27/18 10:13	2000

Client Sample ID: P93B-ROX-101518-DUP
Date Collected: 10/15/18 10:45
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160656-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND	U	2000	2000	ug/L			10/27/18 10:13	2000
tert-Butylbenzene	ND		2000	1300	ug/L			10/27/18 10:13	2000
1,1,1,2-Tetrachloroethane	ND		2000	1000	ug/L			10/27/18 10:13	2000
1,1,2,2-Tetrachloroethane	ND		2000	1000	ug/L			10/27/18 10:13	2000
Tetrachloroethene	ND		2000	1200	ug/L			10/27/18 10:13	2000
Toluene	ND		2000	1400	ug/L			10/27/18 10:13	2000
trans-1,2-Dichloroethene	ND		2000	1000	ug/L			10/27/18 10:13	2000
trans-1,3-Dichloropropene	ND		10000	1000	ug/L			10/27/18 10:13	2000
1,2,3-Trichlorobenzene	ND		2000	1400	ug/L			10/27/18 10:13	2000
1,2,4-Trichlorobenzene	ND		2000	1600	ug/L			10/27/18 10:13	2000
1,1,1-Trichloroethane	ND		2000	1000	ug/L			10/27/18 10:13	2000
1,1,2-Trichloroethane	ND		10000	1000	ug/L			10/27/18 10:13	2000
Trichloroethene	ND		2000	1000	ug/L			10/27/18 10:13	2000
Trichlorofluoromethane	ND		2000	1000	ug/L			10/27/18 10:13	2000
1,2,3-Trichloropropane	ND		10000	1700	ug/L			10/27/18 10:13	2000
1,2,4-Trimethylbenzene	ND		2000	1600	ug/L			10/27/18 10:13	2000
1,3,5-Trimethylbenzene	ND		2000	1100	ug/L			10/27/18 10:13	2000
Vinyl acetate	ND		50000	4000	ug/L			10/27/18 10:13	2000
Vinyl chloride	ND		2000	1000	ug/L			10/27/18 10:13	2000
Xylenes, Total	ND		20000	3200	ug/L			10/27/18 10:13	2000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*92*		*78 - 118*		*10/27/18 10:13*	*2000*
Dibromofluoromethane	*97*		*81 - 121*		*10/27/18 10:13*	*2000*
Toluene-d8 (Surr)	*97*		*80 - 120*		*10/27/18 10:13*	*2000*

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1200000		5000	1900	ug/L			10/27/18 17:02	5000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*78 - 118*		*10/27/18 17:02*	*5000*
Dibromofluoromethane	*95*		*81 - 121*		*10/27/18 17:02*	*5000*
Toluene-d8 (Surr)	*98*		*80 - 120*		*10/27/18 17:02*	*5000*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/24/18 23:22	1
Acenaphthylene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/24/18 23:22	1
Anthracene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/24/18 23:22	1
Benzo[a]anthracene	ND		0.19	0.038	ug/L		10/22/18 13:25	10/24/18 23:22	1
Benzo[a]pyrene	ND		0.19	0.038	ug/L		10/22/18 13:25	10/24/18 23:22	1
Benzo[b]fluoranthene	ND		0.19	0.038	ug/L		10/22/18 13:25	10/24/18 23:22	1
Benzo[g,h,i]perylene	ND		0.19	0.038	ug/L		10/22/18 13:25	10/24/18 23:22	1
Benzo[k]fluoranthene	ND		0.19	0.038	ug/L		10/22/18 13:25	10/24/18 23:22	1
Chrysene	ND		0.19	0.038	ug/L		10/22/18 13:25	10/24/18 23:22	1
Dibenz(a,h)anthracene	ND		0.19	0.038	ug/L		10/22/18 13:25	10/24/18 23:22	1
Fluoranthene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/24/18 23:22	1
Fluorene	ND		0.19	0.020	ug/L		10/22/18 13:25	10/24/18 23:22	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.038	ug/L		10/22/18 13:25	10/24/18 23:22	1

Client Sample ID: P93B-ROX-101518-DUP

Date Collected: 10/15/18 10:45
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160656-5
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/24/18 23:22	1
Pyrene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/24/18 23:22	1
1-Methylnaphthalene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/24/18 23:22	1
2-Methylnaphthalene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/24/18 23:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*51*		*33 - 138*	*10/22/18 13:25*	*10/24/18 23:22*	*1*
2-Fluorobiphenyl	*47*		*15 - 122*	*10/22/18 13:25*	*10/24/18 23:22*	*1*
Nitrobenzene-d5	*51*		*19 - 130*	*10/22/18 13:25*	*10/24/18 23:22*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.6	3.7	ug/L		10/22/18 13:25	10/24/18 15:23	1
Benzenethiol	ND	* UJ	9.6	1.6	ug/L		10/22/18 13:25	10/24/18 15:23	1
Benzoic acid	ND		29	7.0	ug/L		10/22/18 13:25	10/24/18 15:23	1
Benzyl alcohol	ND	UJ	9.6	1.9	ug/L		10/22/18 13:25	10/24/18 15:23	1
Bis(2-chloroethoxy)methane	ND		9.6	0.66	ug/L		10/22/18 13:25	10/24/18 15:23	1
Bis(2-chloroethyl)ether	ND	UJ	9.6	0.71	ug/L		10/22/18 13:25	10/24/18 15:23	1
bis (2-chloroisopropyl) ether	ND		9.6	0.78	ug/L		10/22/18 13:25	10/24/18 15:23	1
Bis(2-ethylhexyl) phthalate	ND		9.6	4.8	ug/L		10/22/18 13:25	10/24/18 15:23	1
4-Bromophenyl phenyl ether	ND		9.6	0.31	ug/L		10/22/18 13:25	10/24/18 15:23	1
Butyl benzyl phthalate	ND		9.6	0.66	ug/L		10/22/18 13:25	10/24/18 15:23	1
4-Chloroaniline	ND		9.6	3.3	ug/L		10/22/18 13:25	10/24/18 15:23	1
4-Chloro-3-methylphenol	ND		9.6	3.7	ug/L		10/22/18 13:25	10/24/18 15:23	1
2-Chloronaphthalene	ND		9.6	0.50	ug/L		10/22/18 13:25	10/24/18 15:23	1
2-Chlorophenol	ND		9.6	2.1	ug/L		10/22/18 13:25	10/24/18 15:23	1
4-Chlorophenyl phenyl ether	ND		9.6	1.9	ug/L		10/22/18 13:25	10/24/18 15:23	1
Dibenz[a,h]acridine	ND		9.6	2.9	ug/L		10/22/18 13:25	10/24/18 15:23	1
Dibenzofuran	ND		9.6	0.50	ug/L		10/22/18 13:25	10/24/18 15:23	1
3,3'-Dichlorobenzidine	ND		9.6	2.5	ug/L		10/22/18 13:25	10/24/18 15:23	1
2,4-Dichlorophenol	ND		9.6	2.9	ug/L		10/22/18 13:25	10/24/18 15:23	1
Diethyl phthalate	ND		9.6	0.67	ug/L		10/22/18 13:25	10/24/18 15:23	1
2,4-Dimethylphenol	ND		9.6	3.4	ug/L		10/22/18 13:25	10/24/18 15:23	1
Dimethyl phthalate	ND		9.6	0.58	ug/L		10/22/18 13:25	10/24/18 15:23	1
Di-n-butyl phthalate	ND		9.6	2.6	ug/L		10/22/18 13:25	10/24/18 15:23	1
4,6-Dinitro-ortho-cresol	ND		9.6	1.9	ug/L		10/22/18 13:25	10/24/18 15:23	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		10/22/18 13:25	10/24/18 15:23	1
2,4-Dinitrotoluene	ND		9.6	1.8	ug/L		10/22/18 13:25	10/24/18 15:23	1
2,6-Dinitrotoluene	ND		9.6	1.8	ug/L		10/22/18 13:25	10/24/18 15:23	1
Di-n-octyl phthalate	ND		9.6	0.42	ug/L		10/22/18 13:25	10/24/18 15:23	1
1,4-Dioxane	ND		9.6	0.96	ug/L		10/22/18 13:25	10/24/18 15:23	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.6	0.96	ug/L		10/22/18 13:25	10/24/18 15:23	1
Hexachlorobenzene	ND		9.6	0.24	ug/L		10/22/18 13:25	10/24/18 15:23	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		10/22/18 13:25	10/24/18 15:23	1
Hexachloroethane	ND		9.6	4.0	ug/L		10/22/18 13:25	10/24/18 15:23	1
Indene	ND		9.6	0.96	ug/L		10/22/18 13:25	10/24/18 15:23	1
Isophorone	ND		9.6	0.55	ug/L		10/22/18 13:25	10/24/18 15:23	1
2-Methylphenol	2.3	J	9.6	1.7	ug/L		10/22/18 13:25	10/24/18 15:23	1
3 & 4 Methylphenol	6.1	J	19	1.0	ug/L		10/22/18 13:25	10/24/18 15:23	1

Client Sample ID: P93B-ROX-101518-DUP

Date Collected: 10/15/18 10:45
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160656-5
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	ND		9.6	2.1	ug/L		10/22/18 13:25	10/24/18 15:23	1
3-Nitroaniline	ND		9.6	1.7	ug/L		10/22/18 13:25	10/24/18 15:23	1
4-Nitroaniline	ND		9.6	2.4	ug/L		10/22/18 13:25	10/24/18 15:23	1
Nitrobenzene	ND		9.6	0.53	ug/L		10/22/18 13:25	10/24/18 15:23	1
2-Nitrophenol	ND		9.6	0.63	ug/L		10/22/18 13:25	10/24/18 15:23	1
4-Nitrophenol	ND		9.6	2.0	ug/L		10/22/18 13:25	10/24/18 15:23	1
N-Nitrosodimethylamine	ND		9.6	3.4	ug/L		10/22/18 13:25	10/24/18 15:23	1
N-Nitrosodi-n-propylamine	ND		9.6	3.2	ug/L		10/22/18 13:25	10/24/18 15:23	1
N-Nitrosodiphenylamine	ND		9.6	0.45	ug/L		10/22/18 13:25	10/24/18 15:23	1
Pentachlorophenol	ND		19	1.7	ug/L		10/22/18 13:25	10/24/18 15:23	1
Pyridine	ND		9.6	3.1	ug/L		10/22/18 13:25	10/24/18 15:23	1
Quinoline	ND	U	9.6	5.8	ug/L		10/22/18 13:25	10/24/18 15:23	1
2,4,5-Trichlorophenol	ND		9.6	3.6	ug/L		10/22/18 13:25	10/24/18 15:23	1
2,4,6-Trichlorophenol	ND		9.6	3.4	ug/L		10/22/18 13:25	10/24/18 15:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*27*		*10 - 120*	*10/22/18 13:25*	*10/24/18 15:23*	*1*
Nitrobenzene-d5	*28*		*27 - 120*	*10/22/18 13:25*	*10/24/18 15:23*	*1*
Phenol-d5	*35*		*10 - 120*	*10/22/18 13:25*	*10/24/18 15:23*	*1*
Terphenyl-d14	*26*	*X*	*53 - 125*	*10/22/18 13:25*	*10/24/18 15:23*	*1*
2,4,6-Tribromophenol	*49*		*15 - 135*	*10/22/18 13:25*	*10/24/18 15:23*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	250	*	48	13	ug/L		10/22/18 13:25	10/25/18 21:35	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*50*		*34 - 120*	*10/22/18 13:25*	*10/25/18 21:35*	*5*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0055	ug/L		10/25/18 11:36	10/26/18 13:52	1
1,2-Dibromoethane	ND		0.020	0.0050	ug/L		10/25/18 11:36	10/26/18 13:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*144*	*p*	*51 - 149*	*10/25/18 11:36*	*10/26/18 13:52*	*1*

Client Sample ID: P93C-ROX-101518

Date Collected: 10/15/18 12:05
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160656-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		250	100	ug/L			10/27/18 09:24	10
Acrolein	ND		200	100	ug/L			10/27/18 09:24	10
Acrylonitrile	ND		100	28	ug/L			10/27/18 09:24	10
Benzene	1900		10	3.8	ug/L			10/27/18 09:24	10
Bromobenzene	ND		10	5.4	ug/L			10/27/18 09:24	10
Bromochloromethane	ND		10	5.2	ug/L			10/27/18 09:24	10
Bromodichloromethane	ND		10	5.0	ug/L			10/27/18 09:24	10
Bromoform	ND		50	7.1	ug/L			10/27/18 09:24	10
Bromomethane	ND		10	9.8	ug/L			10/27/18 09:24	10
2-Butanone (MEK)	ND		250	26	ug/L			10/27/18 09:24	10
Carbon disulfide	ND		10	5.0	ug/L			10/27/18 09:24	10
Carbon tetrachloride	ND		10	5.0	ug/L			10/27/18 09:24	10
Chlorobenzene	ND		10	5.0	ug/L			10/27/18 09:24	10
Dibromochloromethane	ND		10	5.0	ug/L			10/27/18 09:24	10
Chloroethane	ND		10	7.6	ug/L			10/27/18 09:24	10
2-Chloroethyl vinyl ether	ND		50	20	ug/L			10/27/18 09:24	10
Chloroform	ND		10	6.0	ug/L			10/27/18 09:24	10
1-Chlorohexane	ND		10	7.0	ug/L			10/27/18 09:24	10
Chloromethane	ND		10	8.3	ug/L			10/27/18 09:24	10
cis-1,2-Dichloroethene	ND		10	5.0	ug/L			10/27/18 09:24	10
cis-1,3-Dichloropropene	ND		50	5.0	ug/L			10/27/18 09:24	10
1,2-Dichlorobenzene	ND		10	5.0	ug/L			10/27/18 09:24	10
1,3-Dichlorobenzene	ND		10	5.4	ug/L			10/27/18 09:24	10
1,4-Dichlorobenzene	ND		10	6.4	ug/L			10/27/18 09:24	10
Dichlorodifluoromethane	ND		10	8.5	ug/L			10/27/18 09:24	10
1,1-Dichloroethane	ND		10	5.0	ug/L			10/27/18 09:24	10
1,2-Dichloroethane	ND		10	5.0	ug/L			10/27/18 09:24	10
1,1-Dichloroethene	ND		10	5.0	ug/L			10/27/18 09:24	10
1,2-Dichloropropane	ND		10	5.0	ug/L			10/27/18 09:24	10
1,3-Dichloropropane	ND		10	5.0	ug/L			10/27/18 09:24	10
2,2-Dichloropropane	ND		10	5.0	ug/L			10/27/18 09:24	10
1,1-Dichloropropene	ND		10	5.0	ug/L			10/27/18 09:24	10
Ethylbenzene	ND		10	5.0	ug/L			10/27/18 09:24	10
Ethyl methacrylate	ND		10	6.0	ug/L			10/27/18 09:24	10
Hexachlorobutadiene	ND		50	9.0	ug/L			10/27/18 09:24	10
2-Hexanone	ND		250	31	ug/L			10/27/18 09:24	10
Isopropylbenzene	ND		10	5.3	ug/L			10/27/18 09:24	10
Methylene bromide	ND		50	5.9	ug/L			10/27/18 09:24	10
Methylene Chloride	ND		50	30	ug/L			10/27/18 09:24	10
4-Methyl-2-pentanone (MIBK)	ND		250	18	ug/L			10/27/18 09:24	10
Methyl tert-butyl ether	8.6	J	10	7.4	ug/L			10/27/18 09:24	10
m-Xylene & p-Xylene	ND		50	16	ug/L			10/27/18 09:24	10
Naphthalene	ND		10	10	ug/L			10/27/18 09:24	10
n-Butylbenzene	ND		10	7.6	ug/L			10/27/18 09:24	10
N-Propylbenzene	ND		10	6.9	ug/L			10/27/18 09:24	10
o-Chlorotoluene	ND		10	5.7	ug/L			10/27/18 09:24	10
o-Xylene	ND		50	6.0	ug/L			10/27/18 09:24	10
p-Chlorotoluene	ND		10	5.6	ug/L			10/27/18 09:24	10
p-Isopropyltoluene	ND		10	7.1	ug/L			10/27/18 09:24	10

Client Sample ID: P93C-ROX-101518

Date Collected: 10/15/18 12:05
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160656-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		10	7.0	ug/L			10/27/18 09:24	10
Styrene	ND		10	10	ug/L			10/27/18 09:24	10
tert-Butylbenzene	ND		10	6.3	ug/L			10/27/18 09:24	10
1,1,1,2-Tetrachloroethane	ND		10	5.2	ug/L			10/27/18 09:24	10
1,1,2,2-Tetrachloroethane	ND		10	5.0	ug/L			10/27/18 09:24	10
Tetrachloroethene	ND		10	5.8	ug/L			10/27/18 09:24	10
Toluene	ND		10	7.0	ug/L			10/27/18 09:24	10
trans-1,2-Dichloroethene	ND		10	5.0	ug/L			10/27/18 09:24	10
trans-1,3-Dichloropropene	ND		50	5.0	ug/L			10/27/18 09:24	10
1,2,3-Trichlorobenzene	ND		10	7.0	ug/L			10/27/18 09:24	10
1,2,4-Trichlorobenzene	ND		10	8.2	ug/L			10/27/18 09:24	10
1,1,1-Trichloroethane	ND		10	5.0	ug/L			10/27/18 09:24	10
1,1,2-Trichloroethane	ND		50	5.0	ug/L			10/27/18 09:24	10
Trichloroethene	ND		10	5.0	ug/L			10/27/18 09:24	10
Trichlorofluoromethane	ND		10	5.2	ug/L			10/27/18 09:24	10
1,2,3-Trichloropropane	ND		50	8.4	ug/L			10/27/18 09:24	10
1,2,4-Trimethylbenzene	ND		10	8.2	ug/L			10/27/18 09:24	10
1,3,5-Trimethylbenzene	ND		10	5.6	ug/L			10/27/18 09:24	10
Vinyl acetate	ND		250	20	ug/L			10/27/18 09:24	10
Vinyl chloride	ND		10	5.0	ug/L			10/27/18 09:24	10
Xylenes, Total	ND		100	16	ug/L			10/27/18 09:24	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*92*		*78 - 118*		*10/27/18 09:24*	*10*
Dibromofluoromethane	*95*		*81 - 121*		*10/27/18 09:24*	*10*
Toluene-d8 (Surr)	*98*		*80 - 120*		*10/27/18 09:24*	*10*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 23:39	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 23:39	1
Anthracene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 23:39	1
Benzo[a]anthracene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/24/18 23:39	1
Benzo[a]pyrene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/24/18 23:39	1
Benzo[b]fluoranthene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/24/18 23:39	1
Benzo[g,h,i]perylene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/24/18 23:39	1
Benzo[k]fluoranthene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/24/18 23:39	1
Chrysene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/24/18 23:39	1
Dibenz(a,h)anthracene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/24/18 23:39	1
Fluoranthene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 23:39	1
Fluorene	ND		0.20	0.021	ug/L		10/22/18 13:25	10/24/18 23:39	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/24/18 23:39	1
Phenanthrene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 23:39	1
Pyrene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 23:39	1
1-Methylnaphthalene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 23:39	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 23:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*81*		*33 - 138*	*10/22/18 13:25*	*10/24/18 23:39*	*1*
2-Fluorobiphenyl	*65*		*15 - 122*	*10/22/18 13:25*	*10/24/18 23:39*	*1*

Client Sample ID: P93C-ROX-101518

Date Collected: 10/15/18 12:05
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160656-6

Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	76		19 - 130	10/22/18 13:25	10/24/18 23:39	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.8	3.7	ug/L		10/22/18 13:25	10/24/18 15:44	1
Benzenethiol	ND	* UJ	9.8	1.7	ug/L		10/22/18 13:25	10/24/18 15:44	1
Benzoic acid	ND		29	7.2	ug/L		10/22/18 13:25	10/24/18 15:44	1
Benzyl alcohol	ND	UJ	9.8	2.0	ug/L		10/22/18 13:25	10/24/18 15:44	1
Bis(2-chloroethoxy)methane	ND		9.8	0.68	ug/L		10/22/18 13:25	10/24/18 15:44	1
Bis(2-chloroethyl)ether	ND	UJ	9.8	0.72	ug/L		10/22/18 13:25	10/24/18 15:44	1
bis (2-chloroisopropyl) ether	ND		9.8	0.79	ug/L		10/22/18 13:25	10/24/18 15:44	1
Bis(2-ethylhexyl) phthalate	ND		9.8	4.9	ug/L		10/22/18 13:25	10/24/18 15:44	1
4-Bromophenyl phenyl ether	ND		9.8	0.31	ug/L		10/22/18 13:25	10/24/18 15:44	1
Butyl benzyl phthalate	ND		9.8	0.68	ug/L		10/22/18 13:25	10/24/18 15:44	1
4-Chloroaniline	ND		9.8	3.3	ug/L		10/22/18 13:25	10/24/18 15:44	1
4-Chloro-3-methylphenol	ND		9.8	3.7	ug/L		10/22/18 13:25	10/24/18 15:44	1
2-Chloronaphthalene	ND		9.8	0.51	ug/L		10/22/18 13:25	10/24/18 15:44	1
2-Chlorophenol	ND		9.8	2.2	ug/L		10/22/18 13:25	10/24/18 15:44	1
4-Chlorophenyl phenyl ether	ND		9.8	2.0	ug/L		10/22/18 13:25	10/24/18 15:44	1
Dibenz[a,h]acridine	ND		9.8	2.9	ug/L		10/22/18 13:25	10/24/18 15:44	1
Dibenzofuran	ND		9.8	0.51	ug/L		10/22/18 13:25	10/24/18 15:44	1
3,3'-Dichlorobenzidine	ND		9.8	2.5	ug/L		10/22/18 13:25	10/24/18 15:44	1
2,4-Dichlorophenol	ND		9.8	2.9	ug/L		10/22/18 13:25	10/24/18 15:44	1
Diethyl phthalate	ND		9.8	0.69	ug/L		10/22/18 13:25	10/24/18 15:44	1
2,4-Dimethylphenol	ND		9.8	3.4	ug/L		10/22/18 13:25	10/24/18 15:44	1
Dimethyl phthalate	ND		9.8	0.59	ug/L		10/22/18 13:25	10/24/18 15:44	1
Di-n-butyl phthalate	ND		9.8	2.6	ug/L		10/22/18 13:25	10/24/18 15:44	1
4,6-Dinitro-ortho-cresol	ND		9.8	2.0	ug/L		10/22/18 13:25	10/24/18 15:44	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		10/22/18 13:25	10/24/18 15:44	1
2,4-Dinitrotoluene	ND		9.8	1.9	ug/L		10/22/18 13:25	10/24/18 15:44	1
2,6-Dinitrotoluene	ND		9.8	1.9	ug/L		10/22/18 13:25	10/24/18 15:44	1
Di-n-octyl phthalate	ND		9.8	0.43	ug/L		10/22/18 13:25	10/24/18 15:44	1
1,4-Dioxane	ND		9.8	0.98	ug/L		10/22/18 13:25	10/24/18 15:44	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.8	0.98	ug/L		10/22/18 13:25	10/24/18 15:44	1
Hexachlorobenzene	ND		9.8	0.24	ug/L		10/22/18 13:25	10/24/18 15:44	1
Hexachlorocyclopentadiene	ND		20	2.5	ug/L		10/22/18 13:25	10/24/18 15:44	1
Hexachloroethane	ND		9.8	4.1	ug/L		10/22/18 13:25	10/24/18 15:44	1
Indene	ND		9.8	0.98	ug/L		10/22/18 13:25	10/24/18 15:44	1
Isophorone	ND		9.8	0.56	ug/L		10/22/18 13:25	10/24/18 15:44	1
2-Methylphenol	ND		9.8	1.8	ug/L		10/22/18 13:25	10/24/18 15:44	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/22/18 13:25	10/24/18 15:44	1
2-Nitroaniline	ND		9.8	2.2	ug/L		10/22/18 13:25	10/24/18 15:44	1
3-Nitroaniline	ND		9.8	1.8	ug/L		10/22/18 13:25	10/24/18 15:44	1
4-Nitroaniline	ND		9.8	2.4	ug/L		10/22/18 13:25	10/24/18 15:44	1
Nitrobenzene	ND		9.8	0.54	ug/L		10/22/18 13:25	10/24/18 15:44	1
2-Nitrophenol	ND		9.8	0.64	ug/L		10/22/18 13:25	10/24/18 15:44	1
4-Nitrophenol	ND		9.8	2.1	ug/L		10/22/18 13:25	10/24/18 15:44	1
N-Nitrosodimethylamine	ND		9.8	3.4	ug/L		10/22/18 13:25	10/24/18 15:44	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160656-1
SDG: 60527968

Client Sample ID: P93C-ROX-101518
Date Collected: 10/15/18 12:05
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160656-6
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.8	3.2	ug/L		10/22/18 13:25	10/24/18 15:44	1
N-Nitrosodiphenylamine	ND		9.8	0.46	ug/L		10/22/18 13:25	10/24/18 15:44	1
Pentachlorophenol	ND		20	1.8	ug/L		10/22/18 13:25	10/24/18 15:44	1
Phenol	13		9.8	2.5	ug/L		10/22/18 13:25	10/24/18 15:44	1
Pyridine	ND		9.8	3.1	ug/L		10/22/18 13:25	10/24/18 15:44	1
Quinoline	ND	U	9.8	5.9	ug/L		10/22/18 13:25	10/24/18 15:44	1
2,4,5-Trichlorophenol	ND		9.8	3.6	ug/L		10/22/18 13:25	10/24/18 15:44	1
2,4,6-Trichlorophenol	ND		9.8	3.4	ug/L		10/22/18 13:25	10/24/18 15:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*39*		*34 - 120*	*10/22/18 13:25*	*10/24/18 15:44*	*1*
2-Fluorophenol	*24*		*10 - 120*	*10/22/18 13:25*	*10/24/18 15:44*	*1*
Nitrobenzene-d5	*35*		*27 - 120*	*10/22/18 13:25*	*10/24/18 15:44*	*1*
Phenol-d5	*28*		*10 - 120*	*10/22/18 13:25*	*10/24/18 15:44*	*1*
Terphenyl-d14	*41*	X	*53 - 125*	*10/22/18 13:25*	*10/24/18 15:44*	*1*
2,4,6-Tribromophenol	*52*		*15 - 135*	*10/22/18 13:25*	*10/24/18 15:44*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0055	ug/L		10/25/18 11:36	10/26/18 13:21	1
1,2-Dibromoethane	ND		0.020	0.0050	ug/L		10/25/18 11:36	10/26/18 13:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*111*	*p*	*51 - 149*	*10/25/18 11:36*	*10/26/18 13:21*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160656-1
SDG: 60527968

Client Sample ID: P56-ROX-101518
Date Collected: 10/15/18 13:05
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160656-7
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/27/18 12:44	1
Acrolein	ND		20	10	ug/L			10/27/18 12:44	1
Acrylonitrile	ND		10	2.8	ug/L			10/27/18 12:44	1
Benzene	2.0		1.0	0.38	ug/L			10/27/18 12:44	1
Bromobenzene	ND		1.0	0.54	ug/L			10/27/18 12:44	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/27/18 12:44	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/27/18 12:44	1
Bromoform	ND		5.0	0.71	ug/L			10/27/18 12:44	1
Bromomethane	ND		1.0	0.98	ug/L			10/27/18 12:44	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/27/18 12:44	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/27/18 12:44	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/27/18 12:44	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/27/18 12:44	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/27/18 12:44	1
Chloroethane	ND		1.0	0.76	ug/L			10/27/18 12:44	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/27/18 12:44	1
Chloroform	ND		1.0	0.60	ug/L			10/27/18 12:44	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/27/18 12:44	1
Chloromethane	ND		1.0	0.83	ug/L			10/27/18 12:44	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 12:44	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/27/18 12:44	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/27/18 12:44	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/27/18 12:44	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/27/18 12:44	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/27/18 12:44	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/27/18 12:44	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/27/18 12:44	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 12:44	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 12:44	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 12:44	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 12:44	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/27/18 12:44	1
Ethylbenzene	1.2		1.0	0.50	ug/L			10/27/18 12:44	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/27/18 12:44	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/27/18 12:44	1
2-Hexanone	ND		25	3.1	ug/L			10/27/18 12:44	1
Isopropylbenzene	14		1.0	0.53	ug/L			10/27/18 12:44	1
Methylene bromide	ND		5.0	0.59	ug/L			10/27/18 12:44	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/27/18 12:44	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/27/18 12:44	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/27/18 12:44	1
m-Xylene & p-Xylene	5.9		5.0	1.6	ug/L			10/27/18 12:44	1
Naphthalene	ND		1.0	1.0	ug/L			10/27/18 12:44	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/27/18 12:44	1
N-Propylbenzene	16		1.0	0.69	ug/L			10/27/18 12:44	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/27/18 12:44	1
o-Xylene	ND		5.0	0.60	ug/L			10/27/18 12:44	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/27/18 12:44	1
p-Isopropyltoluene	0.82	J	1.0	0.71	ug/L			10/27/18 12:44	1

Client Sample ID: P56-ROX-101518

Date Collected: 10/15/18 13:05
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160656-7

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	1.1		1.0	0.70	ug/L			10/27/18 12:44	1
Styrene	ND		1.0	1.0	ug/L			10/27/18 12:44	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/27/18 12:44	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/27/18 12:44	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/27/18 12:44	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/27/18 12:44	1
Toluene	0.76	J	1.0	0.70	ug/L			10/27/18 12:44	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 12:44	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/27/18 12:44	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/27/18 12:44	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/27/18 12:44	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/27/18 12:44	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/27/18 12:44	1
Trichloroethene	ND		1.0	0.50	ug/L			10/27/18 12:44	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/27/18 12:44	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/27/18 12:44	1
1,2,4-Trimethylbenzene	1.3		1.0	0.82	ug/L			10/27/18 12:44	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/27/18 12:44	1
Vinyl acetate	ND		25	2.0	ug/L			10/27/18 12:44	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/27/18 12:44	1
Xylenes, Total	6.2	J	10	1.6	ug/L			10/27/18 12:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*78 - 118*		*10/27/18 12:44*	*1*
Dibromofluoromethane	*96*		*81 - 121*		*10/27/18 12:44*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*10/27/18 12:44*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.37		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 23:56	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 23:56	1
Anthracene	0.069	J	0.20	0.020	ug/L		10/22/18 13:25	10/24/18 23:56	1
Benzo[a]anthracene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/24/18 23:56	1
Benzo[a]pyrene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/24/18 23:56	1
Benzo[b]fluoranthene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/24/18 23:56	1
Benzo[g,h,i]perylene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/24/18 23:56	1
Benzo[k]fluoranthene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/24/18 23:56	1
Chrysene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/24/18 23:56	1
Dibenz(a,h)anthracene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/24/18 23:56	1
Fluoranthene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 23:56	1
Fluorene	0.19	J	0.20	0.021	ug/L		10/22/18 13:25	10/24/18 23:56	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/24/18 23:56	1
Phenanthrene	0.57		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 23:56	1
Pyrene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 23:56	1
1-Methylnaphthalene	24		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 23:56	1
2-Methylnaphthalene	17		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 23:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*49*		*33 - 138*	*10/22/18 13:25*	*10/24/18 23:56*	*1*
2-Fluorobiphenyl	*57*		*15 - 122*	*10/22/18 13:25*	*10/24/18 23:56*	*1*

Client Sample ID: P56-ROX-101518

Date Collected: 10/15/18 13:05
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160656-7
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	91		19 - 130	10/22/18 13:25	10/24/18 23:56	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.8	3.7	ug/L		10/22/18 13:25	10/24/18 16:06	1
Benzenethiol	ND	* UJ	9.8	1.7	ug/L		10/22/18 13:25	10/24/18 16:06	1
Benzoic acid	ND		29	7.1	ug/L		10/22/18 13:25	10/24/18 16:06	1
Benzyl alcohol	ND	UJ	9.8	2.0	ug/L		10/22/18 13:25	10/24/18 16:06	1
Bis(2-chloroethoxy)methane	ND		9.8	0.67	ug/L		10/22/18 13:25	10/24/18 16:06	1
Bis(2-chloroethyl)ether	ND	UJ	9.8	0.72	ug/L		10/22/18 13:25	10/24/18 16:06	1
bis (2-chloroisopropyl) ether	ND		9.8	0.79	ug/L		10/22/18 13:25	10/24/18 16:06	1
Bis(2-ethylhexyl) phthalate	ND		9.8	4.9	ug/L		10/22/18 13:25	10/24/18 16:06	1
4-Bromophenyl phenyl ether	ND		9.8	0.31	ug/L		10/22/18 13:25	10/24/18 16:06	1
Butyl benzyl phthalate	ND		9.8	0.67	ug/L		10/22/18 13:25	10/24/18 16:06	1
4-Chloroaniline	ND		9.8	3.3	ug/L		10/22/18 13:25	10/24/18 16:06	1
4-Chloro-3-methylphenol	ND		9.8	3.7	ug/L		10/22/18 13:25	10/24/18 16:06	1
2-Chloronaphthalene	ND		9.8	0.51	ug/L		10/22/18 13:25	10/24/18 16:06	1
2-Chlorophenol	ND		9.8	2.2	ug/L		10/22/18 13:25	10/24/18 16:06	1
4-Chlorophenyl phenyl ether	ND		9.8	2.0	ug/L		10/22/18 13:25	10/24/18 16:06	1
Dibenz[a,h]acridine	ND		9.8	2.9	ug/L		10/22/18 13:25	10/24/18 16:06	1
Dibenzofuran	ND		9.8	0.51	ug/L		10/22/18 13:25	10/24/18 16:06	1
3,3'-Dichlorobenzidine	ND		9.8	2.5	ug/L		10/22/18 13:25	10/24/18 16:06	1
2,4-Dichlorophenol	ND		9.8	2.9	ug/L		10/22/18 13:25	10/24/18 16:06	1
Diethyl phthalate	ND		9.8	0.68	ug/L		10/22/18 13:25	10/24/18 16:06	1
2,4-Dimethylphenol	ND		9.8	3.4	ug/L		10/22/18 13:25	10/24/18 16:06	1
Dimethyl phthalate	ND		9.8	0.59	ug/L		10/22/18 13:25	10/24/18 16:06	1
Di-n-butyl phthalate	ND		9.8	2.6	ug/L		10/22/18 13:25	10/24/18 16:06	1
4,6-Dinitro-ortho-cresol	ND		9.8	2.0	ug/L		10/22/18 13:25	10/24/18 16:06	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		10/22/18 13:25	10/24/18 16:06	1
2,4-Dinitrotoluene	ND		9.8	1.9	ug/L		10/22/18 13:25	10/24/18 16:06	1
2,6-Dinitrotoluene	ND		9.8	1.9	ug/L		10/22/18 13:25	10/24/18 16:06	1
Di-n-octyl phthalate	ND		9.8	0.43	ug/L		10/22/18 13:25	10/24/18 16:06	1
1,4-Dioxane	ND		9.8	0.98	ug/L		10/22/18 13:25	10/24/18 16:06	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.8	0.98	ug/L		10/22/18 13:25	10/24/18 16:06	1
Hexachlorobenzene	ND		9.8	0.24	ug/L		10/22/18 13:25	10/24/18 16:06	1
Hexachlorocyclopentadiene	ND		20	2.5	ug/L		10/22/18 13:25	10/24/18 16:06	1
Hexachloroethane	ND		9.8	4.1	ug/L		10/22/18 13:25	10/24/18 16:06	1
Indene	ND		9.8	0.98	ug/L		10/22/18 13:25	10/24/18 16:06	1
Isophorone	ND		9.8	0.56	ug/L		10/22/18 13:25	10/24/18 16:06	1
2-Methylphenol	ND		9.8	1.8	ug/L		10/22/18 13:25	10/24/18 16:06	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/22/18 13:25	10/24/18 16:06	1
2-Nitroaniline	ND		9.8	2.2	ug/L		10/22/18 13:25	10/24/18 16:06	1
3-Nitroaniline	ND		9.8	1.8	ug/L		10/22/18 13:25	10/24/18 16:06	1
4-Nitroaniline	ND		9.8	2.4	ug/L		10/22/18 13:25	10/24/18 16:06	1
Nitrobenzene	ND		9.8	0.54	ug/L		10/22/18 13:25	10/24/18 16:06	1
2-Nitrophenol	ND		9.8	0.64	ug/L		10/22/18 13:25	10/24/18 16:06	1
4-Nitrophenol	ND		9.8	2.1	ug/L		10/22/18 13:25	10/24/18 16:06	1
N-Nitrosodimethylamine	ND		9.8	3.4	ug/L		10/22/18 13:25	10/24/18 16:06	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160656-1
SDG: 60527968

Client Sample ID: P56-ROX-101518
Date Collected: 10/15/18 13:05
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160656-7
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.8	3.2	ug/L		10/22/18 13:25	10/24/18 16:06	1
N-Nitrosodiphenylamine	ND		9.8	0.46	ug/L		10/22/18 13:25	10/24/18 16:06	1
Pentachlorophenol	ND		20	1.8	ug/L		10/22/18 13:25	10/24/18 16:06	1
Phenol	ND		9.8	2.5	ug/L		10/22/18 13:25	10/24/18 16:06	1
Pyridine	ND		9.8	3.1	ug/L		10/22/18 13:25	10/24/18 16:06	1
Quinoline	ND	U5	9.8	5.9	ug/L		10/22/18 13:25	10/24/18 16:06	1
2,4,5-Trichlorophenol	ND		9.8	3.6	ug/L		10/22/18 13:25	10/24/18 16:06	1
2,4,6-Trichlorophenol	ND		9.8	3.4	ug/L		10/22/18 13:25	10/24/18 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*35*		*34 - 120*	*10/22/18 13:25*	*10/24/18 16:06*	*1*
2-Fluorophenol	*24*		*10 - 120*	*10/22/18 13:25*	*10/24/18 16:06*	*1*
Nitrobenzene-d5	*33*		*27 - 120*	*10/22/18 13:25*	*10/24/18 16:06*	*1*
Phenol-d5	*27*		*10 - 120*	*10/22/18 13:25*	*10/24/18 16:06*	*1*
Terphenyl-d14	*26*	X	*53 - 125*	*10/22/18 13:25*	*10/24/18 16:06*	*1*
2,4,6-Tribromophenol	*53*		*15 - 135*	*10/22/18 13:25*	*10/24/18 16:06*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0056	ug/L		10/25/18 11:36	10/26/18 12:49	1
1,2-Dibromoethane	ND		0.020	0.0051	ug/L		10/25/18 11:36	10/26/18 12:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*122*	*p*	*51 - 149*	*10/25/18 11:36*	*10/26/18 12:49*	*1*

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits
E	Result exceeded calibration range.

GC Semi VOA

Qualifier	Qualifier Description
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160656-1
SDG: 60527968

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(78-118)	(81-121)	(80-120)
400-160656-2	TB-ROX-101518-8260-SS	93	103	98
400-160656-3	P93D-ROX-101518	95	96	98
400-160656-4	P93B-ROX-101518	95	96	97
400-160656-4 - DL	P93B-ROX-101518	94	93	98
400-160656-5	P93B-ROX-101518-DUP	92	97	97
400-160656-5 - DL	P93B-ROX-101518-DUP	93	95	98
400-160656-6	P93C-ROX-101518	92	95	98
400-160656-7	P56-ROX-101518	96	96	99
LCS 400-417182/1002	Lab Control Sample	94	99	96
MB 400-417182/4	Method Blank	93	100	98

Surrogate Legend

BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPHL	TBP
Lab Sample ID	Client Sample ID	(34-120)	(10-120)	(27-120)	(10-120)	(53-125)	(15-135)
400-160656-3	P93D-ROX-101518	38	25	35	30	40 X	51
400-160656-4	P93B-ROX-101518		34		35		55
400-160656-4 - DL	P93B-ROX-101518	46		39		45 X	
400-160656-5	P93B-ROX-101518-DUP		27	28	35	26 X	49
400-160656-5 - DL	P93B-ROX-101518-DUP	50					
400-160656-6	P93C-ROX-101518	39	24	35	28	41 X	52
400-160656-7	P56-ROX-101518	35	24	33	27	26 X	53
LCS 400-416425/2-A	Lab Control Sample	75	56	79	73	89	87
LCS 400-416425/4-A	Lab Control Sample	34	7 X	34	21	48 X	44
LCSD 400-416425/3-A	Lab Control Sample Dup	60	19	63	46	65	73
LCSD 400-416425/5-A	Lab Control Sample Dup	37	11	38	27	54	36
MB 400-416425/1-A	Method Blank	37	30	37	37	54	56

Surrogate Legend

FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPHL = Terphenyl-d14
TBP = 2,4,6-Tribromophenol

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		TPHL	FBP	NBZ
Lab Sample ID	Client Sample ID	(33-138)	(15-122)	(19-130)
400-160656-3	P93D-ROX-101518	87	69	77

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		TPHL	FBP	NBZ
Lab Sample ID	Client Sample ID	(33-138)	(15-122)	(19-130)
400-160656-4	P93B-ROX-101518	58	46	29
400-160656-5	P93B-ROX-101518-DUP	51	47	51
400-160656-6	P93C-ROX-101518	81	65	76
400-160656-7	P56-ROX-101518	49	57	91
LCS 400-416425/2-A	Lab Control Sample	101	72	104
LCSD 400-416425/3-A	Lab Control Sample Dup	92	67	102
MB 400-416425/1-A	Method Blank	132	70	119

Surrogate Legend

TPHL = Terphenyl-d14
FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5

Method: 8011 - EDB and DBCP in Water by Microextraction

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		BFB2
Lab Sample ID	Client Sample ID	(51-149)
400-160656-1	TB-ROX-101518-8011-SS	98 p
400-160656-3	P93D-ROX-101518	109 p
400-160656-4	P93B-ROX-101518	139 p
400-160656-5	P93B-ROX-101518-DUP	144 p
400-160656-6	P93C-ROX-101518	111 p
400-160656-7	P56-ROX-101518	122 p
LCS 400-416931/2-A	Lab Control Sample	104
LCSD 400-416931/3-A	Lab Control Sample Dup	98
MB 400-416931/1-A	Method Blank	94 p

Surrogate Legend

BFB = 4-Bromofluorobenzene

Method Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160656-1
SDG: 60527968

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL PEN
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	TAL PEN
8011	EDB and DBCP in Water by Microextraction	EPA	TAL PEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL PEN
5030B	Purge and Trap	SW846	TAL PEN
8011	Microextraction	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160656-1
SDG: 60527968

Client Sample ID: TB-ROX-101518-8011-SS

Lab Sample ID: 400-160656-1
Matrix: Water

Date Collected: 10/15/18 00:00
Date Received: 10/16/18 09:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			34.3 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/26/18 15:54	DS	TAL PEN

Client Sample ID: TB-ROX-101518-8260-SS

Lab Sample ID: 400-160656-2
Matrix: Water

Date Collected: 10/15/18 00:00
Date Received: 10/16/18 09:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417182	10/27/18 08:34	CAR	TAL PEN

Client Sample ID: P93D-ROX-101518

Lab Sample ID: 400-160656-3
Matrix: Water

Date Collected: 10/15/18 09:55
Date Received: 10/16/18 09:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417182	10/27/18 12:17	CAR	TAL PEN
Total/NA	Prep	3520C			1026.8 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416716	10/24/18 14:39	KJA	TAL PEN
Total/NA	Prep	3520C			1026.8 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416798	10/24/18 22:47	RM	TAL PEN
Total/NA	Prep	8011			35.5 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/26/18 15:30	DS	TAL PEN

Client Sample ID: P93B-ROX-101518

Lab Sample ID: 400-160656-4
Matrix: Water

Date Collected: 10/15/18 10:45
Date Received: 10/16/18 09:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2000	5 mL	5 mL	417182	10/27/18 09:48	CAR	TAL PEN
Total/NA	Analysis	8260B	DL	5000	5 mL	5 mL	417182	10/27/18 16:36	CAR	TAL PEN
Total/NA	Prep	3520C			1028 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416716	10/24/18 15:01	KJA	TAL PEN
Total/NA	Prep	3520C	DL		1028 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D	DL	5			416960	10/25/18 21:09	VC1	TAL PEN
Total/NA	Prep	3520C			1028 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416798	10/24/18 23:04	RM	TAL PEN
Total/NA	Prep	8011			35.7 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/26/18 14:57	DS	TAL PEN

Client Sample ID: P93B-ROX-101518-DUP

Lab Sample ID: 400-160656-5
Matrix: Water

Date Collected: 10/15/18 10:45
Date Received: 10/16/18 09:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2000	5 mL	5 mL	417182	10/27/18 10:13	CAR	TAL PEN
Total/NA	Analysis	8260B	DL	5000	5 mL	5 mL	417182	10/27/18 17:02	CAR	TAL PEN
Total/NA	Prep	3520C			1039 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416716	10/24/18 15:23	KJA	TAL PEN
Total/NA	Prep	3520C	DL		1039 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D	DL	5			416960	10/25/18 21:35	VC1	TAL PEN
Total/NA	Prep	3520C			1039 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416798	10/24/18 23:22	RM	TAL PEN
Total/NA	Prep	8011			34.8 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/26/18 13:52	DS	TAL PEN

Client Sample ID: P93C-ROX-101518

Lab Sample ID: 400-160656-6
Matrix: Water

Date Collected: 10/15/18 12:05
Date Received: 10/16/18 09:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	5 mL	5 mL	417182	10/27/18 09:24	CAR	TAL PEN
Total/NA	Prep	3520C			1020.8 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416716	10/24/18 15:44	KJA	TAL PEN
Total/NA	Prep	3520C			1020.8 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416798	10/24/18 23:39	RM	TAL PEN
Total/NA	Prep	8011			34.7 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/26/18 13:21	DS	TAL PEN

Client Sample ID: P56-ROX-101518

Lab Sample ID: 400-160656-7
Matrix: Water

Date Collected: 10/15/18 13:05
Date Received: 10/16/18 09:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417182	10/27/18 12:44	CAR	TAL PEN
Total/NA	Prep	3520C			1022.8 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416716	10/24/18 16:06	KJA	TAL PEN
Total/NA	Prep	3520C			1022.8 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416798	10/24/18 23:56	RM	TAL PEN
Total/NA	Prep	8011			34.6 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/26/18 12:49	DS	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-416425/1-A
Matrix: Water

Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN

Client Sample ID: Method Blank
Date Collected: N/A
Date Received: N/A

Lab Sample ID: MB 400-416425/1-A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270D		1			416716	10/24/18 12:51	KJA	TAL PEN
Total/NA	Prep	3520C			1000 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416798	10/24/18 21:56	RM	TAL PEN

Client Sample ID: Method Blank
Date Collected: N/A
Date Received: N/A

Lab Sample ID: MB 400-416931/1-A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/25/18 19:05	DS	TAL PEN

Client Sample ID: Method Blank
Date Collected: N/A
Date Received: N/A

Lab Sample ID: MB 400-417182/4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417182	10/27/18 07:45	CAR	TAL PEN

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 400-416425/2-A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416989	10/25/18 21:54	VC1	TAL PEN
Total/NA	Prep	3520C			1000 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D LL		5			416798	10/24/18 22:13	RM	TAL PEN

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 400-416425/4-A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416716	10/24/18 13:56	KJA	TAL PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160656-1
SDG: 60527968

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 400-416931/2-A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/25/18 20:09	DS	TAL PEN

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 400-417182/1002
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417182	10/27/18 06:55	CAR	TAL PEN

Client Sample ID: Lab Control Sample Dup
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCSD 400-416425/3-A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416989	10/25/18 22:18	VC1	TAL PEN
Total/NA	Prep	3520C			1000 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D LL		5			416798	10/24/18 22:30	RM	TAL PEN

Client Sample ID: Lab Control Sample Dup
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCSD 400-416425/5-A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416716	10/24/18 14:18	KJA	TAL PEN

Client Sample ID: Lab Control Sample Dup
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCSD 400-416931/3-A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/25/18 20:39	DS	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

QC Association Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160656-1
SDG: 60527968

GC/MS VOA

Analysis Batch: 417182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160656-2	TB-ROX-101518-8260-SS	Total/NA	Water	8260B	
400-160656-3	P93D-ROX-101518	Total/NA	Water	8260B	
400-160656-4	P93B-ROX-101518	Total/NA	Water	8260B	
400-160656-4 - DL	P93B-ROX-101518	Total/NA	Water	8260B	
400-160656-5	P93B-ROX-101518-DUP	Total/NA	Water	8260B	
400-160656-5 - DL	P93B-ROX-101518-DUP	Total/NA	Water	8260B	
400-160656-6	P93C-ROX-101518	Total/NA	Water	8260B	
400-160656-7	P56-ROX-101518	Total/NA	Water	8260B	
MB 400-417182/4	Method Blank	Total/NA	Water	8260B	
LCS 400-417182/1002	Lab Control Sample	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 416425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160656-3	P93D-ROX-101518	Total/NA	Water	3520C	
400-160656-4	P93B-ROX-101518	Total/NA	Water	3520C	
400-160656-4 - DL	P93B-ROX-101518	Total/NA	Water	3520C	
400-160656-5	P93B-ROX-101518-DUP	Total/NA	Water	3520C	
400-160656-5 - DL	P93B-ROX-101518-DUP	Total/NA	Water	3520C	
400-160656-6	P93C-ROX-101518	Total/NA	Water	3520C	
400-160656-7	P56-ROX-101518	Total/NA	Water	3520C	
MB 400-416425/1-A	Method Blank	Total/NA	Water	3520C	
LCS 400-416425/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 400-416425/4-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-416425/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
LCSD 400-416425/5-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 416716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160656-3	P93D-ROX-101518	Total/NA	Water	8270D	416425
400-160656-4	P93B-ROX-101518	Total/NA	Water	8270D	416425
400-160656-5	P93B-ROX-101518-DUP	Total/NA	Water	8270D	416425
400-160656-6	P93C-ROX-101518	Total/NA	Water	8270D	416425
400-160656-7	P56-ROX-101518	Total/NA	Water	8270D	416425
MB 400-416425/1-A	Method Blank	Total/NA	Water	8270D	416425
LCS 400-416425/4-A	Lab Control Sample	Total/NA	Water	8270D	416425
LCSD 400-416425/5-A	Lab Control Sample Dup	Total/NA	Water	8270D	416425

Analysis Batch: 416798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160656-3	P93D-ROX-101518	Total/NA	Water	8270D LL	416425
400-160656-4	P93B-ROX-101518	Total/NA	Water	8270D LL	416425
400-160656-5	P93B-ROX-101518-DUP	Total/NA	Water	8270D LL	416425
400-160656-6	P93C-ROX-101518	Total/NA	Water	8270D LL	416425
400-160656-7	P56-ROX-101518	Total/NA	Water	8270D LL	416425
MB 400-416425/1-A	Method Blank	Total/NA	Water	8270D LL	416425
LCS 400-416425/2-A	Lab Control Sample	Total/NA	Water	8270D LL	416425
LCSD 400-416425/3-A	Lab Control Sample Dup	Total/NA	Water	8270D LL	416425

GC/MS Semi VOA (Continued)

Analysis Batch: 416960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160656-4 - DL	P93B-ROX-101518	Total/NA	Water	8270D	416425
400-160656-5 - DL	P93B-ROX-101518-DUP	Total/NA	Water	8270D	416425

Analysis Batch: 416989

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-416425/2-A	Lab Control Sample	Total/NA	Water	8270D	416425
LCSD 400-416425/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	416425

GC Semi VOA

Prep Batch: 416931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160656-1	TB-ROX-101518-8011-SS	Total/NA	Water	8011	
400-160656-3	P93D-ROX-101518	Total/NA	Water	8011	
400-160656-4	P93B-ROX-101518	Total/NA	Water	8011	
400-160656-5	P93B-ROX-101518-DUP	Total/NA	Water	8011	
400-160656-6	P93C-ROX-101518	Total/NA	Water	8011	
400-160656-7	P56-ROX-101518	Total/NA	Water	8011	
MB 400-416931/1-A	Method Blank	Total/NA	Water	8011	
LCS 400-416931/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 400-416931/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 417027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160656-1	TB-ROX-101518-8011-SS	Total/NA	Water	8011	416931
400-160656-3	P93D-ROX-101518	Total/NA	Water	8011	416931
400-160656-4	P93B-ROX-101518	Total/NA	Water	8011	416931
400-160656-5	P93B-ROX-101518-DUP	Total/NA	Water	8011	416931
400-160656-6	P93C-ROX-101518	Total/NA	Water	8011	416931
400-160656-7	P56-ROX-101518	Total/NA	Water	8011	416931
MB 400-416931/1-A	Method Blank	Total/NA	Water	8011	416931
LCS 400-416931/2-A	Lab Control Sample	Total/NA	Water	8011	416931
LCSD 400-416931/3-A	Lab Control Sample Dup	Total/NA	Water	8011	416931

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-417182/4
Matrix: Water
Analysis Batch: 417182

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/27/18 07:45	1
Acrolein	ND		20	10	ug/L			10/27/18 07:45	1
Acrylonitrile	ND		10	2.8	ug/L			10/27/18 07:45	1
Benzene	ND		1.0	0.38	ug/L			10/27/18 07:45	1
Bromobenzene	ND		1.0	0.54	ug/L			10/27/18 07:45	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/27/18 07:45	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Bromoform	ND		5.0	0.71	ug/L			10/27/18 07:45	1
Bromomethane	ND		1.0	0.98	ug/L			10/27/18 07:45	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/27/18 07:45	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Chloroethane	ND		1.0	0.76	ug/L			10/27/18 07:45	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/27/18 07:45	1
Chloroform	ND		1.0	0.60	ug/L			10/27/18 07:45	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/27/18 07:45	1
Chloromethane	ND		1.0	0.83	ug/L			10/27/18 07:45	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 07:45	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/27/18 07:45	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/27/18 07:45	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/27/18 07:45	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/27/18 07:45	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/27/18 07:45	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 07:45	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/27/18 07:45	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/27/18 07:45	1
2-Hexanone	ND		25	3.1	ug/L			10/27/18 07:45	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/27/18 07:45	1
Methylene bromide	ND		5.0	0.59	ug/L			10/27/18 07:45	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/27/18 07:45	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/27/18 07:45	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/27/18 07:45	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/27/18 07:45	1
Naphthalene	ND		1.0	1.0	ug/L			10/27/18 07:45	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/27/18 07:45	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/27/18 07:45	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/27/18 07:45	1
o-Xylene	ND		5.0	0.60	ug/L			10/27/18 07:45	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/27/18 07:45	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-417182/4
Matrix: Water
Analysis Batch: 417182

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/27/18 07:45	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/27/18 07:45	1
Styrene	ND		1.0	1.0	ug/L			10/27/18 07:45	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/27/18 07:45	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/27/18 07:45	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/27/18 07:45	1
Toluene	ND		1.0	0.70	ug/L			10/27/18 07:45	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 07:45	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/27/18 07:45	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/27/18 07:45	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/27/18 07:45	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/27/18 07:45	1
Trichloroethene	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/27/18 07:45	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/27/18 07:45	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/27/18 07:45	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/27/18 07:45	1
Vinyl acetate	ND		25	2.0	ug/L			10/27/18 07:45	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Xylenes, Total	ND		10	1.6	ug/L			10/27/18 07:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*78 - 118*		*10/27/18 07:45*	*1*
Dibromofluoromethane	*100*		*81 - 121*		*10/27/18 07:45*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*10/27/18 07:45*	*1*

Lab Sample ID: LCS 400-417182/1002
Matrix: Water
Analysis Batch: 417182

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	200	258		ug/L		129	43 - 160
Acrolein	500	513		ug/L		103	38 - 160
Acrylonitrile	500	675		ug/L		135	64 - 142
Benzene	50.0	47.5		ug/L		95	70 - 130
Bromobenzene	50.0	52.8		ug/L		106	70 - 132
Bromochloromethane	50.0	53.5		ug/L		107	70 - 130
Bromodichloromethane	50.0	46.5		ug/L		93	67 - 133
Bromoform	50.0	53.2		ug/L		106	57 - 140
Bromomethane	50.0	49.5		ug/L		99	10 - 160
2-Butanone (MEK)	200	208		ug/L		104	61 - 145
Carbon disulfide	50.0	44.4		ug/L		89	61 - 137
Carbon tetrachloride	50.0	43.5		ug/L		87	61 - 137
Chlorobenzene	50.0	51.6		ug/L		103	70 - 130
Dibromochloromethane	50.0	51.3		ug/L		103	67 - 135
Chloroethane	50.0	54.7		ug/L		109	55 - 141

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-417182/1002
Matrix: Water
Analysis Batch: 417182

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloroethyl vinyl ether	50.0	28.3		ug/L		57	10 - 160
Chloroform	50.0	45.3		ug/L		91	69 - 130
1-Chlorohexane	50.0	55.8		ug/L		112	69 - 130
Chloromethane	50.0	65.8		ug/L		132	58 - 137
cis-1,2-Dichloroethene	50.0	50.5		ug/L		101	68 - 130
cis-1,3-Dichloropropene	50.0	42.5		ug/L		85	69 - 132
1,2-Dichlorobenzene	50.0	53.7		ug/L		107	67 - 130
1,3-Dichlorobenzene	50.0	53.8		ug/L		108	70 - 130
1,4-Dichlorobenzene	50.0	53.1		ug/L		106	70 - 130
Dichlorodifluoromethane	50.0	52.4		ug/L		105	41 - 146
1,1-Dichloroethane	50.0	50.0		ug/L		100	70 - 130
1,2-Dichloroethane	50.0	48.6		ug/L		97	69 - 130
1,1-Dichloroethene	50.0	48.1		ug/L		96	63 - 134
1,2-Dichloropropane	50.0	48.8		ug/L		98	70 - 130
1,3-Dichloropropane	50.0	47.9		ug/L		96	70 - 130
2,2-Dichloropropane	50.0	32.3		ug/L		65	52 - 135
1,1-Dichloropropene	50.0	47.2		ug/L		94	70 - 130
Ethylbenzene	50.0	48.9		ug/L		98	70 - 130
Ethyl methacrylate	50.0	43.0		ug/L		86	68 - 130
Hexachlorobutadiene	50.0	48.8		ug/L		98	53 - 140
2-Hexanone	200	246		ug/L		123	65 - 137
Isopropylbenzene	50.0	50.2		ug/L		100	70 - 130
Methylene bromide	50.0	49.6		ug/L		99	70 - 130
Methylene Chloride	50.0	48.0		ug/L		96	66 - 135
4-Methyl-2-pentanone (MIBK)	200	246		ug/L		123	69 - 138
Methyl tert-butyl ether	50.0	41.8		ug/L		84	66 - 130
m-Xylene & p-Xylene	50.0	48.2		ug/L		96	70 - 130
Naphthalene	50.0	51.0		ug/L		102	47 - 149
n-Butylbenzene	50.0	52.8		ug/L		106	67 - 130
N-Propylbenzene	50.0	50.7		ug/L		101	70 - 130
o-Chlorotoluene	50.0	46.0		ug/L		92	70 - 130
o-Xylene	50.0	48.2		ug/L		96	70 - 130
p-Chlorotoluene	50.0	50.0		ug/L		100	70 - 130
p-Isopropyltoluene	50.0	53.1		ug/L		106	65 - 130
sec-Butylbenzene	50.0	52.5		ug/L		105	66 - 130
Styrene	50.0	49.7		ug/L		99	70 - 130
tert-Butylbenzene	50.0	48.3		ug/L		97	64 - 139
1,1,1,2-Tetrachloroethane	50.0	48.6		ug/L		97	67 - 131
1,1,2,2-Tetrachloroethane	50.0	51.0		ug/L		102	70 - 131
Tetrachloroethene	50.0	50.9		ug/L		102	65 - 130
Toluene	50.0	49.6		ug/L		99	70 - 130
trans-1,2-Dichloroethene	50.0	48.9		ug/L		98	70 - 130
trans-1,3-Dichloropropene	50.0	40.9		ug/L		82	63 - 130
1,2,3-Trichlorobenzene	50.0	50.2		ug/L		100	60 - 138
1,2,4-Trichlorobenzene	50.0	49.3		ug/L		99	60 - 140
1,1,1-Trichloroethane	50.0	43.7		ug/L		87	68 - 130
1,1,2-Trichloroethane	50.0	48.1		ug/L		96	70 - 130
Trichloroethene	50.0	51.1		ug/L		102	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-417182/1002
Matrix: Water
Analysis Batch: 417182

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	50.0	54.1		ug/L		108	65 - 138
1,2,3-Trichloropropane	50.0	53.9		ug/L		108	70 - 130
1,2,4-Trimethylbenzene	50.0	52.3		ug/L		105	70 - 130
1,3,5-Trimethylbenzene	50.0	52.4		ug/L		105	69 - 130
Vinyl acetate	100	90.9		ug/L		91	26 - 160
Vinyl chloride	50.0	54.9		ug/L		110	59 - 136
Xylenes, Total	100	96.4		ug/L		96	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*94*		*78 - 118*
Dibromofluoromethane	*99*		*81 - 121*
Toluene-d8 (Surr)	*96*		*80 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-416425/1-A
Matrix: Water
Analysis Batch: 416716

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416425

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.8	ug/L		10/22/18 13:25	10/24/18 12:51	1
Benzenethiol	ND		10	1.7	ug/L		10/22/18 13:25	10/24/18 12:51	1
Benzoic acid	ND		30	7.3	ug/L		10/22/18 13:25	10/24/18 12:51	1
Benzyl alcohol	ND		10	2.0	ug/L		10/22/18 13:25	10/24/18 12:51	1
Bis(2-chloroethoxy)methane	ND		10	0.69	ug/L		10/22/18 13:25	10/24/18 12:51	1
Bis(2-chloroethyl)ether	ND		10	0.74	ug/L		10/22/18 13:25	10/24/18 12:51	1
bis (2-chloroisopropyl) ether	ND		10	0.81	ug/L		10/22/18 13:25	10/24/18 12:51	1
Bis(2-ethylhexyl) phthalate	ND		10	5.0	ug/L		10/22/18 13:25	10/24/18 12:51	1
4-Bromophenyl phenyl ether	ND		10	0.32	ug/L		10/22/18 13:25	10/24/18 12:51	1
Butyl benzyl phthalate	ND		10	0.69	ug/L		10/22/18 13:25	10/24/18 12:51	1
4-Chloroaniline	ND		10	3.4	ug/L		10/22/18 13:25	10/24/18 12:51	1
4-Chloro-3-methylphenol	ND		10	3.8	ug/L		10/22/18 13:25	10/24/18 12:51	1
2-Chloronaphthalene	ND		10	0.52	ug/L		10/22/18 13:25	10/24/18 12:51	1
2-Chlorophenol	ND		10	2.2	ug/L		10/22/18 13:25	10/24/18 12:51	1
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		10/22/18 13:25	10/24/18 12:51	1
Dibenz[a,h]acridine	ND		10	3.0	ug/L		10/22/18 13:25	10/24/18 12:51	1
Dibenzofuran	ND		10	0.52	ug/L		10/22/18 13:25	10/24/18 12:51	1
3,3'-Dichlorobenzidine	ND		10	2.6	ug/L		10/22/18 13:25	10/24/18 12:51	1
2,4-Dichlorophenol	ND		10	3.0	ug/L		10/22/18 13:25	10/24/18 12:51	1
Diethyl phthalate	ND		10	0.70	ug/L		10/22/18 13:25	10/24/18 12:51	1
2,4-Dimethylphenol	ND		10	3.5	ug/L		10/22/18 13:25	10/24/18 12:51	1
Dimethyl phthalate	ND		10	0.60	ug/L		10/22/18 13:25	10/24/18 12:51	1
Di-n-butyl phthalate	ND		10	2.7	ug/L		10/22/18 13:25	10/24/18 12:51	1
4,6-Dinitro-ortho-cresol	ND		10	2.0	ug/L		10/22/18 13:25	10/24/18 12:51	1
2,4-Dinitrophenol	ND		30	3.4	ug/L		10/22/18 13:25	10/24/18 12:51	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		10/22/18 13:25	10/24/18 12:51	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		10/22/18 13:25	10/24/18 12:51	1
Di-n-octyl phthalate	ND		10	0.44	ug/L		10/22/18 13:25	10/24/18 12:51	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-416425/1-A
Matrix: Water
Analysis Batch: 416716

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416425

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		10	1.0	ug/L		10/22/18 13:25	10/24/18 12:51	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		10/22/18 13:25	10/24/18 12:51	1
Hexachlorobenzene	ND		10	0.25	ug/L		10/22/18 13:25	10/24/18 12:51	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		10/22/18 13:25	10/24/18 12:51	1
Hexachloroethane	ND		10	4.2	ug/L		10/22/18 13:25	10/24/18 12:51	1
Indene	ND		10	1.0	ug/L		10/22/18 13:25	10/24/18 12:51	1
Isophorone	ND		10	0.57	ug/L		10/22/18 13:25	10/24/18 12:51	1
2-Methylphenol	ND		10	1.8	ug/L		10/22/18 13:25	10/24/18 12:51	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/22/18 13:25	10/24/18 12:51	1
2-Nitroaniline	ND		10	2.2	ug/L		10/22/18 13:25	10/24/18 12:51	1
3-Nitroaniline	ND		10	1.8	ug/L		10/22/18 13:25	10/24/18 12:51	1
4-Nitroaniline	ND		10	2.5	ug/L		10/22/18 13:25	10/24/18 12:51	1
Nitrobenzene	ND		10	0.55	ug/L		10/22/18 13:25	10/24/18 12:51	1
2-Nitrophenol	ND		10	0.65	ug/L		10/22/18 13:25	10/24/18 12:51	1
4-Nitrophenol	ND		10	2.1	ug/L		10/22/18 13:25	10/24/18 12:51	1
N-Nitrosodimethylamine	ND		10	3.5	ug/L		10/22/18 13:25	10/24/18 12:51	1
N-Nitrosodi-n-propylamine	ND		10	3.3	ug/L		10/22/18 13:25	10/24/18 12:51	1
N-Nitrosodiphenylamine	ND		10	0.47	ug/L		10/22/18 13:25	10/24/18 12:51	1
Pentachlorophenol	ND		20	1.8	ug/L		10/22/18 13:25	10/24/18 12:51	1
Phenol	ND		10	2.6	ug/L		10/22/18 13:25	10/24/18 12:51	1
Pyridine	ND		10	3.2	ug/L		10/22/18 13:25	10/24/18 12:51	1
Quinoline	ND		10	6.0	ug/L		10/22/18 13:25	10/24/18 12:51	1
2,4,5-Trichlorophenol	ND		10	3.7	ug/L		10/22/18 13:25	10/24/18 12:51	1
2,4,6-Trichlorophenol	ND		10	3.5	ug/L		10/22/18 13:25	10/24/18 12:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*37*		*34 - 120*	*10/22/18 13:25*	*10/24/18 12:51*	*1*
2-Fluorophenol	*30*		*10 - 120*	*10/22/18 13:25*	*10/24/18 12:51*	*1*
Nitrobenzene-d5	*37*		*27 - 120*	*10/22/18 13:25*	*10/24/18 12:51*	*1*
Phenol-d5	*37*		*10 - 120*	*10/22/18 13:25*	*10/24/18 12:51*	*1*
Terphenyl-d14	*54*		*53 - 125*	*10/22/18 13:25*	*10/24/18 12:51*	*1*
2,4,6-Tribromophenol	*56*		*15 - 135*	*10/22/18 13:25*	*10/24/18 12:51*	*1*

Lab Sample ID: LCS 400-416425/2-A
Matrix: Water
Analysis Batch: 416989

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416425

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aniline	30.0	26.4		ug/L		88	29 - 120
Benzoic acid	118	101		ug/L		86	10 - 150
Benzyl alcohol	30.0	26.9		ug/L		90	19 - 125
Bis(2-chloroethoxy)methane	30.0	25.0		ug/L		83	45 - 120
Bis(2-chloroethyl)ether	30.0	24.0		ug/L		80	48 - 120
bis (2-chloroisopropyl) ether	30.0	22.5		ug/L		75	30 - 125
Bis(2-ethylhexyl) phthalate	30.0	36.1		ug/L		120	48 - 150
4-Bromophenyl phenyl ether	30.0	27.7		ug/L		92	55 - 122
Butyl benzyl phthalate	30.0	29.1		ug/L		97	46 - 145

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-416425/2-A
Matrix: Water
Analysis Batch: 416989

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416425

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Chloroaniline	30.0	22.0		ug/L		73	30 - 120
4-Chloro-3-methylphenol	30.0	26.0		ug/L		87	39 - 140
2-Chloronaphthalene	30.0	23.2		ug/L		77	52 - 120
2-Chlorophenol	30.0	24.0		ug/L		80	34 - 120
4-Chlorophenyl phenyl ether	30.0	25.4		ug/L		85	58 - 124
Dibenz[a,h]acridine	30.0	27.6		ug/L		92	46 - 149
Dibenzofuran	30.0	25.2		ug/L		84	58 - 123
3,3'-Dichlorobenzidine	40.0	60.1	E *	ug/L		150	39 - 135
2,4-Dichlorophenol	30.0	25.9		ug/L		86	39 - 128
Diethyl phthalate	30.0	26.6		ug/L		89	44 - 146
2,4-Dimethylphenol	30.0	27.3		ug/L		91	44 - 120
Dimethyl phthalate	30.0	25.4		ug/L		85	50 - 131
Di-n-butyl phthalate	30.0	28.2		ug/L		94	55 - 131
4,6-Dinitro-ortho-cresol	60.0	56.1		ug/L		94	10 - 150
2,4-Dinitrophenol	60.0	55.3		ug/L		92	10 - 150
2,4-Dinitrotoluene	30.0	28.8		ug/L		96	58 - 140
2,6-Dinitrotoluene	30.0	26.9		ug/L		90	57 - 130
Di-n-octyl phthalate	30.0	27.4		ug/L		91	50 - 150
1,4-Dioxane	30.0	19.1		ug/L		64	25 - 120
1,2-Diphenylhydrazine (as Azobenzene)	30.0	26.5		ug/L		88	47 - 123
Hexachlorobenzene	30.0	29.5		ug/L		98	52 - 131
Hexachlorocyclopentadiene	30.0	8.17	J	ug/L		27	10 - 129
Hexachloroethane	30.0	16.0		ug/L		53	41 - 120
Indene	30.0	24.4		ug/L		81	47 - 120
Isophorone	30.0	25.1		ug/L		84	49 - 120
2-Methylphenol	30.0	25.1		ug/L		84	39 - 123
3 & 4 Methylphenol	30.0	25.3		ug/L		84	38 - 121
2-Nitroaniline	30.0	25.9		ug/L		86	47 - 150
3-Nitroaniline	30.0	24.2		ug/L		81	34 - 132
4-Nitroaniline	30.0	28.8		ug/L		96	41 - 135
Nitrobenzene	30.0	24.5		ug/L		82	47 - 120
2-Nitrophenol	30.0	26.7		ug/L		89	28 - 136
4-Nitrophenol	60.0	46.6		ug/L		78	10 - 150
N-Nitrosodimethylamine	30.0	22.3		ug/L		74	22 - 148
N-Nitrosodi-n-propylamine	30.0	26.4		ug/L		88	44 - 120
N-Nitrosodiphenylamine	29.8	27.0		ug/L		91	56 - 120
Pentachlorophenol	60.0	62.2		ug/L		104	15 - 141
Phenol	30.0	24.7		ug/L		82	33 - 120
Pyridine	60.0	37.3		ug/L		62	26 - 120
Quinoline	30.0	28.9		ug/L		96	51 - 129
2,4,5-Trichlorophenol	30.0	26.9		ug/L		90	38 - 147
2,4,6-Trichlorophenol	30.0	26.4		ug/L		88	36 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*75*		*34 - 120*
2-Fluorophenol	*56*		*10 - 120*
Nitrobenzene-d5	*79*		*27 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-416425/2-A
Matrix: Water
Analysis Batch: 416989

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416425

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Phenol-d5	73		10 - 120
Terphenyl-d14	89		53 - 125
2,4,6-Tribromophenol	87		15 - 135

Lab Sample ID: LCS 400-416425/4-A
Matrix: Water
Analysis Batch: 416716

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416425

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzenethiol	30.0	ND	*	ug/L		3	10 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl	34		34 - 120
2-Fluorophenol	7	X	10 - 120
Nitrobenzene-d5	34		27 - 120
Phenol-d5	21		10 - 120
Terphenyl-d14	48	X	53 - 125
2,4,6-Tribromophenol	44		15 - 135

Lab Sample ID: LCSD 400-416425/3-A
Matrix: Water
Analysis Batch: 416989

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416425

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aniline	30.0	21.6		ug/L		72	29 - 120	20	30
Benzoic acid	118	20.1	J *	ug/L		17	10 - 150	133	30
Benzyl alcohol	30.0	20.7		ug/L		69	19 - 125	26	30
Bis(2-chloroethoxy)methane	30.0	20.9		ug/L		70	45 - 120	18	30
Bis(2-chloroethyl)ether	30.0	20.0		ug/L		67	48 - 120	18	30
bis (2-chloroisopropyl) ether	30.0	18.1		ug/L		60	30 - 125	21	30
Bis(2-ethylhexyl) phthalate	30.0	21.6	*	ug/L		72	48 - 150	50	30
4-Bromophenyl phenyl ether	30.0	22.2		ug/L		74	55 - 122	22	30
Butyl benzyl phthalate	30.0	21.6		ug/L		72	46 - 145	30	30
4-Chloroaniline	30.0	20.2		ug/L		67	30 - 120	9	30
4-Chloro-3-methylphenol	30.0	20.5		ug/L		68	39 - 140	23	30
2-Chloronaphthalene	30.0	18.2		ug/L		61	52 - 120	24	30
2-Chlorophenol	30.0	13.6	*	ug/L		45	34 - 120	55	30
4-Chlorophenyl phenyl ether	30.0	21.6		ug/L		72	58 - 124	16	30
Dibenz[a,h]acridine	30.0	23.8		ug/L		79	46 - 149	15	30
Dibenzofuran	30.0	21.2		ug/L		71	58 - 123	17	30
3,3'-Dichlorobenzidine	40.0	45.6		ug/L		114	39 - 135	27	30
2,4-Dichlorophenol	30.0	18.5	*	ug/L		62	39 - 128	33	30
Diethyl phthalate	30.0	22.2		ug/L		74	44 - 146	18	30
2,4-Dimethylphenol	30.0	20.9		ug/L		70	44 - 120	27	30
Dimethyl phthalate	30.0	21.6		ug/L		72	50 - 131	16	30
Di-n-butyl phthalate	30.0	23.5		ug/L		78	55 - 131	18	30
4,6-Dinitro-ortho-cresol	60.0	50.1		ug/L		84	10 - 150	11	30
2,4-Dinitrophenol	60.0	39.5	*	ug/L		66	10 - 150	33	30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-416425/3-A
Matrix: Water
Analysis Batch: 416989

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416425

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4-Dinitrotoluene	30.0	24.6		ug/L		82	58 - 140	16	30
2,6-Dinitrotoluene	30.0	21.9		ug/L		73	57 - 130	20	30
Di-n-octyl phthalate	30.0	22.4		ug/L		75	50 - 150	20	30
1,4-Dioxane	30.0	12.3	*	ug/L		41	25 - 120	43	30
1,2-Diphenylhydrazine (as Azobenzene)	30.0	21.2		ug/L		71	47 - 123	22	30
Hexachlorobenzene	30.0	24.3		ug/L		81	52 - 131	19	30
Hexachlorocyclopentadiene	30.0	7.22	J	ug/L		24	10 - 129	12	30
Hexachloroethane	30.0	12.5		ug/L		42	41 - 120	24	30
Indene	30.0	18.8		ug/L		63	47 - 120	26	30
Isophorone	30.0	20.7		ug/L		69	49 - 120	19	30
2-Methylphenol	30.0	18.7		ug/L		62	39 - 123	29	30
3 & 4 Methylphenol	30.0	18.6	J *	ug/L		62	38 - 121	31	30
2-Nitroaniline	30.0	21.2		ug/L		71	47 - 150	20	30
3-Nitroaniline	30.0	21.5		ug/L		72	34 - 132	11	30
4-Nitroaniline	30.0	24.3		ug/L		81	41 - 135	17	30
Nitrobenzene	30.0	19.3		ug/L		64	47 - 120	24	30
2-Nitrophenol	30.0	19.2	*	ug/L		64	28 - 136	33	30
4-Nitrophenol	60.0	38.9		ug/L		65	10 - 150	18	30
N-Nitrosodimethylamine	30.0	18.3		ug/L		61	22 - 148	20	30
N-Nitrosodi-n-propylamine	30.0	20.8		ug/L		69	44 - 120	24	30
N-Nitrosodiphenylamine	29.8	21.4		ug/L		72	56 - 120	23	30
Pentachlorophenol	60.0	48.9		ug/L		81	15 - 141	24	30
Phenol	30.0	14.7	*	ug/L		49	33 - 120	51	30
Pyridine	60.0	27.1	*	ug/L		45	26 - 120	32	30
Quinoline	30.0	24.1		ug/L		80	51 - 129	18	30
2,4,5-Trichlorophenol	30.0	21.2		ug/L		71	38 - 147	24	30
2,4,6-Trichlorophenol	30.0	20.3		ug/L		68	36 - 139	26	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*60*		*34 - 120*
2-Fluorophenol	*19*		*10 - 120*
Nitrobenzene-d5	*63*		*27 - 120*
Phenol-d5	*46*		*10 - 120*
Terphenyl-d14	*65*		*53 - 125*
2,4,6-Tribromophenol	*73*		*15 - 135*

Lab Sample ID: LCSD 400-416425/5-A
Matrix: Water
Analysis Batch: 416716

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416425

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzenethiol	30.0	ND	*	ug/L		0.6	10 - 120	131	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*37*		*34 - 120*
2-Fluorophenol	*11*		*10 - 120*
Nitrobenzene-d5	*38*		*27 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-416425/5-A
Matrix: Water
Analysis Batch: 416716

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416425

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Phenol-d5	*27*		*10 - 120*
Terphenyl-d14	*54*		*53 - 125*
2,4,6-Tribromophenol	*36*		*15 - 135*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 400-416425/1-A
Matrix: Water
Analysis Batch: 416798

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416425

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 21:56	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 21:56	1
Anthracene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 21:56	1
Benzo[a]anthracene	ND		0.20	0.040	ug/L		10/22/18 13:25	10/24/18 21:56	1
Benzo[a]pyrene	ND		0.20	0.040	ug/L		10/22/18 13:25	10/24/18 21:56	1
Benzo[b]fluoranthene	ND		0.20	0.040	ug/L		10/22/18 13:25	10/24/18 21:56	1
Benzo[g,h,i]perylene	ND		0.20	0.040	ug/L		10/22/18 13:25	10/24/18 21:56	1
Benzo[k]fluoranthene	ND		0.20	0.040	ug/L		10/22/18 13:25	10/24/18 21:56	1
Chrysene	ND		0.20	0.040	ug/L		10/22/18 13:25	10/24/18 21:56	1
Dibenz(a,h)anthracene	ND		0.20	0.040	ug/L		10/22/18 13:25	10/24/18 21:56	1
Fluoranthene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 21:56	1
Fluorene	ND		0.20	0.021	ug/L		10/22/18 13:25	10/24/18 21:56	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.040	ug/L		10/22/18 13:25	10/24/18 21:56	1
Phenanthrene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 21:56	1
Pyrene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 21:56	1
1-Methylnaphthalene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 21:56	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 21:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*132*		*33 - 138*	*10/22/18 13:25*	*10/24/18 21:56*	*1*
2-Fluorobiphenyl	*70*		*15 - 122*	*10/22/18 13:25*	*10/24/18 21:56*	*1*
Nitrobenzene-d5	*119*		*19 - 130*	*10/22/18 13:25*	*10/24/18 21:56*	*1*

Lab Sample ID: LCS 400-416425/2-A
Matrix: Water
Analysis Batch: 416798

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416425

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	30.0	26.1		ug/L		87	41 - 120
Acenaphthylene	30.0	27.4		ug/L		91	44 - 120
Anthracene	30.0	30.7		ug/L		102	49 - 120
Benzo[a]anthracene	30.0	27.2		ug/L		91	61 - 135
Benzo[a]pyrene	30.0	29.6		ug/L		99	52 - 120
Benzo[b]fluoranthene	30.0	34.1		ug/L		114	53 - 134
Benzo[g,h,i]perylene	30.0	25.1		ug/L		84	47 - 133
Benzo[k]fluoranthene	30.0	31.7		ug/L		106	57 - 134

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCS 400-416425/2-A
Matrix: Water
Analysis Batch: 416798

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416425

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chrysene	30.0	27.6		ug/L		92	55 - 122
Dibenz(a,h)anthracene	30.0	28.9		ug/L		96	48 - 146
Fluoranthene	30.0	27.1		ug/L		90	54 - 128
Fluorene	30.0	29.2		ug/L		97	45 - 125
Indeno[1,2,3-cd]pyrene	30.0	28.1		ug/L		94	43 - 142
Phenanthrene	30.0	29.5		ug/L		98	48 - 120
Pyrene	30.0	33.0		ug/L		110	48 - 132
1-Methylnaphthalene	30.0	29.3		ug/L		98	41 - 120
2-Methylnaphthalene	30.0	28.5		ug/L		95	32 - 124

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14	*101*		*33 - 138*
2-Fluorobiphenyl	*72*		*15 - 122*
Nitrobenzene-d5	*104*		*19 - 130*

Lab Sample ID: LCSD 400-416425/3-A
Matrix: Water
Analysis Batch: 416798

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416425

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	30.0	25.0		ug/L		83	41 - 120	4	56
Acenaphthylene	30.0	26.1		ug/L		87	44 - 120	5	56
Anthracene	30.0	29.8		ug/L		99	49 - 120	3	51
Benzo[a]anthracene	30.0	26.5		ug/L		88	61 - 135	3	49
Benzo[a]pyrene	30.0	29.3		ug/L		98	52 - 120	1	50
Benzo[b]fluoranthene	30.0	33.3		ug/L		111	53 - 134	2	54
Benzo[g,h,i]perylene	30.0	22.4		ug/L		75	47 - 133	11	50
Benzo[k]fluoranthene	30.0	30.5		ug/L		102	57 - 134	4	52
Chrysene	30.0	27.3		ug/L		91	55 - 122	1	50
Dibenz(a,h)anthracene	30.0	25.5		ug/L		85	48 - 146	12	50
Fluoranthene	30.0	27.5		ug/L		92	54 - 128	1	52
Fluorene	30.0	28.0		ug/L		93	45 - 125	4	56
Indeno[1,2,3-cd]pyrene	30.0	25.0		ug/L		83	43 - 142	12	51
Phenanthrene	30.0	28.7		ug/L		96	48 - 120	3	56
Pyrene	30.0	32.5		ug/L		108	48 - 132	2	52
1-Methylnaphthalene	30.0	29.9		ug/L		100	41 - 120	2	55
2-Methylnaphthalene	30.0	29.9		ug/L		100	32 - 124	5	57

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Terphenyl-d14	*92*		*33 - 138*
2-Fluorobiphenyl	*67*		*15 - 122*
Nitrobenzene-d5	*102*		*19 - 130*

Method: 8011 - EDB and DBCP in Water by Microextraction

Lab Sample ID: MB 400-416931/1-A
Matrix: Water
Analysis Batch: 417027

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416931

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0055	ug/L		10/25/18 11:36	10/25/18 19:05	1
1,2-Dibromoethane	ND		0.020	0.0050	ug/L		10/25/18 11:36	10/25/18 19:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*	*p*	*51 - 149*	*10/25/18 11:36*	*10/25/18 19:05*	*1*

Lab Sample ID: LCS 400-416931/2-A
Matrix: Water
Analysis Batch: 417027

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416931

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	0.100	0.0882		ug/L		88	60 - 140
1,2-Dibromoethane	0.100	0.121		ug/L		121	60 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*104*		*51 - 149*

Lab Sample ID: LCSD 400-416931/3-A
Matrix: Water
Analysis Batch: 417027

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416931

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane	0.100	0.0809		ug/L		81	60 - 140	9	30
1,2-Dibromoethane	0.100	0.120		ug/L		120	60 - 140	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*98*		*51 - 149*

Shell Oil Products US Chain Of Custody Record

AECOM

LAB (LOCATION)

☐ ACCUTEST (_____)

☐ CALSCIENCE (_____)

☑ TESTAMERICA (TestAmerica Pensacola; 3355 McLemore Dr. Pensacola, FL 32514 (850-474-1001))

☐ Other Lab Vendor # 1364589 (TestAmerica)

Please Check Appropriate Box:

☐ SGW FDG ☐ PIPELINE ☐ RETAIL

☐ CHEMICALS ☐ CONSULTANT ☐ LUBES

☐ TRANSPORTATION ☑ OTHER _ENV. SERVICES

Print Bill To Contact Name: Bob Billman

PlaNet Site or Project ID: 25278

PO #: 60527968 - 01.03.004 | 60527968 - 01.03.0044

GSAP Project ID: USPC/00114/R/02

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 10/15/18

PAGE: 1 of 1

SAMPLING COMPANY: AECOM

LOG CODE:

SITE ADDRESS: Street and City: 900 South Central Ave; ROXANA

State: IL

AECOM Project / Task Number: Roxana Quarterly GW 60527968 - 01.03.004 | 60527968 - 01.03.0044

ADDRESS: 100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA

[SS- DELIVERABLES TO (Name, Company, Office Location)]

PHONE NO

E-MAIL

AECOM Order ID

PROJECT CONTACT (Hardcopy or PDF Report to)

Elizabeth Kunkel, Bob Billman, Melissa Remiger

SAMPLER NAME(S) (Print): J. PETERS, T. JONES

LAB USE ONLY

TELEPHONE: 314-429-0100

FAX: 314-429-0462

Bill To Contact E-MAIL: bob.billman@aecom.com; elizabeth.kunkel@aecom.com; melissa.remiger@aecom.com

TURNAROUND TIME (CALENDAR DAYS):

☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT

DELIVERABLES: ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT C° Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
* Please include "J" values on Reports
* Please provide sample receipt upon login

SPLIT REPORT

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

UNIT COST 60527968 - 01.03.004

NON-UNIT COST 60527968 - 01.03.0044

400-160656 COC

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

Container PID Readings or Laboratory Notes

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VOC 8011	PAH 8270LL	VOC 8260	SVOC 8270	
	TB-ROX-101518-8011-EE	10/15	0000	WATER	2					2	X				~~SPLIT~~ LP
	TB-ROX-101518-8260-EE	10/15	0000		2					2			X		SPLIT REPORT
	P93D-ROX-101518	10/15	0955		4			2		6	X	X	X	X	
	P93B-ROX-101518	10/15	1045		4			2		6	X	X	X	X	
	P93B-ROX-101518-DUP	10/15	1045		4			2		6	X	X	X	X	
	P93C-ROX-101518	10/15	1205		4			2		6	X	X	X	X	
	P56-ROX-101518	10/15	1305	✓	4			2		6	X	X	X	X	

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
	FEDEX	10/15/18	1530
Relinquished by: (Signature)	Received by: (Signature)	Date: 10/16/18	Time: 0911
Relinquished by: (Signature)	Received by: (Signature) 2.2°C, 0.9°C 2.0°C, 0.1°C IR8	Date	Time

Version: 14Dec15

* Custody seals and tracking numbers same as Roxana COC

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10/31/2018

Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 400-160656-1
SDG Number: 60527968

Login Number: 160656
List Number: 1
Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.2°C, 0.9°C, 2.0°C, 0.1°C IR-8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160656-1
SDG: 60527968

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-18 *
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-16	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Roxana Groundwater Quarterly – 4th Quarter 2018 Data Review

Laboratory SDG: 400-160657-1

Data Reviewer: Melissa Remiger

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 10/31/2018

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2017

Sample Identification	Sample Identification
TB-ROX-101518-8011	TB-ROX-101518-8260
ROST4PZE-ROX-101518	MW22-ROX-101518
MW14-ROX-101518-EB	MW14-ROX-101518
P66-ROX-101518	P66-ROX-101518-Dup

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated SVOC LCS/LCSD recoveries for benzenethiol and 3,3'-dichlorobenzidine, and several LCS/LCSD RPDs, were outside evaluation criteria. Several SVOC surrogate recoveries were outside criteria in several investigative and quality control samples. The VOC MS/MSD recoveries, and MS/MSD RPDs, for acetone and 2-chloroethyl vinyl ether, were outside evaluation criteria in sample ROST4PZE-ROX-101518. The difference in acenaphthene results for the field duplicate pair P66-ROX-101518/P66-ROX-101518-Dup was greater than two times (2X) the reporting level, and results for n-propylbenzene and sec-butylbenzene were qualified due to field duplicate RPD above evaluation criteria; therefore results were qualified as estimated (**UJ/J**). SVOCs in sample ROST4PZE-ROX-101518 and field duplicate pair P66-ROX-101518/P66-ROX-101518-Dup were diluted due to the nature of the sample matrix, and VOCs and PAHs in several samples were diluted to bring target analytes into calibration range of the instrument. The continuing calibration verifications for several analytes were outside evaluation criteria, biased low. These issues are addressed further in the appropriate sections of this data review.

Three of 69 (2-chloroethyl vinyl ether, acrolein, and acrylonitrile) 8260 VOCs are acid-reactive compounds; results may be biased low due to the presence of HCl in the preservative.

The cooler receipt form did not indicate any problems.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS/LCSD ID	Parameter	Analyte	LCS/ LCSD Recovery	RPD	LCS/LCSD/ RPD Criteria
LCS/LCSD 400-416425/4-A/5-A	SVOCs	Benzenethiol	**3/0.6**	**131**	10-120/30
LCS/LCSD 400-416425/2-A/3-A	SVOCs	Benzoic acid	86/17	**133**	10-150/30
LCS/LCSD 400-416425/2-A/3-A	SVOCs	bis(2-Ethylhexyl)phthalate	120/72	**50**	48-150/30
LCS/LCSD 400-416425/2-A/3-A	SVOCs	2-Chlorophenol	80/45	**55**	34-120/30
LCS/LCSD 400-416425/2-A/3-A	SVOCs	3,3'-Dichlorobenzidine	**150**/114	27	39-135/30
LCS/LCSD 400-416425/2-A/3-A	SVOCs	2,4-Dichlorophenol	86/62	**33**	39-128/30
LCS/LCSD 400-416425/2-A/3-A	SVOCs	2,4-Dinitrophenol	92/66	**33**	10-150/30
LCS/LCSD 400-416425/2-A/3-A	SVOCs	1,4-Dioxane	64/41	**43**	25-120/30
LCS/LCSD 400-416425/2-A/3-A	SVOCs	3&4-Methylphenol	84/62	**31**	38-121/30
LCS/LCSD 400-416425/2-A/3-A	SVOCs	2-Nitrophenol	89/64	**33**	28-136/30
LCS/LCSD 400-416425/2-A/3-A	SVOCs	Phenol	82/49	**51**	33-120/30
LCS/LCSD 400-416425/2-A/3-A	SVOCs	Pyridine	62/45	**32**	26-120/30
LCS/LCSD 400-416931/2-A/3-A	VOCs by 8011	1,2-Dibromoethane	121/120	**35**	60-140/30

Analytical data that required qualification based on LCS/LCSD data are included in the table below. Professional judgment was used to qualify, however not reject, data associated with benzenethiol in LCS/LCSD 400-416425/4-A/5-A; benzenethiol has been identified as a poor performing analyte under Method 8270. Analytical data associated with RPD alone outside evaluation criteria did not require qualification. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Sample ID	Parameter	Analyte	Qualification
ROST4PZE-ROX-101518	SVOCs	Benzenethiol	**UJ**
MW22-ROX-101518	SVOCs	Benzenethiol	**UJ**
MW14-ROX-101518	SVOCs	Benzenethiol	**UJ**

Sample ID	Parameter	Analyte	Qualification
P66-ROX-101518	SVOCs	Benzenethiol	**UJ**
P66-ROX-101518-Dup	SVOCs	Benzenethiol	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
MW14-ROX-101518-EB	SVOCs	Terphenyl-d_{14}	**45**	53-125
P66-ROX-101518	SVOCs	Terphenyl-d_{14}	**36**	53-125
P66-ROX-101518-Dup	SVOCs	Terphenyl-d_{14}	**36**	53-125
LCS 400-416425/4-A	SVOCs	2-Fluorophenol	**7**	10-120
LCS 400-416425/4-A	SVOCs	Terphenyl-d_{14}	**48**	53-125

Qualifications due to surrogate recoveries were not required if only one of three base/neutral fraction surrogate recoveries were outside evaluation criteria in the associated SVOC samples. Quality control samples do not require qualification. No qualification of data was required.

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

Yes, although not requested, sample ROST4PZE-ROX-101518 was spiked and duplicated for Method 8260 VOCs.

Were MS/MSD recoveries within evaluation criteria?

No

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
ROST4PZE-ROX-101518	VOCs	Acetone	**288/309**	7	43-150/30
ROST4PZE-ROX-101518	VOCs	2-Chloroethyl vinyl ether	**0/0**	**NC**	10-150/50

Analytical data that required qualification based on MS/MSD data are included in the table below. Analytical data associated with RPD alone outside evaluation criteria did not require qualification. Analytical data reported as non-detect and associated with MSMSD recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Sample ID	Parameter	Analyte	Qualification
ROST4PZE-ROX-101518	VOCs	2-Chloroethyl vinyl ether	**UJ**

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
P66-ROX-101518	P66-ROX-101518-Dup

Were field duplicates within evaluation criteria?

No

Field ID	Field Duplicate ID	Parameter	Analyte	RPD	Qualification
P66-ROX-101518	P66-ROX-101518-Dup	VOCs	n-Propylbenzene	**29**	**J/J**
P66-ROX-101518	P66-ROX-101518-Dup	VOCs	sec-Butylbenzene	**32**	**J/J**
P66-ROX-101518	P66-ROX-101518-Dup	PAHs	Acenaphthene	**> 2X RL**	**J/UJ**

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; analytes were detected in samples that were diluted, with the exception of SVOCs in sample ROST4PZE-ROX-101518 and field duplicate pair P66-ROX-101518/P66-ROX-101518-Dup. SVOCs were non-detect at a dilution factor of 5X, with a raised reporting limits of 49 to 150 µg/L. Due to historical SVOC detections, please see section 12.0 of the data review for additional qualifications.

12.0 Additional Qualifications

Were additional qualifications applied?

Yes, the continuing calibration verifications for several analytes were below acceptance criteria and are qualified as summarized in the following table. SVOCs in sample ROST4PZE-ROX-101518 and field duplicate pair P66-ROX-101518/P66-ROX-101518-Dup were previously qualified in Section 11.0 of this review due to sample dilution and historical detections; no further qualification of SVOCs in sample ROST4PZE-ROX-101518 and field duplicate pair P66-ROX-101518/P66-ROX-101518-Dup was required.

Sample ID	Parameter	Analyte	Qualification
MW14-ROX-101518	SVOCs	Quinoline	**UJ**
MW14-ROX-101518	SVOCs	Aniline	**UJ**
MW14-ROX-101518	SVOCs	4,6-Dinitro-ortho-cresol	**UJ**
MW14-ROX-101518	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW14-ROX-101518	SVOCs	4-Nitrophenol	**UJ**
MW22-ROX-101518	SVOCs	4,6-Dinitro-ortho-cresol	**UJ**

Sample ID	Parameter	Analyte	Qualification
MW22-ROX-101518	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW22-ROX-101518	SVOCs	4-Nitroaniline	**UJ**
MW22-ROX-101518	SVOCs	4-Nitrophenol	**UJ**

Additionally, SVOCs in sample ROST4PZE-ROX-101518 and field duplicate pair P66-ROX-101518/P66-ROX-101518-Dup were qualified as estimated non-detect due to sample dilution and historical detections.

Sample ID	Parameter	Analyte	Qualification
ROST4PZE-ROX-101518	SVOCs	All non-detects	**UJ**
P66-ROX-101518	SVOCs	All non-detects	**UJ**
P66-ROX-101518-Dup	SVOCs	All non-detects	**UJ**

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-160657-1
TestAmerica Sample Delivery Group: 90527968
Client Project/Site: ROXANA QUARTERLY

For:
AECOM Technical Services Inc.
100 N. Broadway
20th Floor
St. Louis, Missouri 63102

Attn: Elizabeth Kunkel

Authorized for release by:
10/30/2018 5:35:47 PM

Leah Klingensmith, Senior Project Manager
(615)301-5038
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LINKS

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Reviewed 10/31/18 LR

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-160657-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-160657-1

Comments
No additional comments.

Receipt
The samples were received on 10/16/2018 9:11 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 0.1° C, 0.9° C, 2.0° C and 2.2° C.

GC/MS VOA
Method(s) 8260B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 400-417182 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 8260B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 400-417182 were outside control limits for 2-Chloroethyl vinyl ether due to the acidic nature of the parent sample.

Method(s) 8260B: The RPD for the matrix spike / matrix spike duplicate (MS/MSD) for 2-Chloroethyl vinyl ether was not calculable for analytical batch 400-417182 because the recoveries were below the reporting limit due to the acidic nature of the parent sample.

Method(s) 8260B: The preservative used in the sample containers provided is not compatible with some of the Method 8260 analytes requested. The following samples were received preserved with hydrochloric acid: TB-ROX-101518-8260 (400-160657-2), ROST4PZE-ROX-101518 (400-160657-3), MW22-ROX-101518 (400-160657-4), MW14-ROX-101518 (400-160657-5), MW14-ROX-101518-EB (400-160657-6), P66-ROX-101518 (400-160657-7) and P66-ROX-101518-DUP (400-160657-8). The requested target analyte list includes 2-chloroethyl vinyl ether, Acrolein and Acrylonitrile, which are acid-labile compounds that degrade in an acidic medium.

Method(s) 8260B: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW22-ROX-101518 (400-160657-4). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: The initial calibration verification (ICV) analyzed in batch 400-390317 was outside method criteria for the following analytes: Acrolein and Dichlorodifluoromethane. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270D: Six surrogates are used for this analysis. The laboratory's SOP allows one acid and one base of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following samples contained an allowable number of surrogate compounds outside limits: MW14-ROX-101518-EB (400-160657-6) and (LCS 400-416425/4-A). These results have been reported and qualified.

Method(s) 8270D LL: The following samples were diluted to bring the concentration of target analytes within the calibration range: P66-ROX-101518 (400-160657-7) and P66-ROX-101518-DUP (400-160657-8). Elevated reporting limits (RLs) are provided.

Method(s) 8270D: Three surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following samples contained an allowable number of surrogate compounds outside limits: P66-ROX-101518 (400-160657-7) and P66-ROX-101518-DUP (400-160657-8). These results have been reported and qualified.

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 400-416965 recovered above the upper control limit for Dibenz[a,h]acridine. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: ROST4PZE-ROX-101518 (400-160657-3), MW22-ROX-101518 (400-160657-4), P66-ROX-101518 (400-160657-7) and P66-ROX-101518-DUP (400-160657-8).

Job ID: 400-160657-1 (Continued)

Laboratory: TestAmerica Pensacola (Continued)

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 400-416716 recovered above the upper control limit for Di-n-butyl phthalate, Hexachlorobenzene, 4,6-Dinitro-ortho-cresol, 4-Bromophenyl phenyl ether, 2-Nitrophenol and 4-Nitrophenol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW14-ROX-101518-EB (400-160657-6) and (MB 400-416425/1-A).

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 400-416716 recovered outside acceptance criteria, low biased, for Quinoline, Benzyl alcohol and Bis(2-chloroethyl)ether. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method(s) 8270D: The laboratory control sample (LCS) for preparation batch 400-416425 and analytical batch 400-416989 recovered outside control limits for the following analytes: 3,3'-Dichlorobenzidine. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 400-416425 and analytical batch 400-416989 recovered outside control limits for the following analytes: 2,4-Dinitrophenol, 2-Chlorophenol, 2-Nitrophenol, Bis(2-ethylhexyl) phthalate, Phenol, Pyridine, 2,4-Dichlorophenol, 1,4-Dioxane, Benzoic acid and 3 & 4 Methylphenol.

Method(s) 8270D: The following samples were diluted due to the nature of the sample matrix: ROST4PZE-ROX-101518 (400-160657-3), MW22-ROX-101518 (400-160657-4), P66-ROX-101518 (400-160657-7) and P66-ROX-101518-DUP (400-160657-8). Elevated reporting limits (RLs) are provided.

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 400-416965 recovered outside acceptance criteria, low biased, for 4,6-Dinitro-ortho-cresol, Hexachlorocyclopentadiene, 4-Nitroaniline and 4-Nitrophenol. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 400-417229 recovered outside acceptance criteria, low biased, for 4,6-Dinitro-ortho-cresol, Hexachlorocyclopentadiene, Aniline and 4-Nitrophenol. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method(s) 8270D: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 400-416425 and analytical batch 400-416716 recovered outside control limits for the following analyte(s): Benzenethiol. Benzenethiol has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. Batch precision also exceeded control limits for these analyte(s). These results have been reported and qualified.

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 400-416716 recovered outside acceptance criteria, low biased, for Quinoline. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

Method(s) 8011: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 400-416931 and analytical batch 400-417027 recovered outside control limits for the following analytes: 1,2-Dibromoethane. Individual recoveries are passing.

Method(s) 8011: The continuing calibration verification (CCV) associated with batch 400-417027 recovered above the upper control limit for 1,2-Dibromo-3-Chloropropane and 1,2-Dibromoethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: TB-ROX-101518-8011 (400-160657-1), ROST4PZE-ROX-101518 (400-160657-3), MW22-ROX-101518 (400-160657-4), MW14-ROX-101518 (400-160657-5), MW14-ROX-101518-EB (400-160657-6), P66-ROX-101518 (400-160657-7), P66-ROX-101518-DUP (400-160657-8) and (MB 400-416931/1-A).

Job ID: 400-160657-1 (Continued)

Laboratory: TestAmerica Pensacola (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160657-1
SDG: 90527968

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-160657-1	TB-ROX-101518-8011	Water	10/15/18 00:00	10/16/18 09:11
400-160657-2	TB-ROX-101518-8260	Water	10/15/18 00:00	10/16/18 09:11
400-160657-3	ROST4PZE-ROX-101518	Water	10/15/18 09:40	10/16/18 09:11
400-160657-4	MW22-ROX-101518	Water	10/15/18 10:30	10/16/18 09:11
400-160657-5	MW14-ROX-101518	Water	10/15/18 12:30	10/16/18 09:11
400-160657-6	MW14-ROX-101518-EB	Water	10/15/18 12:00	10/16/18 09:11
400-160657-7	P66-ROX-101518	Water	10/15/18 13:20	10/16/18 09:11
400-160657-8	P66-ROX-101518-DUP	Water	10/15/18 13:20	10/16/18 09:11

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160657-1
SDG: 90527968

Client Sample ID: TB-ROX-101518-8011 — Lab Sample ID: 400-160657-1

No Detections.

Client Sample ID: TB-ROX-101518-8260 — Lab Sample ID: 400-160657-2

No Detections.

Client Sample ID: ROST4PZE-ROX-101518 — Lab Sample ID: 400-160657-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.1		1.0	0.38	ug/L	1		8260B	Total/NA
m-Xylene & p-Xylene	2.8	J	5.0	1.6	ug/L	1		8260B	Total/NA
Naphthalene	1.5		1.0	1.0	ug/L	1		8260B	Total/NA
o-Xylene	1.4	J	5.0	0.60	ug/L	1		8260B	Total/NA
p-Isopropyltoluene	0.71	J	1.0	0.71	ug/L	1		8260B	Total/NA
1,2,4-Trimethylbenzene	5.9		1.0	0.82	ug/L	1		8260B	Total/NA
1,3,5-Trimethylbenzene	1.8		1.0	0.56	ug/L	1		8260B	Total/NA
Xylenes, Total	4.2	J	10	1.6	ug/L	1		8260B	Total/NA
Phenanthrene	2.8		0.20	0.020	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene	5.1		0.20	0.020	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	4.0		0.20	0.020	ug/L	1		8270D LL	Total/NA

Client Sample ID: MW22-ROX-101518 — Lab Sample ID: 400-160657-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	56		10	3.8	ug/L	10		8260B	Total/NA
Ethylbenzene	1500		10	5.0	ug/L	10		8260B	Total/NA
Isopropylbenzene	66		10	5.3	ug/L	10		8260B	Total/NA
m-Xylene & p-Xylene	2900		50	16	ug/L	10		8260B	Total/NA
Naphthalene	210		10	10	ug/L	10		8260B	Total/NA
N-Propylbenzene	120		10	6.9	ug/L	10		8260B	Total/NA
o-Xylene	300		50	6.0	ug/L	10		8260B	Total/NA
sec-Butylbenzene	7.7	J	10	7.0	ug/L	10		8260B	Total/NA
Toluene	130		10	7.0	ug/L	10		8260B	Total/NA
1,2,4-Trimethylbenzene	800		10	8.2	ug/L	10		8260B	Total/NA
1,3,5-Trimethylbenzene	190		10	5.6	ug/L	10		8260B	Total/NA
Xylenes, Total	3200		100	16	ug/L	10		8260B	Total/NA
Phenanthrene	0.16	J	0.21	0.021	ug/L	1		8270D LL	Total/NA
Pyrene	0.026	J	0.21	0.021	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene	19		0.21	0.021	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	28		0.21	0.021	ug/L	1		8270D LL	Total/NA
Indene	19	J	53	5.3	ug/L	5		8270D	Total/NA

Client Sample ID: MW14-ROX-101518 — Lab Sample ID: 400-160657-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	13	J	25	10	ug/L	1		8260B	Total/NA
1-Methylnaphthalene	0.083	J	0.20	0.020	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	0.12	J	0.20	0.020	ug/L	1		8270D LL	Total/NA
Di-n-octyl phthalate - RA	1.9	J	9.8	0.43	ug/L	1		8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160657-1
SDG: 90527968

Client Sample ID: MW14-ROX-101518-EB — Lab Sample ID: 400-160657-6

No Detections.

Client Sample ID: P66-ROX-101518 — Lab Sample ID: 400-160657-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	52		1.0	0.38	ug/L	1		8260B	Total/NA
Ethylbenzene	0.72	J	1.0	0.50	ug/L	1		8260B	Total/NA
Isopropylbenzene	54		1.0	0.53	ug/L	1		8260B	Total/NA
n-Butylbenzene	3.6		1.0	0.76	ug/L	1		8260B	Total/NA
N-Propylbenzene	57	J	1.0	0.69	ug/L	1		8260B	Total/NA
sec-Butylbenzene	8.0	J	1.0	0.70	ug/L	1		8260B	Total/NA
tert-Butylbenzene	2.3		1.0	0.63	ug/L	1		8260B	Total/NA
Toluene	0.98	J	1.0	0.70	ug/L	1		8260B	Total/NA
Acenaphthene	0.66	J	0.19	0.019	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	23		0.19	0.019	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene - DL	46		1.9	0.19	ug/L	10		8270D LL	Total/NA

Client Sample ID: P66-ROX-101518-DUP — Lab Sample ID: 400-160657-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	57		1.0	0.38	ug/L	1		8260B	Total/NA
Ethylbenzene	0.82	J	1.0	0.50	ug/L	1		8260B	Total/NA
Isopropylbenzene	68		1.0	0.53	ug/L	1		8260B	Total/NA
n-Butylbenzene	5.0		1.0	0.76	ug/L	1		8260B	Total/NA
N-Propylbenzene	76	J	1.0	0.69	ug/L	1		8260B	Total/NA
o-Xylene	0.86	J	5.0	0.60	ug/L	1		8260B	Total/NA
sec-Butylbenzene	11	J	1.0	0.70	ug/L	1		8260B	Total/NA
tert-Butylbenzene	2.8		1.0	0.63	ug/L	1		8260B	Total/NA
Toluene	0.99	J	1.0	0.70	ug/L	1		8260B	Total/NA
2-Methylnaphthalene	25		0.20	0.020	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene - DL	42		2.0	0.20	ug/L	10		8270D LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160657-1
SDG: 90527968

Client Sample ID: TB-ROX-101518-8011
Date Collected: 10/15/18 00:00
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-1
Matrix: Water

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.032	0.0058	ug/L		10/25/18 11:36	10/26/18 12:17	1
1,2-Dibromoethane	ND	*	0.021	0.0053	ug/L		10/25/18 11:36	10/26/18 12:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*	*p*	*51 - 149*	*10/25/18 11:36*	*10/26/18 12:17*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160657-1
SDG: 90527968

Client Sample ID: TB-ROX-101518-8260
Date Collected: 10/15/18 00:00
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/27/18 11:53	1
Acrolein	ND		20	10	ug/L			10/27/18 11:53	1
Acrylonitrile	ND		10	2.8	ug/L			10/27/18 11:53	1
Benzene	ND		1.0	0.38	ug/L			10/27/18 11:53	1
Bromobenzene	ND		1.0	0.54	ug/L			10/27/18 11:53	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/27/18 11:53	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/27/18 11:53	1
Bromoform	ND		5.0	0.71	ug/L			10/27/18 11:53	1
Bromomethane	ND		1.0	0.98	ug/L			10/27/18 11:53	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/27/18 11:53	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/27/18 11:53	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/27/18 11:53	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/27/18 11:53	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/27/18 11:53	1
Chloroethane	ND		1.0	0.76	ug/L			10/27/18 11:53	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/27/18 11:53	1
Chloroform	ND		1.0	0.60	ug/L			10/27/18 11:53	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/27/18 11:53	1
Chloromethane	ND		1.0	0.83	ug/L			10/27/18 11:53	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 11:53	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/27/18 11:53	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/27/18 11:53	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/27/18 11:53	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/27/18 11:53	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/27/18 11:53	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/27/18 11:53	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/27/18 11:53	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 11:53	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 11:53	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 11:53	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 11:53	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/27/18 11:53	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/27/18 11:53	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/27/18 11:53	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/27/18 11:53	1
2-Hexanone	ND		25	3.1	ug/L			10/27/18 11:53	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/27/18 11:53	1
Methylene bromide	ND		5.0	0.59	ug/L			10/27/18 11:53	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/27/18 11:53	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/27/18 11:53	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/27/18 11:53	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/27/18 11:53	1
Naphthalene	ND		1.0	1.0	ug/L			10/27/18 11:53	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/27/18 11:53	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/27/18 11:53	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/27/18 11:53	1
o-Xylene	ND		5.0	0.60	ug/L			10/27/18 11:53	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/27/18 11:53	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/27/18 11:53	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160657-1
SDG: 90527968

Client Sample ID: TB-ROX-101518-8260
Date Collected: 10/15/18 00:00
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/27/18 11:53	1
Styrene	ND		1.0	1.0	ug/L			10/27/18 11:53	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/27/18 11:53	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/27/18 11:53	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/27/18 11:53	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/27/18 11:53	1
Toluene	ND		1.0	0.70	ug/L			10/27/18 11:53	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 11:53	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/27/18 11:53	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/27/18 11:53	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/27/18 11:53	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/27/18 11:53	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/27/18 11:53	1
Trichloroethene	ND		1.0	0.50	ug/L			10/27/18 11:53	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/27/18 11:53	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/27/18 11:53	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/27/18 11:53	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/27/18 11:53	1
Vinyl acetate	ND		25	2.0	ug/L			10/27/18 11:53	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/27/18 11:53	1
Xylenes, Total	ND		10	1.6	ug/L			10/27/18 11:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*78 - 118*		*10/27/18 11:53*	*1*
Dibromofluoromethane	*98*		*81 - 121*		*10/27/18 11:53*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*10/27/18 11:53*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160657-1
SDG: 90527968

Client Sample ID: ROST4PZE-ROX-101518
Date Collected: 10/15/18 09:40
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	F1	25	10	ug/L			10/27/18 08:59	1
Acrolein	ND		20	10	ug/L			10/27/18 08:59	1
Acrylonitrile	ND		10	2.8	ug/L			10/27/18 08:59	1
Benzene	1.1		1.0	0.38	ug/L			10/27/18 08:59	1
Bromobenzene	ND		1.0	0.54	ug/L			10/27/18 08:59	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/27/18 08:59	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/27/18 08:59	1
Bromoform	ND		5.0	0.71	ug/L			10/27/18 08:59	1
Bromomethane	ND		1.0	0.98	ug/L			10/27/18 08:59	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/27/18 08:59	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/27/18 08:59	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/27/18 08:59	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/27/18 08:59	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/27/18 08:59	1
Chloroethane	ND		1.0	0.76	ug/L			10/27/18 08:59	1
2-Chloroethyl vinyl ether	ND	F1 UJ	5.0	2.0	ug/L			10/27/18 08:59	1
Chloroform	ND		1.0	0.60	ug/L			10/27/18 08:59	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/27/18 08:59	1
Chloromethane	ND		1.0	0.83	ug/L			10/27/18 08:59	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 08:59	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/27/18 08:59	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/27/18 08:59	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/27/18 08:59	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/27/18 08:59	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/27/18 08:59	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/27/18 08:59	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/27/18 08:59	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 08:59	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 08:59	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 08:59	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 08:59	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/27/18 08:59	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/27/18 08:59	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/27/18 08:59	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/27/18 08:59	1
2-Hexanone	ND		25	3.1	ug/L			10/27/18 08:59	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/27/18 08:59	1
Methylene bromide	ND		5.0	0.59	ug/L			10/27/18 08:59	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/27/18 08:59	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/27/18 08:59	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/27/18 08:59	1
m-Xylene & p-Xylene	2.8	J	5.0	1.6	ug/L			10/27/18 08:59	1
Naphthalene	1.5		1.0	1.0	ug/L			10/27/18 08:59	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/27/18 08:59	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/27/18 08:59	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/27/18 08:59	1
o-Xylene	1.4	J	5.0	0.60	ug/L			10/27/18 08:59	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/27/18 08:59	1
p-Isopropyltoluene	0.71	J	1.0	0.71	ug/L			10/27/18 08:59	1

Client Sample ID: ROST4PZE-ROX-101518

Date Collected: 10/15/18 09:40
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/27/18 08:59	1
Styrene	ND		1.0	1.0	ug/L			10/27/18 08:59	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/27/18 08:59	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/27/18 08:59	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/27/18 08:59	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/27/18 08:59	1
Toluene	ND		1.0	0.70	ug/L			10/27/18 08:59	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 08:59	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/27/18 08:59	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/27/18 08:59	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/27/18 08:59	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/27/18 08:59	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/27/18 08:59	1
Trichloroethene	ND		1.0	0.50	ug/L			10/27/18 08:59	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/27/18 08:59	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/27/18 08:59	1
1,2,4-Trimethylbenzene	5.9		1.0	0.82	ug/L			10/27/18 08:59	1
1,3,5-Trimethylbenzene	1.8		1.0	0.56	ug/L			10/27/18 08:59	1
Vinyl acetate	ND		25	2.0	ug/L			10/27/18 08:59	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/27/18 08:59	1
Xylenes, Total	4.2	J	10	1.6	ug/L			10/27/18 08:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*78 - 118*		*10/27/18 08:59*	*1*
Dibromofluoromethane	*99*		*81 - 121*		*10/27/18 08:59*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*10/27/18 08:59*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 00:13	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 00:13	1
Anthracene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 00:13	1
Benzo[a]anthracene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 00:13	1
Benzo[a]pyrene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 00:13	1
Benzo[b]fluoranthene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 00:13	1
Benzo[g,h,i]perylene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 00:13	1
Benzo[k]fluoranthene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 00:13	1
Chrysene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 00:13	1
Dibenz(a,h)anthracene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 00:13	1
Fluoranthene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 00:13	1
Fluorene	ND		0.20	0.021	ug/L		10/22/18 13:25	10/25/18 00:13	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 00:13	1
Phenanthrene	2.8		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 00:13	1
Pyrene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 00:13	1
1-Methylnaphthalene	5.1		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 00:13	1
2-Methylnaphthalene	4.0		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 00:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*98*		*33 - 138*	*10/22/18 13:25*	*10/25/18 00:13*	*1*
2-Fluorobiphenyl	*66*		*15 - 122*	*10/22/18 13:25*	*10/25/18 00:13*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	102		19 - 130	10/22/18 13:25	10/25/18 00:13	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND	UJ	49	19	ug/L		10/22/18 13:25	10/25/18 23:34	5
Benzenethiol	ND	* UJ	49	8.3	ug/L		10/22/18 13:25	10/25/18 23:34	5
Benzoic acid	ND	*	150	36	ug/L		10/22/18 13:25	10/25/18 23:34	5
Benzyl alcohol	ND		49	9.8	ug/L		10/22/18 13:25	10/25/18 23:34	5
Bis(2-chloroethoxy)methane	ND		49	3.4	ug/L		10/22/18 13:25	10/25/18 23:34	5
Bis(2-chloroethyl)ether	ND		49	3.6	ug/L		10/22/18 13:25	10/25/18 23:34	5
bis (2-chloroisopropyl) ether	ND		49	4.0	ug/L		10/22/18 13:25	10/25/18 23:34	5
Bis(2-ethylhexyl) phthalate	ND	*	49	24	ug/L		10/22/18 13:25	10/25/18 23:34	5
4-Bromophenyl phenyl ether	ND		49	1.6	ug/L		10/22/18 13:25	10/25/18 23:34	5
Butyl benzyl phthalate	ND		49	3.4	ug/L		10/22/18 13:25	10/25/18 23:34	5
4-Chloroaniline	ND		49	17	ug/L		10/22/18 13:25	10/25/18 23:34	5
4-Chloro-3-methylphenol	ND		49	19	ug/L		10/22/18 13:25	10/25/18 23:34	5
2-Chloronaphthalene	ND		49	2.5	ug/L		10/22/18 13:25	10/25/18 23:34	5
2-Chlorophenol	ND	*	49	11	ug/L		10/22/18 13:25	10/25/18 23:34	5
4-Chlorophenyl phenyl ether	ND		49	9.8	ug/L		10/22/18 13:25	10/25/18 23:34	5
Dibenz[a,h]acridine	ND		49	15	ug/L		10/22/18 13:25	10/25/18 23:34	5
Dibenzofuran	ND		49	2.5	ug/L		10/22/18 13:25	10/25/18 23:34	5
3,3'-Dichlorobenzidine	ND	*	49	13	ug/L		10/22/18 13:25	10/25/18 23:34	5
2,4-Dichlorophenol	ND	*	49	15	ug/L		10/22/18 13:25	10/25/18 23:34	5
Diethyl phthalate	ND		49	3.4	ug/L		10/22/18 13:25	10/25/18 23:34	5
2,4-Dimethylphenol	ND		49	17	ug/L		10/22/18 13:25	10/25/18 23:34	5
Dimethyl phthalate	ND		49	2.9	ug/L		10/22/18 13:25	10/25/18 23:34	5
Di-n-butyl phthalate	ND		49	13	ug/L		10/22/18 13:25	10/25/18 23:34	5
4,6-Dinitro-ortho-cresol	ND		49	9.8	ug/L		10/22/18 13:25	10/25/18 23:34	5
2,4-Dinitrophenol	ND	*	150	17	ug/L		10/22/18 13:25	10/25/18 23:34	5
2,4-Dinitrotoluene	ND		49	9.3	ug/L		10/22/18 13:25	10/25/18 23:34	5
2,6-Dinitrotoluene	ND		49	9.3	ug/L		10/22/18 13:25	10/25/18 23:34	5
Di-n-octyl phthalate	ND		49	2.2	ug/L		10/22/18 13:25	10/25/18 23:34	5
1,4-Dioxane	ND	*	49	4.9	ug/L		10/22/18 13:25	10/25/18 23:34	5
1,2-Diphenylhydrazine (as Azobenzene)	ND		49	4.9	ug/L		10/22/18 13:25	10/25/18 23:34	5
Hexachlorobenzene	ND		49	1.2	ug/L		10/22/18 13:25	10/25/18 23:34	5
Hexachlorocyclopentadiene	ND		98	13	ug/L		10/22/18 13:25	10/25/18 23:34	5
Hexachloroethane	ND		49	21	ug/L		10/22/18 13:25	10/25/18 23:34	5
Indene	ND		49	4.9	ug/L		10/22/18 13:25	10/25/18 23:34	5
Isophorone	ND		49	2.8	ug/L		10/22/18 13:25	10/25/18 23:34	5
2-Methylphenol	ND		49	8.8	ug/L		10/22/18 13:25	10/25/18 23:34	5
3 & 4 Methylphenol	ND	*	98	5.1	ug/L		10/22/18 13:25	10/25/18 23:34	5
2-Nitroaniline	ND		49	11	ug/L		10/22/18 13:25	10/25/18 23:34	5
3-Nitroaniline	ND		49	8.8	ug/L		10/22/18 13:25	10/25/18 23:34	5
4-Nitroaniline	ND		49	12	ug/L		10/22/18 13:25	10/25/18 23:34	5
Nitrobenzene	ND		49	2.7	ug/L		10/22/18 13:25	10/25/18 23:34	5
2-Nitrophenol	ND	*	49	3.2	ug/L		10/22/18 13:25	10/25/18 23:34	5
4-Nitrophenol	ND		49	10	ug/L		10/22/18 13:25	10/25/18 23:34	5
N-Nitrosodimethylamine	ND		49	17	ug/L		10/22/18 13:25	10/25/18 23:34	5

Client Sample ID: ROST4PZE-ROX-101518

Date Collected: 10/15/18 09:40
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-3

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		49	16	ug/L		10/22/18 13:25	10/25/18 23:34	5
N-Nitrosodiphenylamine	ND		49	2.3	ug/L		10/22/18 13:25	10/25/18 23:34	5
Pentachlorophenol	ND		98	8.9	ug/L		10/22/18 13:25	10/25/18 23:34	5
Phenol	ND	*	49	13	ug/L		10/22/18 13:25	10/25/18 23:34	5
Pyridine	ND	*	49	16	ug/L		10/22/18 13:25	10/25/18 23:34	5
Quinoline	ND		49	29	ug/L		10/22/18 13:25	10/25/18 23:34	5
2,4,5-Trichlorophenol	ND		49	18	ug/L		10/22/18 13:25	10/25/18 23:34	5
2,4,6-Trichlorophenol	ND		49	17	ug/L		10/22/18 13:25	10/25/18 23:34	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*72*		*34 - 120*	*10/22/18 13:25*	*10/25/18 23:34*	*5*
2-Fluorophenol	*48*		*10 - 120*	*10/22/18 13:25*	*10/25/18 23:34*	*5*
Nitrobenzene-d5	*80*		*27 - 120*	*10/22/18 13:25*	*10/25/18 23:34*	*5*
Phenol-d5	*80*		*10 - 120*	*10/22/18 13:25*	*10/25/18 23:34*	*5*
Terphenyl-d14	*82*		*53 - 125*	*10/22/18 13:25*	*10/25/18 23:34*	*5*
2,4,6-Tribromophenol	*129*		*15 - 135*	*10/22/18 13:25*	*10/25/18 23:34*	*5*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.031	0.0057	ug/L		10/25/18 11:36	10/26/18 11:52	1
1,2-Dibromoethane	ND	*	0.021	0.0052	ug/L		10/25/18 11:36	10/26/18 11:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*107*	*p*	*51 - 149*	*10/25/18 11:36*	*10/26/18 11:52*	*1*

Client Sample ID: MW22-ROX-101518
Date Collected: 10/15/18 10:30
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		250	100	ug/L			10/27/18 14:50	10
Acrolein	ND		200	100	ug/L			10/27/18 14:50	10
Acrylonitrile	ND		100	28	ug/L			10/27/18 14:50	10
Benzene	56		10	3.8	ug/L			10/27/18 14:50	10
Bromobenzene	ND		10	5.4	ug/L			10/27/18 14:50	10
Bromochloromethane	ND		10	5.2	ug/L			10/27/18 14:50	10
Bromodichloromethane	ND		10	5.0	ug/L			10/27/18 14:50	10
Bromoform	ND		50	7.1	ug/L			10/27/18 14:50	10
Bromomethane	ND		10	9.8	ug/L			10/27/18 14:50	10
2-Butanone (MEK)	ND		250	26	ug/L			10/27/18 14:50	10
Carbon disulfide	ND		10	5.0	ug/L			10/27/18 14:50	10
Carbon tetrachloride	ND		10	5.0	ug/L			10/27/18 14:50	10
Chlorobenzene	ND		10	5.0	ug/L			10/27/18 14:50	10
Dibromochloromethane	ND		10	5.0	ug/L			10/27/18 14:50	10
Chloroethane	ND		10	7.6	ug/L			10/27/18 14:50	10
2-Chloroethyl vinyl ether	ND		50	20	ug/L			10/27/18 14:50	10
Chloroform	ND		10	6.0	ug/L			10/27/18 14:50	10
1-Chlorohexane	ND		10	7.0	ug/L			10/27/18 14:50	10
Chloromethane	ND		10	8.3	ug/L			10/27/18 14:50	10
cis-1,2-Dichloroethene	ND		10	5.0	ug/L			10/27/18 14:50	10
cis-1,3-Dichloropropene	ND		50	5.0	ug/L			10/27/18 14:50	10
1,2-Dichlorobenzene	ND		10	5.0	ug/L			10/27/18 14:50	10
1,3-Dichlorobenzene	ND		10	5.4	ug/L			10/27/18 14:50	10
1,4-Dichlorobenzene	ND		10	6.4	ug/L			10/27/18 14:50	10
Dichlorodifluoromethane	ND		10	8.5	ug/L			10/27/18 14:50	10
1,1-Dichloroethane	ND		10	5.0	ug/L			10/27/18 14:50	10
1,2-Dichloroethane	ND		10	5.0	ug/L			10/27/18 14:50	10
1,1-Dichloroethene	ND		10	5.0	ug/L			10/27/18 14:50	10
1,2-Dichloropropane	ND		10	5.0	ug/L			10/27/18 14:50	10
1,3-Dichloropropane	ND		10	5.0	ug/L			10/27/18 14:50	10
2,2-Dichloropropane	ND		10	5.0	ug/L			10/27/18 14:50	10
1,1-Dichloropropene	ND		10	5.0	ug/L			10/27/18 14:50	10
Ethylbenzene	1500		10	5.0	ug/L			10/27/18 14:50	10
Ethyl methacrylate	ND		10	6.0	ug/L			10/27/18 14:50	10
Hexachlorobutadiene	ND		50	9.0	ug/L			10/27/18 14:50	10
2-Hexanone	ND		250	31	ug/L			10/27/18 14:50	10
Isopropylbenzene	66		10	5.3	ug/L			10/27/18 14:50	10
Methylene bromide	ND		50	5.9	ug/L			10/27/18 14:50	10
Methylene Chloride	ND		50	30	ug/L			10/27/18 14:50	10
4-Methyl-2-pentanone (MIBK)	ND		250	18	ug/L			10/27/18 14:50	10
Methyl tert-butyl ether	ND		10	7.4	ug/L			10/27/18 14:50	10
m-Xylene & p-Xylene	2900		50	16	ug/L			10/27/18 14:50	10
Naphthalene	210		10	10	ug/L			10/27/18 14:50	10
n-Butylbenzene	ND		10	7.6	ug/L			10/27/18 14:50	10
N-Propylbenzene	120		10	6.9	ug/L			10/27/18 14:50	10
o-Chlorotoluene	ND		10	5.7	ug/L			10/27/18 14:50	10
o-Xylene	300		50	6.0	ug/L			10/27/18 14:50	10
p-Chlorotoluene	ND		10	5.6	ug/L			10/27/18 14:50	10
p-Isopropyltoluene	ND		10	7.1	ug/L			10/27/18 14:50	10

Client Sample ID: MW22-ROX-101518

Date Collected: 10/15/18 10:30
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	7.7	J	10	7.0	ug/L			10/27/18 14:50	10
Styrene	ND		10	10	ug/L			10/27/18 14:50	10
tert-Butylbenzene	ND		10	6.3	ug/L			10/27/18 14:50	10
1,1,1,2-Tetrachloroethane	ND		10	5.2	ug/L			10/27/18 14:50	10
1,1,2,2-Tetrachloroethane	ND		10	5.0	ug/L			10/27/18 14:50	10
Tetrachloroethene	ND		10	5.8	ug/L			10/27/18 14:50	10
Toluene	130		10	7.0	ug/L			10/27/18 14:50	10
trans-1,2-Dichloroethene	ND		10	5.0	ug/L			10/27/18 14:50	10
trans-1,3-Dichloropropene	ND		50	5.0	ug/L			10/27/18 14:50	10
1,2,3-Trichlorobenzene	ND		10	7.0	ug/L			10/27/18 14:50	10
1,2,4-Trichlorobenzene	ND		10	8.2	ug/L			10/27/18 14:50	10
1,1,1-Trichloroethane	ND		10	5.0	ug/L			10/27/18 14:50	10
1,1,2-Trichloroethane	ND		50	5.0	ug/L			10/27/18 14:50	10
Trichloroethene	ND		10	5.0	ug/L			10/27/18 14:50	10
Trichlorofluoromethane	ND		10	5.2	ug/L			10/27/18 14:50	10
1,2,3-Trichloropropane	ND		50	8.4	ug/L			10/27/18 14:50	10
1,2,4-Trimethylbenzene	800		10	8.2	ug/L			10/27/18 14:50	10
1,3,5-Trimethylbenzene	190		10	5.6	ug/L			10/27/18 14:50	10
Vinyl acetate	ND		250	20	ug/L			10/27/18 14:50	10
Vinyl chloride	ND		10	5.0	ug/L			10/27/18 14:50	10
Xylenes, Total	3200		100	16	ug/L			10/27/18 14:50	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*92*		*78 - 118*		*10/27/18 14:50*	*10*
Dibromofluoromethane	*92*		*81 - 121*		*10/27/18 14:50*	*10*
Toluene-d8 (Surr)	*98*		*80 - 120*		*10/27/18 14:50*	*10*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.21	0.021	ug/L		10/22/18 13:25	10/25/18 00:30	1
Acenaphthylene	ND		0.21	0.021	ug/L		10/22/18 13:25	10/25/18 00:30	1
Anthracene	ND		0.21	0.021	ug/L		10/22/18 13:25	10/25/18 00:30	1
Benzo[a]anthracene	ND		0.21	0.043	ug/L		10/22/18 13:25	10/25/18 00:30	1
Benzo[a]pyrene	ND		0.21	0.043	ug/L		10/22/18 13:25	10/25/18 00:30	1
Benzo[b]fluoranthene	ND		0.21	0.043	ug/L		10/22/18 13:25	10/25/18 00:30	1
Benzo[g,h,i]perylene	ND		0.21	0.043	ug/L		10/22/18 13:25	10/25/18 00:30	1
Benzo[k]fluoranthene	ND		0.21	0.043	ug/L		10/22/18 13:25	10/25/18 00:30	1
Chrysene	ND		0.21	0.043	ug/L		10/22/18 13:25	10/25/18 00:30	1
Dibenz(a,h)anthracene	ND		0.21	0.043	ug/L		10/22/18 13:25	10/25/18 00:30	1
Fluoranthene	ND		0.21	0.021	ug/L		10/22/18 13:25	10/25/18 00:30	1
Fluorene	ND		0.21	0.022	ug/L		10/22/18 13:25	10/25/18 00:30	1
Indeno[1,2,3-cd]pyrene	ND		0.21	0.043	ug/L		10/22/18 13:25	10/25/18 00:30	1
Phenanthrene	0.16	J	0.21	0.021	ug/L		10/22/18 13:25	10/25/18 00:30	1
Pyrene	0.026	J	0.21	0.021	ug/L		10/22/18 13:25	10/25/18 00:30	1
1-Methylnaphthalene	19		0.21	0.021	ug/L		10/22/18 13:25	10/25/18 00:30	1
2-Methylnaphthalene	28		0.21	0.021	ug/L		10/22/18 13:25	10/25/18 00:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*64*		*33 - 138*	*10/22/18 13:25*	*10/25/18 00:30*	*1*
2-Fluorobiphenyl	*61*		*15 - 122*	*10/22/18 13:25*	*10/25/18 00:30*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	96		19 - 130	10/22/18 13:25	10/25/18 00:30	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		53	20	ug/L		10/22/18 13:25	10/25/18 23:55	5
Benzenethiol	ND	* UJ	53	9.1	ug/L		10/22/18 13:25	10/25/18 23:55	5
Benzoic acid	ND	*	160	39	ug/L		10/22/18 13:25	10/25/18 23:55	5
Benzyl alcohol	ND		53	11	ug/L		10/22/18 13:25	10/25/18 23:55	5
Bis(2-chloroethoxy)methane	ND		53	3.7	ug/L		10/22/18 13:25	10/25/18 23:55	5
Bis(2-chloroethyl)ether	ND		53	4.0	ug/L		10/22/18 13:25	10/25/18 23:55	5
bis (2-chloroisopropyl) ether	ND		53	4.3	ug/L		10/22/18 13:25	10/25/18 23:55	5
Bis(2-ethylhexyl) phthalate	ND	*	53	27	ug/L		10/22/18 13:25	10/25/18 23:55	5
4-Bromophenyl phenyl ether	ND		53	1.7	ug/L		10/22/18 13:25	10/25/18 23:55	5
Butyl benzyl phthalate	ND		53	3.7	ug/L		10/22/18 13:25	10/25/18 23:55	5
4-Chloroaniline	ND		53	18	ug/L		10/22/18 13:25	10/25/18 23:55	5
4-Chloro-3-methylphenol	ND		53	20	ug/L		10/22/18 13:25	10/25/18 23:55	5
2-Chloronaphthalene	ND		53	2.8	ug/L		10/22/18 13:25	10/25/18 23:55	5
2-Chlorophenol	ND	*	53	12	ug/L		10/22/18 13:25	10/25/18 23:55	5
4-Chlorophenyl phenyl ether	ND		53	11	ug/L		10/22/18 13:25	10/25/18 23:55	5
Dibenz[a,h]acridine	ND		53	16	ug/L		10/22/18 13:25	10/25/18 23:55	5
Dibenzofuran	ND		53	2.8	ug/L		10/22/18 13:25	10/25/18 23:55	5
3,3'-Dichlorobenzidine	ND	*	53	14	ug/L		10/22/18 13:25	10/25/18 23:55	5
2,4-Dichlorophenol	ND	*	53	16	ug/L		10/22/18 13:25	10/25/18 23:55	5
Diethyl phthalate	ND		53	3.7	ug/L		10/22/18 13:25	10/25/18 23:55	5
2,4-Dimethylphenol	ND		53	19	ug/L		10/22/18 13:25	10/25/18 23:55	5
Dimethyl phthalate	ND		53	3.2	ug/L		10/22/18 13:25	10/25/18 23:55	5
Di-n-butyl phthalate	ND		53	14	ug/L		10/22/18 13:25	10/25/18 23:55	5
4,6-Dinitro-ortho-cresol	ND	UJ	53	11	ug/L		10/22/18 13:25	10/25/18 23:55	5
2,4-Dinitrophenol	ND	*	160	18	ug/L		10/22/18 13:25	10/25/18 23:55	5
2,4-Dinitrotoluene	ND		53	10	ug/L		10/22/18 13:25	10/25/18 23:55	5
2,6-Dinitrotoluene	ND		53	10	ug/L		10/22/18 13:25	10/25/18 23:55	5
Di-n-octyl phthalate	ND		53	2.4	ug/L		10/22/18 13:25	10/25/18 23:55	5
1,4-Dioxane	ND	*	53	5.3	ug/L		10/22/18 13:25	10/25/18 23:55	5
1,2-Diphenylhydrazine (as Azobenzene)	ND		53	5.3	ug/L		10/22/18 13:25	10/25/18 23:55	5
Hexachlorobenzene	ND		53	1.3	ug/L		10/22/18 13:25	10/25/18 23:55	5
Hexachlorocyclopentadiene	ND	UJ	110	14	ug/L		10/22/18 13:25	10/25/18 23:55	5
Hexachloroethane	ND		53	22	ug/L		10/22/18 13:25	10/25/18 23:55	5
Indene	19	J	53	5.3	ug/L		10/22/18 13:25	10/25/18 23:55	5
Isophorone	ND		53	3.0	ug/L		10/22/18 13:25	10/25/18 23:55	5
2-Methylphenol	ND		53	9.6	ug/L		10/22/18 13:25	10/25/18 23:55	5
3 & 4 Methylphenol	ND	*	110	5.6	ug/L		10/22/18 13:25	10/25/18 23:55	5
2-Nitroaniline	ND		53	12	ug/L		10/22/18 13:25	10/25/18 23:55	5
3-Nitroaniline	ND		53	9.6	ug/L		10/22/18 13:25	10/25/18 23:55	5
4-Nitroaniline	ND	UJ	53	13	ug/L		10/22/18 13:25	10/25/18 23:55	5
Nitrobenzene	ND		53	2.9	ug/L		10/22/18 13:25	10/25/18 23:55	5
2-Nitrophenol	ND	*	53	3.5	ug/L		10/22/18 13:25	10/25/18 23:55	5
4-Nitrophenol	ND	UJ	53	11	ug/L		10/22/18 13:25	10/25/18 23:55	5
N-Nitrosodimethylamine	ND		53	19	ug/L		10/22/18 13:25	10/25/18 23:55	5

Client Sample ID: MW22-ROX-101518

Date Collected: 10/15/18 10:30
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-4

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		53	18	ug/L		10/22/18 13:25	10/25/18 23:55	5
N-Nitrosodiphenylamine	ND		53	2.5	ug/L		10/22/18 13:25	10/25/18 23:55	5
Pentachlorophenol	ND		110	9.7	ug/L		10/22/18 13:25	10/25/18 23:55	5
Phenol	ND	*	53	14	ug/L		10/22/18 13:25	10/25/18 23:55	5
Pyridine	ND	*	53	17	ug/L		10/22/18 13:25	10/25/18 23:55	5
Quinoline	ND		53	32	ug/L		10/22/18 13:25	10/25/18 23:55	5
2,4,5-Trichlorophenol	ND		53	20	ug/L		10/22/18 13:25	10/25/18 23:55	5
2,4,6-Trichlorophenol	ND		53	19	ug/L		10/22/18 13:25	10/25/18 23:55	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*59*		*34 - 120*	*10/22/18 13:25*	*10/25/18 23:55*	*5*
2-Fluorophenol	*63*		*10 - 120*	*10/22/18 13:25*	*10/25/18 23:55*	*5*
Nitrobenzene-d5	*76*		*27 - 120*	*10/22/18 13:25*	*10/25/18 23:55*	*5*
Phenol-d5	*69*		*10 - 120*	*10/22/18 13:25*	*10/25/18 23:55*	*5*
Terphenyl-d14	*55*		*53 - 125*	*10/22/18 13:25*	*10/25/18 23:55*	*5*
2,4,6-Tribromophenol	*95*		*15 - 135*	*10/22/18 13:25*	*10/25/18 23:55*	*5*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0055	ug/L		10/25/18 11:36	10/26/18 11:28	1
1,2-Dibromoethane	ND	*	0.020	0.0050	ug/L		10/25/18 11:36	10/26/18 11:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*141*	*p*	*51 - 149*	*10/25/18 11:36*	*10/26/18 11:28*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160657-1
SDG: 90527968

Client Sample ID: MW14-ROX-101518
Date Collected: 10/15/18 12:30
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	13	J	25	10	ug/L			10/27/18 13:09	1
Acrolein	ND		20	10	ug/L			10/27/18 13:09	1
Acrylonitrile	ND		10	2.8	ug/L			10/27/18 13:09	1
Benzene	ND		1.0	0.38	ug/L			10/27/18 13:09	1
Bromobenzene	ND		1.0	0.54	ug/L			10/27/18 13:09	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/27/18 13:09	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/27/18 13:09	1
Bromoform	ND		5.0	0.71	ug/L			10/27/18 13:09	1
Bromomethane	ND		1.0	0.98	ug/L			10/27/18 13:09	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/27/18 13:09	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/27/18 13:09	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/27/18 13:09	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/27/18 13:09	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/27/18 13:09	1
Chloroethane	ND		1.0	0.76	ug/L			10/27/18 13:09	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/27/18 13:09	1
Chloroform	ND		1.0	0.60	ug/L			10/27/18 13:09	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/27/18 13:09	1
Chloromethane	ND		1.0	0.83	ug/L			10/27/18 13:09	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 13:09	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/27/18 13:09	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/27/18 13:09	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/27/18 13:09	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/27/18 13:09	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/27/18 13:09	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/27/18 13:09	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/27/18 13:09	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 13:09	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 13:09	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 13:09	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 13:09	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/27/18 13:09	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/27/18 13:09	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/27/18 13:09	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/27/18 13:09	1
2-Hexanone	ND		25	3.1	ug/L			10/27/18 13:09	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/27/18 13:09	1
Methylene bromide	ND		5.0	0.59	ug/L			10/27/18 13:09	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/27/18 13:09	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/27/18 13:09	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/27/18 13:09	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/27/18 13:09	1
Naphthalene	ND		1.0	1.0	ug/L			10/27/18 13:09	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/27/18 13:09	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/27/18 13:09	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/27/18 13:09	1
o-Xylene	ND		5.0	0.60	ug/L			10/27/18 13:09	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/27/18 13:09	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/27/18 13:09	1

Client Sample ID: MW14-ROX-101518

Date Collected: 10/15/18 12:30
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/27/18 13:09	1
Styrene	ND		1.0	1.0	ug/L			10/27/18 13:09	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/27/18 13:09	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/27/18 13:09	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/27/18 13:09	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/27/18 13:09	1
Toluene	ND		1.0	0.70	ug/L			10/27/18 13:09	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 13:09	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/27/18 13:09	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/27/18 13:09	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/27/18 13:09	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/27/18 13:09	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/27/18 13:09	1
Trichloroethene	ND		1.0	0.50	ug/L			10/27/18 13:09	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/27/18 13:09	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/27/18 13:09	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/27/18 13:09	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/27/18 13:09	1
Vinyl acetate	ND		25	2.0	ug/L			10/27/18 13:09	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/27/18 13:09	1
Xylenes, Total	ND		10	1.6	ug/L			10/27/18 13:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*78 - 118*		*10/27/18 13:09*	*1*
Dibromofluoromethane	*97*		*81 - 121*		*10/27/18 13:09*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*10/27/18 13:09*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 00:47	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 00:47	1
Anthracene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 00:47	1
Benzo[a]anthracene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 00:47	1
Benzo[a]pyrene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 00:47	1
Benzo[b]fluoranthene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 00:47	1
Benzo[g,h,i]perylene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 00:47	1
Benzo[k]fluoranthene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 00:47	1
Chrysene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 00:47	1
Dibenz(a,h)anthracene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 00:47	1
Fluoranthene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 00:47	1
Fluorene	ND		0.20	0.021	ug/L		10/22/18 13:25	10/25/18 00:47	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 00:47	1
Phenanthrene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 00:47	1
Pyrene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 00:47	1
1-Methylnaphthalene	0.083	J	0.20	0.020	ug/L		10/22/18 13:25	10/25/18 00:47	1
2-Methylnaphthalene	0.12	J	0.20	0.020	ug/L		10/22/18 13:25	10/25/18 00:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*79*		*33 - 138*	*10/22/18 13:25*	*10/25/18 00:47*	*1*
2-Fluorobiphenyl	*62*		*15 - 122*	*10/22/18 13:25*	*10/25/18 00:47*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	104		19 - 130	10/22/18 13:25	10/25/18 00:47	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzenethiol	ND	* UJ	9.8	1.7	ug/L		10/22/18 13:25	10/24/18 17:10	1
Dibenz[a,h]acridine	ND		9.8	2.9	ug/L		10/22/18 13:25	10/24/18 17:10	1
2,4-Dinitrophenol	ND	*	29	3.3	ug/L		10/22/18 13:25	10/24/18 17:10	1
Pentachlorophenol	ND		20	1.8	ug/L		10/22/18 13:25	10/24/18 17:10	1
Quinoline	ND	UJ	9.8	5.9	ug/L		10/22/18 13:25	10/24/18 17:10	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND	UJ	9.8	3.7	ug/L		10/22/18 13:25	10/27/18 15:22	1
Benzoic acid	ND	*	29	7.2	ug/L		10/22/18 13:25	10/27/18 15:22	1
Benzyl alcohol	ND		9.8	2.0	ug/L		10/22/18 13:25	10/27/18 15:22	1
Bis(2-chloroethoxy)methane	ND		9.8	0.68	ug/L		10/22/18 13:25	10/27/18 15:22	1
Bis(2-chloroethyl)ether	ND		9.8	0.72	ug/L		10/22/18 13:25	10/27/18 15:22	1
bis (2-chloroisopropyl) ether	ND		9.8	0.79	ug/L		10/22/18 13:25	10/27/18 15:22	1
Bis(2-ethylhexyl) phthalate	ND	*	9.8	4.9	ug/L		10/22/18 13:25	10/27/18 15:22	1
4-Bromophenyl phenyl ether	ND		9.8	0.31	ug/L		10/22/18 13:25	10/27/18 15:22	1
Butyl benzyl phthalate	ND		9.8	0.68	ug/L		10/22/18 13:25	10/27/18 15:22	1
4-Chloroaniline	ND		9.8	3.3	ug/L		10/22/18 13:25	10/27/18 15:22	1
4-Chloro-3-methylphenol	ND		9.8	3.7	ug/L		10/22/18 13:25	10/27/18 15:22	1
2-Chloronaphthalene	ND		9.8	0.51	ug/L		10/22/18 13:25	10/27/18 15:22	1
2-Chlorophenol	ND	*	9.8	2.2	ug/L		10/22/18 13:25	10/27/18 15:22	1
4-Chlorophenyl phenyl ether	ND		9.8	2.0	ug/L		10/22/18 13:25	10/27/18 15:22	1
Dibenzofuran	ND		9.8	0.51	ug/L		10/22/18 13:25	10/27/18 15:22	1
3,3'-Dichlorobenzidine	ND	*	9.8	2.5	ug/L		10/22/18 13:25	10/27/18 15:22	1
2,4-Dichlorophenol	ND	*	9.8	2.9	ug/L		10/22/18 13:25	10/27/18 15:22	1
Diethyl phthalate	ND		9.8	0.69	ug/L		10/22/18 13:25	10/27/18 15:22	1
2,4-Dimethylphenol	ND		9.8	3.4	ug/L		10/22/18 13:25	10/27/18 15:22	1
Dimethyl phthalate	ND		9.8	0.59	ug/L		10/22/18 13:25	10/27/18 15:22	1
Di-n-butyl phthalate	ND		9.8	2.6	ug/L		10/22/18 13:25	10/27/18 15:22	1
4,6-Dinitro-ortho-cresol	ND	UJ	9.8	2.0	ug/L		10/22/18 13:25	10/27/18 15:22	1
2,4-Dinitrotoluene	ND		9.8	1.9	ug/L		10/22/18 13:25	10/27/18 15:22	1
2,6-Dinitrotoluene	ND		9.8	1.9	ug/L		10/22/18 13:25	10/27/18 15:22	1
Di-n-octyl phthalate	1.9	J	9.8	0.43	ug/L		10/22/18 13:25	10/27/18 15:22	1
1,4-Dioxane	ND	*	9.8	0.98	ug/L		10/22/18 13:25	10/27/18 15:22	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.8	0.98	ug/L		10/22/18 13:25	10/27/18 15:22	1
Hexachlorobenzene	ND		9.8	0.24	ug/L		10/22/18 13:25	10/27/18 15:22	1
Hexachlorocyclopentadiene	ND	UJ	20	2.5	ug/L		10/22/18 13:25	10/27/18 15:22	1
Hexachloroethane	ND		9.8	4.1	ug/L		10/22/18 13:25	10/27/18 15:22	1
Indene	ND		9.8	0.98	ug/L		10/22/18 13:25	10/27/18 15:22	1
Isophorone	ND		9.8	0.56	ug/L		10/22/18 13:25	10/27/18 15:22	1
2-Methylphenol	ND		9.8	1.8	ug/L		10/22/18 13:25	10/27/18 15:22	1
3 & 4 Methylphenol	ND	*	20	1.0	ug/L		10/22/18 13:25	10/27/18 15:22	1
2-Nitroaniline	ND		9.8	2.2	ug/L		10/22/18 13:25	10/27/18 15:22	1
3-Nitroaniline	ND		9.8	1.8	ug/L		10/22/18 13:25	10/27/18 15:22	1
4-Nitroaniline	ND		9.8	2.4	ug/L		10/22/18 13:25	10/27/18 15:22	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160657-1
SDG: 90527968

Client Sample ID: MW14-ROX-101518
Date Collected: 10/15/18 12:30
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-5
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RA (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrobenzene	ND		9.8	0.54	ug/L		10/22/18 13:25	10/27/18 15:22	1
2-Nitrophenol	ND	*	9.8	0.64	ug/L		10/22/18 13:25	10/27/18 15:22	1
4-Nitrophenol	ND	U5	9.8	2.1	ug/L		10/22/18 13:25	10/27/18 15:22	1
N-Nitrosodimethylamine	ND		9.8	3.4	ug/L		10/22/18 13:25	10/27/18 15:22	1
N-Nitrosodi-n-propylamine	ND		9.8	3.2	ug/L		10/22/18 13:25	10/27/18 15:22	1
N-Nitrosodiphenylamine	ND		9.8	0.46	ug/L		10/22/18 13:25	10/27/18 15:22	1
Phenol	ND	*	9.8	2.5	ug/L		10/22/18 13:25	10/27/18 15:22	1
Pyridine	ND	*	9.8	3.1	ug/L		10/22/18 13:25	10/27/18 15:22	1
2,4,5-Trichlorophenol	ND		9.8	3.6	ug/L		10/22/18 13:25	10/27/18 15:22	1
2,4,6-Trichlorophenol	ND		9.8	3.4	ug/L		10/22/18 13:25	10/27/18 15:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	55		34 - 120	10/22/18 13:25	10/27/18 15:22	1
2-Fluorophenol	34		10 - 120	10/22/18 13:25	10/27/18 15:22	1
Nitrobenzene-d5	57		27 - 120	10/22/18 13:25	10/27/18 15:22	1
Phenol-d5	51		10 - 120	10/22/18 13:25	10/27/18 15:22	1
Terphenyl-d14	56		53 - 125	10/22/18 13:25	10/27/18 15:22	1
2,4,6-Tribromophenol	69		15 - 135	10/22/18 13:25	10/27/18 15:22	1

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0056	ug/L		10/25/18 11:36	10/26/18 10:56	1
1,2-Dibromoethane	ND	*	0.020	0.0051	ug/L		10/25/18 11:36	10/26/18 10:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	100	p	51 - 149	10/25/18 11:36	10/26/18 10:56	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160657-1
SDG: 90527968

Client Sample ID: MW14-ROX-101518-EB
Date Collected: 10/15/18 12:00
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/27/18 08:09	1
Acrolein	ND		20	10	ug/L			10/27/18 08:09	1
Acrylonitrile	ND		10	2.8	ug/L			10/27/18 08:09	1
Benzene	ND		1.0	0.38	ug/L			10/27/18 08:09	1
Bromobenzene	ND		1.0	0.54	ug/L			10/27/18 08:09	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/27/18 08:09	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/27/18 08:09	1
Bromoform	ND		5.0	0.71	ug/L			10/27/18 08:09	1
Bromomethane	ND		1.0	0.98	ug/L			10/27/18 08:09	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/27/18 08:09	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/27/18 08:09	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/27/18 08:09	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/27/18 08:09	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/27/18 08:09	1
Chloroethane	ND		1.0	0.76	ug/L			10/27/18 08:09	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/27/18 08:09	1
Chloroform	ND		1.0	0.60	ug/L			10/27/18 08:09	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/27/18 08:09	1
Chloromethane	ND		1.0	0.83	ug/L			10/27/18 08:09	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 08:09	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/27/18 08:09	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/27/18 08:09	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/27/18 08:09	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/27/18 08:09	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/27/18 08:09	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/27/18 08:09	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/27/18 08:09	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 08:09	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 08:09	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 08:09	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 08:09	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/27/18 08:09	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/27/18 08:09	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/27/18 08:09	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/27/18 08:09	1
2-Hexanone	ND		25	3.1	ug/L			10/27/18 08:09	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/27/18 08:09	1
Methylene bromide	ND		5.0	0.59	ug/L			10/27/18 08:09	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/27/18 08:09	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/27/18 08:09	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/27/18 08:09	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/27/18 08:09	1
Naphthalene	ND		1.0	1.0	ug/L			10/27/18 08:09	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/27/18 08:09	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/27/18 08:09	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/27/18 08:09	1
o-Xylene	ND		5.0	0.60	ug/L			10/27/18 08:09	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/27/18 08:09	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/27/18 08:09	1

Client Sample ID: MW14-ROX-101518-EB

Lab Sample ID: 400-160657-6

Date Collected: 10/15/18 12:00
Date Received: 10/16/18 09:11

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/27/18 08:09	1
Styrene	ND		1.0	1.0	ug/L			10/27/18 08:09	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/27/18 08:09	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/27/18 08:09	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/27/18 08:09	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/27/18 08:09	1
Toluene	ND		1.0	0.70	ug/L			10/27/18 08:09	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 08:09	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/27/18 08:09	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/27/18 08:09	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/27/18 08:09	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/27/18 08:09	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/27/18 08:09	1
Trichloroethene	ND		1.0	0.50	ug/L			10/27/18 08:09	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/27/18 08:09	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/27/18 08:09	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/27/18 08:09	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/27/18 08:09	1
Vinyl acetate	ND		25	2.0	ug/L			10/27/18 08:09	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/27/18 08:09	1
Xylenes, Total	ND		10	1.6	ug/L			10/27/18 08:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*78 - 118*		*10/27/18 08:09*	*1*
Dibromofluoromethane	*101*		*81 - 121*		*10/27/18 08:09*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*10/27/18 08:09*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 01:04	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 01:04	1
Anthracene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 01:04	1
Benzo[a]anthracene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 01:04	1
Benzo[a]pyrene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 01:04	1
Benzo[b]fluoranthene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 01:04	1
Benzo[g,h,i]perylene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 01:04	1
Benzo[k]fluoranthene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 01:04	1
Chrysene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 01:04	1
Dibenz(a,h)anthracene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 01:04	1
Fluoranthene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 01:04	1
Fluorene	ND		0.20	0.021	ug/L		10/22/18 13:25	10/25/18 01:04	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 01:04	1
Phenanthrene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 01:04	1
Pyrene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 01:04	1
1-Methylnaphthalene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 01:04	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 01:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*86*		*33 - 138*	*10/22/18 13:25*	*10/25/18 01:04*	*1*
2-Fluorobiphenyl	*59*		*15 - 122*	*10/22/18 13:25*	*10/25/18 01:04*	*1*

Client Sample ID: MW14-ROX-101518-EB

Date Collected: 10/15/18 12:00
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-6
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	91		19 - 130	10/22/18 13:25	10/25/18 01:04	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.8	3.7	ug/L		10/22/18 13:25	10/24/18 17:32	1
Benzenethiol	ND	*	9.8	1.7	ug/L		10/22/18 13:25	10/24/18 17:32	1
Benzoic acid	ND	*	29	7.1	ug/L		10/22/18 13:25	10/24/18 17:32	1
Benzyl alcohol	ND		9.8	2.0	ug/L		10/22/18 13:25	10/24/18 17:32	1
Bis(2-chloroethoxy)methane	ND		9.8	0.67	ug/L		10/22/18 13:25	10/24/18 17:32	1
Bis(2-chloroethyl)ether	ND		9.8	0.72	ug/L		10/22/18 13:25	10/24/18 17:32	1
bis (2-chloroisopropyl) ether	ND		9.8	0.79	ug/L		10/22/18 13:25	10/24/18 17:32	1
Bis(2-ethylhexyl) phthalate	ND	*	9.8	4.9	ug/L		10/22/18 13:25	10/24/18 17:32	1
4-Bromophenyl phenyl ether	ND		9.8	0.31	ug/L		10/22/18 13:25	10/24/18 17:32	1
Butyl benzyl phthalate	ND		9.8	0.67	ug/L		10/22/18 13:25	10/24/18 17:32	1
4-Chloroaniline	ND		9.8	3.3	ug/L		10/22/18 13:25	10/24/18 17:32	1
4-Chloro-3-methylphenol	ND		9.8	3.7	ug/L		10/22/18 13:25	10/24/18 17:32	1
2-Chloronaphthalene	ND		9.8	0.51	ug/L		10/22/18 13:25	10/24/18 17:32	1
2-Chlorophenol	ND	*	9.8	2.2	ug/L		10/22/18 13:25	10/24/18 17:32	1
4-Chlorophenyl phenyl ether	ND		9.8	2.0	ug/L		10/22/18 13:25	10/24/18 17:32	1
Dibenz[a,h]acridine	ND		9.8	2.9	ug/L		10/22/18 13:25	10/24/18 17:32	1
Dibenzofuran	ND		9.8	0.51	ug/L		10/22/18 13:25	10/24/18 17:32	1
3,3'-Dichlorobenzidine	ND	*	9.8	2.5	ug/L		10/22/18 13:25	10/24/18 17:32	1
2,4-Dichlorophenol	ND	*	9.8	2.9	ug/L		10/22/18 13:25	10/24/18 17:32	1
Diethyl phthalate	ND		9.8	0.68	ug/L		10/22/18 13:25	10/24/18 17:32	1
2,4-Dimethylphenol	ND		9.8	3.4	ug/L		10/22/18 13:25	10/24/18 17:32	1
Dimethyl phthalate	ND		9.8	0.59	ug/L		10/22/18 13:25	10/24/18 17:32	1
Di-n-butyl phthalate	ND		9.8	2.6	ug/L		10/22/18 13:25	10/24/18 17:32	1
4,6-Dinitro-ortho-cresol	ND		9.8	2.0	ug/L		10/22/18 13:25	10/24/18 17:32	1
2,4-Dinitrophenol	ND	*	29	3.3	ug/L		10/22/18 13:25	10/24/18 17:32	1
2,4-Dinitrotoluene	ND		9.8	1.9	ug/L		10/22/18 13:25	10/24/18 17:32	1
2,6-Dinitrotoluene	ND		9.8	1.9	ug/L		10/22/18 13:25	10/24/18 17:32	1
Di-n-octyl phthalate	ND		9.8	0.43	ug/L		10/22/18 13:25	10/24/18 17:32	1
1,4-Dioxane	ND	*	9.8	0.98	ug/L		10/22/18 13:25	10/24/18 17:32	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.8	0.98	ug/L		10/22/18 13:25	10/24/18 17:32	1
Hexachlorobenzene	ND		9.8	0.24	ug/L		10/22/18 13:25	10/24/18 17:32	1
Hexachlorocyclopentadiene	ND		20	2.5	ug/L		10/22/18 13:25	10/24/18 17:32	1
Hexachloroethane	ND		9.8	4.1	ug/L		10/22/18 13:25	10/24/18 17:32	1
Indene	ND		9.8	0.98	ug/L		10/22/18 13:25	10/24/18 17:32	1
Isophorone	ND		9.8	0.56	ug/L		10/22/18 13:25	10/24/18 17:32	1
2-Methylphenol	ND		9.8	1.8	ug/L		10/22/18 13:25	10/24/18 17:32	1
3 & 4 Methylphenol	ND	*	20	1.0	ug/L		10/22/18 13:25	10/24/18 17:32	1
2-Nitroaniline	ND		9.8	2.2	ug/L		10/22/18 13:25	10/24/18 17:32	1
3-Nitroaniline	ND		9.8	1.8	ug/L		10/22/18 13:25	10/24/18 17:32	1
4-Nitroaniline	ND		9.8	2.4	ug/L		10/22/18 13:25	10/24/18 17:32	1
Nitrobenzene	ND		9.8	0.54	ug/L		10/22/18 13:25	10/24/18 17:32	1
2-Nitrophenol	ND	*	9.8	0.64	ug/L		10/22/18 13:25	10/24/18 17:32	1
4-Nitrophenol	ND		9.8	2.1	ug/L		10/22/18 13:25	10/24/18 17:32	1
N-Nitrosodimethylamine	ND		9.8	3.4	ug/L		10/22/18 13:25	10/24/18 17:32	1

Client Sample ID: MW14-ROX-101518-EB

Date Collected: 10/15/18 12:00
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-6
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.8	3.2	ug/L		10/22/18 13:25	10/24/18 17:32	1
N-Nitrosodiphenylamine	ND		9.8	0.46	ug/L		10/22/18 13:25	10/24/18 17:32	1
Pentachlorophenol	ND		20	1.8	ug/L		10/22/18 13:25	10/24/18 17:32	1
Phenol	ND	*	9.8	2.5	ug/L		10/22/18 13:25	10/24/18 17:32	1
Pyridine	ND	*	9.8	3.1	ug/L		10/22/18 13:25	10/24/18 17:32	1
Quinoline	ND		9.8	5.9	ug/L		10/22/18 13:25	10/24/18 17:32	1
2,4,5-Trichlorophenol	ND		9.8	3.6	ug/L		10/22/18 13:25	10/24/18 17:32	1
2,4,6-Trichlorophenol	ND		9.8	3.4	ug/L		10/22/18 13:25	10/24/18 17:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*34*		*34 - 120*	*10/22/18 13:25*	*10/24/18 17:32*	*1*
2-Fluorophenol	*24*		*10 - 120*	*10/22/18 13:25*	*10/24/18 17:32*	*1*
Nitrobenzene-d5	*31*		*27 - 120*	*10/22/18 13:25*	*10/24/18 17:32*	*1*
Phenol-d5	*29*		*10 - 120*	*10/22/18 13:25*	*10/24/18 17:32*	*1*
Terphenyl-d14	*45*		*53 - 125*	*10/22/18 13:25*	*10/24/18 17:32*	*1*
2,4,6-Tribromophenol	*49*		*15 - 135*	*10/22/18 13:25*	*10/24/18 17:32*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.031	0.0056	ug/L		10/25/18 11:36	10/26/18 10:24	1
1,2-Dibromoethane	ND	*	0.020	0.0051	ug/L		10/25/18 11:36	10/26/18 10:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*	*p*	*51 - 149*	*10/25/18 11:36*	*10/26/18 10:24*	*1*

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160657-1
SDG: 90527968

Client Sample ID: P66-ROX-101518
Date Collected: 10/15/18 13:20
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-7
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/27/18 13:34	1
Acrolein	ND		20	10	ug/L			10/27/18 13:34	1
Acrylonitrile	ND		10	2.8	ug/L			10/27/18 13:34	1
Benzene	52		1.0	0.38	ug/L			10/27/18 13:34	1
Bromobenzene	ND		1.0	0.54	ug/L			10/27/18 13:34	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/27/18 13:34	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/27/18 13:34	1
Bromoform	ND		5.0	0.71	ug/L			10/27/18 13:34	1
Bromomethane	ND		1.0	0.98	ug/L			10/27/18 13:34	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/27/18 13:34	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/27/18 13:34	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/27/18 13:34	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/27/18 13:34	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/27/18 13:34	1
Chloroethane	ND		1.0	0.76	ug/L			10/27/18 13:34	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/27/18 13:34	1
Chloroform	ND		1.0	0.60	ug/L			10/27/18 13:34	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/27/18 13:34	1
Chloromethane	ND		1.0	0.83	ug/L			10/27/18 13:34	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 13:34	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/27/18 13:34	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/27/18 13:34	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/27/18 13:34	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/27/18 13:34	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/27/18 13:34	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/27/18 13:34	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/27/18 13:34	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 13:34	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 13:34	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 13:34	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 13:34	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/27/18 13:34	1
Ethylbenzene	0.72	J	1.0	0.50	ug/L			10/27/18 13:34	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/27/18 13:34	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/27/18 13:34	1
2-Hexanone	ND		25	3.1	ug/L			10/27/18 13:34	1
Isopropylbenzene	54		1.0	0.53	ug/L			10/27/18 13:34	1
Methylene bromide	ND		5.0	0.59	ug/L			10/27/18 13:34	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/27/18 13:34	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/27/18 13:34	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/27/18 13:34	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/27/18 13:34	1
Naphthalene	ND		1.0	1.0	ug/L			10/27/18 13:34	1
n-Butylbenzene	3.6		1.0	0.76	ug/L			10/27/18 13:34	1
N-Propylbenzene	57	J	1.0	0.69	ug/L			10/27/18 13:34	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/27/18 13:34	1
o-Xylene	ND		5.0	0.60	ug/L			10/27/18 13:34	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/27/18 13:34	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/27/18 13:34	1

Client Sample ID: P66-ROX-101518

Date Collected: 10/15/18 13:20
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-7

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	8.0	J	1.0	0.70	ug/L			10/27/18 13:34	1
Styrene	ND		1.0	1.0	ug/L			10/27/18 13:34	1
tert-Butylbenzene	2.3		1.0	0.63	ug/L			10/27/18 13:34	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/27/18 13:34	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/27/18 13:34	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/27/18 13:34	1
Toluene	0.98	J	1.0	0.70	ug/L			10/27/18 13:34	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 13:34	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/27/18 13:34	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/27/18 13:34	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/27/18 13:34	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/27/18 13:34	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/27/18 13:34	1
Trichloroethene	ND		1.0	0.50	ug/L			10/27/18 13:34	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/27/18 13:34	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/27/18 13:34	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/27/18 13:34	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/27/18 13:34	1
Vinyl acetate	ND		25	2.0	ug/L			10/27/18 13:34	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/27/18 13:34	1
Xylenes, Total	ND		10	1.6	ug/L			10/27/18 13:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*78 - 118*		*10/27/18 13:34*	*1*
Dibromofluoromethane	*95*		*81 - 121*		*10/27/18 13:34*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*10/27/18 13:34*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.66	J	0.19	0.019	ug/L		10/22/18 13:25	10/25/18 01:21	1
Acenaphthylene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/25/18 01:21	1
Anthracene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/25/18 01:21	1
Benzo[a]anthracene	ND		0.19	0.039	ug/L		10/22/18 13:25	10/25/18 01:21	1
Benzo[a]pyrene	ND		0.19	0.039	ug/L		10/22/18 13:25	10/25/18 01:21	1
Benzo[b]fluoranthene	ND		0.19	0.039	ug/L		10/22/18 13:25	10/25/18 01:21	1
Benzo[g,h,i]perylene	ND		0.19	0.039	ug/L		10/22/18 13:25	10/25/18 01:21	1
Benzo[k]fluoranthene	ND		0.19	0.039	ug/L		10/22/18 13:25	10/25/18 01:21	1
Chrysene	ND		0.19	0.039	ug/L		10/22/18 13:25	10/25/18 01:21	1
Dibenz(a,h)anthracene	ND		0.19	0.039	ug/L		10/22/18 13:25	10/25/18 01:21	1
Fluoranthene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/25/18 01:21	1
Fluorene	ND		0.19	0.020	ug/L		10/22/18 13:25	10/25/18 01:21	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.039	ug/L		10/22/18 13:25	10/25/18 01:21	1
Phenanthrene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/25/18 01:21	1
Pyrene	ND		0.19	0.019	ug/L		10/22/18 13:25	10/25/18 01:21	1
2-Methylnaphthalene	23		0.19	0.019	ug/L		10/22/18 13:25	10/25/18 01:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*52*		*33 - 138*	*10/22/18 13:25*	*10/25/18 01:21*	*1*
2-Fluorobiphenyl	*52*		*15 - 122*	*10/22/18 13:25*	*10/25/18 01:21*	*1*
Nitrobenzene-d5	*82*		*19 - 130*	*10/22/18 13:25*	*10/25/18 01:21*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160657-1
SDG: 90527968

Client Sample ID: P66-ROX-101518
Date Collected: 10/15/18 13:20
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-7
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	46		1.9	0.19	ug/L		10/22/18 13:25	10/25/18 22:05	10

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		49	18	ug/L		10/22/18 13:25	10/26/18 00:16	5
Benzenethiol	ND	*	49	8.3	ug/L		10/22/18 13:25	10/26/18 00:16	5
Benzoic acid	ND	*	150	35	ug/L		10/22/18 13:25	10/26/18 00:16	5
Benzyl alcohol	ND		49	9.7	ug/L		10/22/18 13:25	10/26/18 00:16	5
Bis(2-chloroethoxy)methane	ND		49	3.4	ug/L		10/22/18 13:25	10/26/18 00:16	5
Bis(2-chloroethyl)ether	ND		49	3.6	ug/L		10/22/18 13:25	10/26/18 00:16	5
bis (2-chloroisopropyl) ether	ND		49	3.9	ug/L		10/22/18 13:25	10/26/18 00:16	5
Bis(2-ethylhexyl) phthalate	ND	*	49	24	ug/L		10/22/18 13:25	10/26/18 00:16	5
4-Bromophenyl phenyl ether	ND		49	1.6	ug/L		10/22/18 13:25	10/26/18 00:16	5
Butyl benzyl phthalate	ND		49	3.4	ug/L		10/22/18 13:25	10/26/18 00:16	5
4-Chloroaniline	ND		49	17	ug/L		10/22/18 13:25	10/26/18 00:16	5
4-Chloro-3-methylphenol	ND		49	18	ug/L		10/22/18 13:25	10/26/18 00:16	5
2-Chloronaphthalene	ND		49	2.5	ug/L		10/22/18 13:25	10/26/18 00:16	5
2-Chlorophenol	ND	*	49	11	ug/L		10/22/18 13:25	10/26/18 00:16	5
4-Chlorophenyl phenyl ether	ND		49	9.7	ug/L		10/22/18 13:25	10/26/18 00:16	5
Dibenz[a,h]acridine	ND		49	15	ug/L		10/22/18 13:25	10/26/18 00:16	5
Dibenzofuran	ND		49	2.5	ug/L		10/22/18 13:25	10/26/18 00:16	5
3,3'-Dichlorobenzidine	ND	*	49	13	ug/L		10/22/18 13:25	10/26/18 00:16	5
2,4-Dichlorophenol	ND	*	49	15	ug/L		10/22/18 13:25	10/26/18 00:16	5
Diethyl phthalate	ND		49	3.4	ug/L		10/22/18 13:25	10/26/18 00:16	5
2,4-Dimethylphenol	ND		49	17	ug/L		10/22/18 13:25	10/26/18 00:16	5
Dimethyl phthalate	ND		49	2.9	ug/L		10/22/18 13:25	10/26/18 00:16	5
Di-n-butyl phthalate	ND		49	13	ug/L		10/22/18 13:25	10/26/18 00:16	5
4,6-Dinitro-ortho-cresol	ND		49	9.7	ug/L		10/22/18 13:25	10/26/18 00:16	5
2,4-Dinitrophenol	ND	*	150	17	ug/L		10/22/18 13:25	10/26/18 00:16	5
2,4-Dinitrotoluene	ND		49	9.2	ug/L		10/22/18 13:25	10/26/18 00:16	5
2,6-Dinitrotoluene	ND		49	9.2	ug/L		10/22/18 13:25	10/26/18 00:16	5
Di-n-octyl phthalate	ND		49	2.1	ug/L		10/22/18 13:25	10/26/18 00:16	5
1,4-Dioxane	ND	*	49	4.9	ug/L		10/22/18 13:25	10/26/18 00:16	5
1,2-Diphenylhydrazine (as Azobenzene)	ND		49	4.9	ug/L		10/22/18 13:25	10/26/18 00:16	5
Hexachlorobenzene	ND		49	1.2	ug/L		10/22/18 13:25	10/26/18 00:16	5
Hexachlorocyclopentadiene	ND		97	13	ug/L		10/22/18 13:25	10/26/18 00:16	5
Hexachloroethane	ND		49	20	ug/L		10/22/18 13:25	10/26/18 00:16	5
Indene	ND		49	4.9	ug/L		10/22/18 13:25	10/26/18 00:16	5
Isophorone	ND		49	2.8	ug/L		10/22/18 13:25	10/26/18 00:16	5
2-Methylphenol	ND		49	8.8	ug/L		10/22/18 13:25	10/26/18 00:16	5
3 & 4 Methylphenol	ND	*	97	5.1	ug/L		10/22/18 13:25	10/26/18 00:16	5
2-Nitroaniline	ND		49	11	ug/L		10/22/18 13:25	10/26/18 00:16	5
3-Nitroaniline	ND		49	8.8	ug/L		10/22/18 13:25	10/26/18 00:16	5
4-Nitroaniline	ND		49	12	ug/L		10/22/18 13:25	10/26/18 00:16	5
Nitrobenzene	ND		49	2.7	ug/L		10/22/18 13:25	10/26/18 00:16	5
2-Nitrophenol	ND	*	49	3.2	ug/L		10/22/18 13:25	10/26/18 00:16	5
4-Nitrophenol	ND		49	10	ug/L		10/22/18 13:25	10/26/18 00:16	5
N-Nitrosodimethylamine	ND		49	17	ug/L		10/22/18 13:25	10/26/18 00:16	5
N-Nitrosodi-n-propylamine	ND		49	16	ug/L		10/22/18 13:25	10/26/18 00:16	5

Client Sample ID: P66-ROX-101518

Date Collected: 10/15/18 13:20
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-7

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodiphenylamine	ND		49	2.3	ug/L		10/22/18 13:25	10/26/18 00:16	5
Pentachlorophenol	ND		97	8.8	ug/L		10/22/18 13:25	10/26/18 00:16	5
Phenol	ND	*	49	13	ug/L		10/22/18 13:25	10/26/18 00:16	5
Pyridine	ND	*	49	16	ug/L		10/22/18 13:25	10/26/18 00:16	5
Quinoline	ND		49	29	ug/L		10/22/18 13:25	10/26/18 00:16	5
2,4,5-Trichlorophenol	ND		49	18	ug/L		10/22/18 13:25	10/26/18 00:16	5
2,4,6-Trichlorophenol	ND		49	17	ug/L		10/22/18 13:25	10/26/18 00:16	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*48*		*34 - 120*	*10/22/18 13:25*	*10/26/18 00:16*	*5*
2-Fluorophenol	*41*		*10 - 120*	*10/22/18 13:25*	*10/26/18 00:16*	*5*
Nitrobenzene-d5	*90*		*27 - 120*	*10/22/18 13:25*	*10/26/18 00:16*	*5*
Phenol-d5	*44*		*10 - 120*	*10/22/18 13:25*	*10/26/18 00:16*	*5*
Terphenyl-d14	*36*	*X*	*53 - 125*	*10/22/18 13:25*	*10/26/18 00:16*	*5*
2,4,6-Tribromophenol	*91*		*15 - 135*	*10/22/18 13:25*	*10/26/18 00:16*	*5*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.031	0.0057	ug/L		10/25/18 11:36	10/26/18 10:00	1
1,2-Dibromoethane	ND	*	0.021	0.0052	ug/L		10/25/18 11:36	10/26/18 10:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*121*	*p*	*51 - 149*	*10/25/18 11:36*	*10/26/18 10:00*	*1*

Client Sample ID: P66-ROX-101518-DUP
Date Collected: 10/15/18 13:20
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-8
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/27/18 13:59	1
Acrolein	ND		20	10	ug/L			10/27/18 13:59	1
Acrylonitrile	ND		10	2.8	ug/L			10/27/18 13:59	1
Benzene	57		1.0	0.38	ug/L			10/27/18 13:59	1
Bromobenzene	ND		1.0	0.54	ug/L			10/27/18 13:59	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/27/18 13:59	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/27/18 13:59	1
Bromoform	ND		5.0	0.71	ug/L			10/27/18 13:59	1
Bromomethane	ND		1.0	0.98	ug/L			10/27/18 13:59	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/27/18 13:59	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/27/18 13:59	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/27/18 13:59	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/27/18 13:59	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/27/18 13:59	1
Chloroethane	ND		1.0	0.76	ug/L			10/27/18 13:59	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/27/18 13:59	1
Chloroform	ND		1.0	0.60	ug/L			10/27/18 13:59	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/27/18 13:59	1
Chloromethane	ND		1.0	0.83	ug/L			10/27/18 13:59	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 13:59	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/27/18 13:59	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/27/18 13:59	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/27/18 13:59	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/27/18 13:59	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/27/18 13:59	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/27/18 13:59	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/27/18 13:59	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 13:59	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 13:59	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 13:59	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 13:59	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/27/18 13:59	1
Ethylbenzene	0.82	J	1.0	0.50	ug/L			10/27/18 13:59	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/27/18 13:59	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/27/18 13:59	1
2-Hexanone	ND		25	3.1	ug/L			10/27/18 13:59	1
Isopropylbenzene	68		1.0	0.53	ug/L			10/27/18 13:59	1
Methylene bromide	ND		5.0	0.59	ug/L			10/27/18 13:59	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/27/18 13:59	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/27/18 13:59	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/27/18 13:59	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/27/18 13:59	1
Naphthalene	ND		1.0	1.0	ug/L			10/27/18 13:59	1
n-Butylbenzene	5.0		1.0	0.76	ug/L			10/27/18 13:59	1
N-Propylbenzene	76	J	1.0	0.69	ug/L			10/27/18 13:59	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/27/18 13:59	1
o-Xylene	0.86	J	5.0	0.60	ug/L			10/27/18 13:59	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/27/18 13:59	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/27/18 13:59	1

Client Sample ID: P66-ROX-101518-DUP
Date Collected: 10/15/18 13:20
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-8
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	11	J	1.0	0.70	ug/L			10/27/18 13:59	1
Styrene	ND		1.0	1.0	ug/L			10/27/18 13:59	1
tert-Butylbenzene	2.8		1.0	0.63	ug/L			10/27/18 13:59	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/27/18 13:59	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/27/18 13:59	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/27/18 13:59	1
Toluene	0.99	J	1.0	0.70	ug/L			10/27/18 13:59	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 13:59	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/27/18 13:59	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/27/18 13:59	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/27/18 13:59	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/27/18 13:59	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/27/18 13:59	1
Trichloroethene	ND		1.0	0.50	ug/L			10/27/18 13:59	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/27/18 13:59	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/27/18 13:59	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/27/18 13:59	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/27/18 13:59	1
Vinyl acetate	ND		25	2.0	ug/L			10/27/18 13:59	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/27/18 13:59	1
Xylenes, Total	ND		10	1.6	ug/L			10/27/18 13:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*78 - 118*		*10/27/18 13:59*	*1*
Dibromofluoromethane	*96*		*81 - 121*		*10/27/18 13:59*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*10/27/18 13:59*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND	UJ	0.20	0.020	ug/L		10/22/18 13:25	10/25/18 01:39	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 01:39	1
Anthracene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 01:39	1
Benzo[a]anthracene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 01:39	1
Benzo[a]pyrene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 01:39	1
Benzo[b]fluoranthene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 01:39	1
Benzo[g,h,i]perylene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 01:39	1
Benzo[k]fluoranthene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 01:39	1
Chrysene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 01:39	1
Dibenz(a,h)anthracene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 01:39	1
Fluoranthene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 01:39	1
Fluorene	ND		0.20	0.021	ug/L		10/22/18 13:25	10/25/18 01:39	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.039	ug/L		10/22/18 13:25	10/25/18 01:39	1
Phenanthrene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 01:39	1
Pyrene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 01:39	1
2-Methylnaphthalene	25		0.20	0.020	ug/L		10/22/18 13:25	10/25/18 01:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*45*		*33 - 138*	*10/22/18 13:25*	*10/25/18 01:39*	*1*
2-Fluorobiphenyl	*62*		*15 - 122*	*10/22/18 13:25*	*10/25/18 01:39*	*1*
Nitrobenzene-d5	*107*		*19 - 130*	*10/22/18 13:25*	*10/25/18 01:39*	*1*

Client Sample ID: P66-ROX-101518-DUP

Date Collected: 10/15/18 13:20
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-8
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	42		2.0	0.20	ug/L		10/22/18 13:25	10/25/18 22:20	10

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		49	19	ug/L		10/22/18 13:25	10/26/18 00:37	5
Benzenethiol	ND	*	49	8.4	ug/L		10/22/18 13:25	10/26/18 00:37	5
Benzoic acid	ND	*	150	36	ug/L		10/22/18 13:25	10/26/18 00:37	5
Benzyl alcohol	ND		49	9.9	ug/L		10/22/18 13:25	10/26/18 00:37	5
Bis(2-chloroethoxy)methane	ND		49	3.4	ug/L		10/22/18 13:25	10/26/18 00:37	5
Bis(2-chloroethyl)ether	ND		49	3.6	ug/L		10/22/18 13:25	10/26/18 00:37	5
bis (2-chloroisopropyl) ether	ND		49	4.0	ug/L		10/22/18 13:25	10/26/18 00:37	5
Bis(2-ethylhexyl) phthalate	ND	*	49	25	ug/L		10/22/18 13:25	10/26/18 00:37	5
4-Bromophenyl phenyl ether	ND		49	1.6	ug/L		10/22/18 13:25	10/26/18 00:37	5
Butyl benzyl phthalate	ND		49	3.4	ug/L		10/22/18 13:25	10/26/18 00:37	5
4-Chloroaniline	ND		49	17	ug/L		10/22/18 13:25	10/26/18 00:37	5
4-Chloro-3-methylphenol	ND		49	19	ug/L		10/22/18 13:25	10/26/18 00:37	5
2-Chloronaphthalene	ND		49	2.6	ug/L		10/22/18 13:25	10/26/18 00:37	5
2-Chlorophenol	ND	*	49	11	ug/L		10/22/18 13:25	10/26/18 00:37	5
4-Chlorophenyl phenyl ether	ND		49	9.9	ug/L		10/22/18 13:25	10/26/18 00:37	5
Dibenz[a,h]acridine	ND		49	15	ug/L		10/22/18 13:25	10/26/18 00:37	5
Dibenzofuran	ND		49	2.6	ug/L		10/22/18 13:25	10/26/18 00:37	5
3,3'-Dichlorobenzidine	ND	*	49	13	ug/L		10/22/18 13:25	10/26/18 00:37	5
2,4-Dichlorophenol	ND	*	49	15	ug/L		10/22/18 13:25	10/26/18 00:37	5
Diethyl phthalate	ND		49	3.4	ug/L		10/22/18 13:25	10/26/18 00:37	5
2,4-Dimethylphenol	ND		49	17	ug/L		10/22/18 13:25	10/26/18 00:37	5
Dimethyl phthalate	ND		49	3.0	ug/L		10/22/18 13:25	10/26/18 00:37	5
Di-n-butyl phthalate	ND		49	13	ug/L		10/22/18 13:25	10/26/18 00:37	5
4,6-Dinitro-ortho-cresol	ND		49	9.9	ug/L		10/22/18 13:25	10/26/18 00:37	5
2,4-Dinitrophenol	ND	*	150	17	ug/L		10/22/18 13:25	10/26/18 00:37	5
2,4-Dinitrotoluene	ND		49	9.4	ug/L		10/22/18 13:25	10/26/18 00:37	5
2,6-Dinitrotoluene	ND		49	9.4	ug/L		10/22/18 13:25	10/26/18 00:37	5
Di-n-octyl phthalate	ND		49	2.2	ug/L		10/22/18 13:25	10/26/18 00:37	5
1,4-Dioxane	ND	*	49	4.9	ug/L		10/22/18 13:25	10/26/18 00:37	5
1,2-Diphenylhydrazine (as Azobenzene)	ND		49	4.9	ug/L		10/22/18 13:25	10/26/18 00:37	5
Hexachlorobenzene	ND		49	1.2	ug/L		10/22/18 13:25	10/26/18 00:37	5
Hexachlorocyclopentadiene	ND		99	13	ug/L		10/22/18 13:25	10/26/18 00:37	5
Hexachloroethane	ND		49	21	ug/L		10/22/18 13:25	10/26/18 00:37	5
Indene	ND		49	4.9	ug/L		10/22/18 13:25	10/26/18 00:37	5
Isophorone	ND		49	2.8	ug/L		10/22/18 13:25	10/26/18 00:37	5
2-Methylphenol	ND		49	8.9	ug/L		10/22/18 13:25	10/26/18 00:37	5
3 & 4 Methylphenol	ND	*	99	5.1	ug/L		10/22/18 13:25	10/26/18 00:37	5
2-Nitroaniline	ND		49	11	ug/L		10/22/18 13:25	10/26/18 00:37	5
3-Nitroaniline	ND		49	8.9	ug/L		10/22/18 13:25	10/26/18 00:37	5
4-Nitroaniline	ND		49	12	ug/L		10/22/18 13:25	10/26/18 00:37	5
Nitrobenzene	ND		49	2.7	ug/L		10/22/18 13:25	10/26/18 00:37	5
2-Nitrophenol	ND	*	49	3.2	ug/L		10/22/18 13:25	10/26/18 00:37	5
4-Nitrophenol	ND		49	10	ug/L		10/22/18 13:25	10/26/18 00:37	5
N-Nitrosodimethylamine	ND		49	17	ug/L		10/22/18 13:25	10/26/18 00:37	5
N-Nitrosodi-n-propylamine	ND		49	16	ug/L		10/22/18 13:25	10/26/18 00:37	5

Client Sample ID: P66-ROX-101518-DUP

Date Collected: 10/15/18 13:20
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-8
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodiphenylamine	ND	U	49	2.3	ug/L		10/22/18 13:25	10/26/18 00:37	5
Pentachlorophenol	ND		99	8.9	ug/L		10/22/18 13:25	10/26/18 00:37	5
Phenol	ND	*	49	13	ug/L		10/22/18 13:25	10/26/18 00:37	5
Pyridine	ND	*	49	16	ug/L		10/22/18 13:25	10/26/18 00:37	5
Quinoline	ND		49	30	ug/L		10/22/18 13:25	10/26/18 00:37	5
2,4,5-Trichlorophenol	ND		49	18	ug/L		10/22/18 13:25	10/26/18 00:37	5
2,4,6-Trichlorophenol	ND		49	17	ug/L		10/22/18 13:25	10/26/18 00:37	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*54*		*34 - 120*	*10/22/18 13:25*	*10/26/18 00:37*	*5*
2-Fluorophenol	*46*		*10 - 120*	*10/22/18 13:25*	*10/26/18 00:37*	*5*
Nitrobenzene-d5	*81*		*27 - 120*	*10/22/18 13:25*	*10/26/18 00:37*	*5*
Phenol-d5	*61*		*10 - 120*	*10/22/18 13:25*	*10/26/18 00:37*	*5*
Terphenyl-d14	*36*	*X*	*53 - 125*	*10/22/18 13:25*	*10/26/18 00:37*	*5*
2,4,6-Tribromophenol	*95*		*15 - 135*	*10/22/18 13:25*	*10/26/18 00:37*	*5*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.031	0.0056	ug/L		10/25/18 11:36	10/26/18 09:27	1
1,2-Dibromoethane	ND	*	0.021	0.0051	ug/L		10/25/18 11:36	10/26/18 09:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*115*		*51 - 149*	*10/25/18 11:36*	*10/26/18 09:27*	*1*

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits
E	Result exceeded calibration range.

GC Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160657-1
SDG: 90527968

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(78-118)	(81-121)	(80-120)
400-160657-2	TB-ROX-101518-8260	95	98	99
400-160657-3	ROST4PZE-ROX-101518	95	99	99
400-160657-3 MS	ROST4PZE-ROX-101518	95	95	98
400-160657-3 MSD	ROST4PZE-ROX-101518	95	95	98
400-160657-4	MW22-ROX-101518	92	92	98
400-160657-5	MW14-ROX-101518	96	97	96
400-160657-6	MW14-ROX-101518-EB	95	101	98
400-160657-7	P66-ROX-101518	97	95	101
400-160657-8	P66-ROX-101518-DUP	96	96	99
LCS 400-417182/1002	Lab Control Sample	94	99	96
MB 400-417182/4	Method Blank	93	100	98

Surrogate Legend

BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPHL	TBP
Lab Sample ID	Client Sample ID	(34-120)	(10-120)	(27-120)	(10-120)	(53-125)	(15-135)
400-160657-3	ROST4PZE-ROX-101518	72	48	80	80	82	129
400-160657-4	MW22-ROX-101518	59	63	76	69	55	95
400-160657-5 - RA	MW14-ROX-101518	55	34	57	51	56	69
400-160657-6	MW14-ROX-101518-EB	34	24	31	29	45 X	49
400-160657-7	P66-ROX-101518	48	41	90	44	36 X	91
400-160657-8	P66-ROX-101518-DUP	54	46	81	61	36 X	95
LCS 400-416425/2-A	Lab Control Sample	75	56	79	73	89	87
LCS 400-416425/4-A	Lab Control Sample	34	7 X	34	21	48 X	44
LCSD 400-416425/3-A	Lab Control Sample Dup	60	19	63	46	65	73
LCSD 400-416425/5-A	Lab Control Sample Dup	37	11	38	27	54	36
MB 400-416425/1-A	Method Blank	37	30	37	37	54	56

Surrogate Legend

FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPHL = Terphenyl-d14
TBP = 2,4,6-Tribromophenol

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		TPHL	FBP	NBZ
Lab Sample ID	Client Sample ID	(33-138)	(15-122)	(19-130)
400-160657-3	ROST4PZE-ROX-101518	98	66	102

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		TPHL	FBP	NBZ
Lab Sample ID	Client Sample ID	(33-138)	(15-122)	(19-130)
400-160657-4	MW22-ROX-101518	64	61	96
400-160657-5	MW14-ROX-101518	79	62	104
400-160657-6	MW14-ROX-101518-EB	86	59	91
400-160657-7	P66-ROX-101518	52	52	82
400-160657-8	P66-ROX-101518-DUP	45	62	107
LCS 400-416425/2-A	Lab Control Sample	101	72	104
LCSD 400-416425/3-A	Lab Control Sample Dup	92	67	102
MB 400-416425/1-A	Method Blank	132	70	119

Surrogate Legend

TPHL = Terphenyl-d14
FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5

Method: 8011 - EDB and DBCP in Water by Microextraction

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		BFB2
Lab Sample ID	Client Sample ID	(51-149)
400-160657-1	TB-ROX-101518-8011	91 p
400-160657-3	ROST4PZE-ROX-101518	107 p
400-160657-4	MW22-ROX-101518	141 p
400-160657-5	MW14-ROX-101518	100 p
400-160657-6	MW14-ROX-101518-EB	98 p
400-160657-7	P66-ROX-101518	121 p
400-160657-8	P66-ROX-101518-DUP	115
LCS 400-416931/2-A	Lab Control Sample	104
LCSD 400-416931/3-A	Lab Control Sample Dup	98
MB 400-416931/1-A	Method Blank	94 p

Surrogate Legend

BFB = 4-Bromofluorobenzene

Method Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160657-1
SDG: 90527968

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL PEN
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	TAL PEN
8011	EDB and DBCP in Water by Microextraction	EPA	TAL PEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL PEN
5030B	Purge and Trap	SW846	TAL PEN
8011	Microextraction	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Client Sample ID: TB-ROX-101518-8011

Lab Sample ID: 400-160657-1
Matrix: Water

Date Collected: 10/15/18 00:00
Date Received: 10/16/18 09:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			33.1 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/26/18 12:17	DS	TAL PEN

Client Sample ID: TB-ROX-101518-8260

Lab Sample ID: 400-160657-2
Matrix: Water

Date Collected: 10/15/18 00:00
Date Received: 10/16/18 09:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417182	10/27/18 11:53	CAR	TAL PEN

Client Sample ID: ROST4PZE-ROX-101518

Lab Sample ID: 400-160657-3
Matrix: Water

Date Collected: 10/15/18 09:40
Date Received: 10/16/18 09:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417182	10/27/18 08:59	CAR	TAL PEN
Total/NA	Prep	3520C			1022 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D		5			416965	10/25/18 23:34	VC1	TAL PEN
Total/NA	Prep	3520C			1022 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416798	10/25/18 00:13	RM	TAL PEN
Total/NA	Prep	8011			33.6 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/26/18 11:52	DS	TAL PEN

Client Sample ID: MW22-ROX-101518

Lab Sample ID: 400-160657-4
Matrix: Water

Date Collected: 10/15/18 10:30
Date Received: 10/16/18 09:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	5 mL	5 mL	417182	10/27/18 14:50	CAR	TAL PEN
Total/NA	Prep	3520C			934.6 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D		5			416965	10/25/18 23:55	VC1	TAL PEN
Total/NA	Prep	3520C			934.6 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416798	10/25/18 00:30	RM	TAL PEN
Total/NA	Prep	8011			35 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/26/18 11:28	DS	TAL PEN

Client Sample ID: MW14-ROX-101518

Lab Sample ID: 400-160657-5
Matrix: Water

Date Collected: 10/15/18 12:30
Date Received: 10/16/18 09:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417182	10/27/18 13:09	CAR	TAL PEN

Client Sample ID: MW14-ROX-101518

Date Collected: 10/15/18 12:30
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1020.8 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416716	10/24/18 17:10	KJA	TAL PEN
Total/NA	Prep	3520C	RA		1020.8 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D	RA	1			417229	10/27/18 15:22	VC1	TAL PEN
Total/NA	Prep	3520C			1020.8 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416798	10/25/18 00:47	RM	TAL PEN
Total/NA	Prep	8011			34.5 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/26/18 10:56	DS	TAL PEN

Client Sample ID: MW14-ROX-101518-EB

Date Collected: 10/15/18 12:00
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417182	10/27/18 08:09	CAR	TAL PEN
Total/NA	Prep	3520C			1022.8 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416716	10/24/18 17:32	KJA	TAL PEN
Total/NA	Prep	3520C			1022.8 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416798	10/25/18 01:04	RM	TAL PEN
Total/NA	Prep	8011			34.2 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/26/18 10:24	DS	TAL PEN

Client Sample ID: P66-ROX-101518

Date Collected: 10/15/18 13:20
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417182	10/27/18 13:34	CAR	TAL PEN
Total/NA	Prep	3520C			1028.4 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D		5			416965	10/26/18 00:16	VC1	TAL PEN
Total/NA	Prep	3520C			1028.4 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416798	10/25/18 01:21	RM	TAL PEN
Total/NA	Prep	3520C	DL		1028.4 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D LL	DL	10			416937	10/25/18 22:05	RM	TAL PEN
Total/NA	Prep	8011			33.9 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/26/18 10:00	DS	TAL PEN

Client Sample ID: P66-ROX-101518-DUP

Date Collected: 10/15/18 13:20
Date Received: 10/16/18 09:11

Lab Sample ID: 400-160657-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417182	10/27/18 13:59	CAR	TAL PEN

Client Sample ID: P66-ROX-101518-DUP

Lab Sample ID: 400-160657-8

Date Collected: 10/15/18 13:20
Date Received: 10/16/18 09:11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1014.8 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D		5			416965	10/26/18 00:37	VC1	TAL PEN
Total/NA	Prep	3520C			1014.8 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416798	10/25/18 01:39	RM	TAL PEN
Total/NA	Prep	3520C	DL		1014.8 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D LL	DL	10			416937	10/25/18 22:20	RM	TAL PEN
Total/NA	Prep	8011			34.1 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/26/18 09:27	DS	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-416425/1-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416716	10/24/18 12:51	KJA	TAL PEN
Total/NA	Prep	3520C			1000 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416798	10/24/18 21:56	RM	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-416931/1-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/25/18 19:05	DS	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-417182/4

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417182	10/27/18 07:45	CAR	TAL PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-416425/2-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416989	10/25/18 21:54	VC1	TAL PEN
Total/NA	Prep	3520C			1000 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D LL		5			416798	10/24/18 22:13	RM	TAL PEN

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 400-416425/4-A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416716	10/24/18 13:56	KJA	TAL PEN

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 400-416931/2-A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/25/18 20:09	DS	TAL PEN

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 400-417182/1002
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417182	10/27/18 06:55	CAR	TAL PEN

Client Sample ID: Lab Control Sample Dup
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCSD 400-416425/3-A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416989	10/25/18 22:18	VC1	TAL PEN
Total/NA	Prep	3520C			1000 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D LL		5			416798	10/24/18 22:30	RM	TAL PEN

Client Sample ID: Lab Control Sample Dup
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCSD 400-416425/5-A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	416425	10/22/18 13:25	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416716	10/24/18 14:18	KJA	TAL PEN

Client Sample ID: Lab Control Sample Dup
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCSD 400-416931/3-A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	416931	10/25/18 11:36	DS	TAL PEN
Total/NA	Analysis	8011		1			417027	10/25/18 20:39	DS	TAL PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160657-1
SDG: 90527968

Client Sample ID: ROST4PZE-ROX-101518 — **Lab Sample ID: 400-160657-3 MS**
Date Collected: 10/15/18 09:40 — Matrix: Water
Date Received: 10/16/18 09:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417182	10/27/18 10:38	CAR	TAL PEN

Client Sample ID: ROST4PZE-ROX-101518 — **Lab Sample ID: 400-160657-3 MSD**
Date Collected: 10/15/18 09:40 — Matrix: Water
Date Received: 10/16/18 09:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417182	10/27/18 11:03	CAR	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

GC/MS VOA

Analysis Batch: 417182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160657-2	TB-ROX-101518-8260	Total/NA	Water	8260B	
400-160657-3	ROST4PZE-ROX-101518	Total/NA	Water	8260B	
400-160657-4	MW22-ROX-101518	Total/NA	Water	8260B	
400-160657-5	MW14-ROX-101518	Total/NA	Water	8260B	
400-160657-6	MW14-ROX-101518-EB	Total/NA	Water	8260B	
400-160657-7	P66-ROX-101518	Total/NA	Water	8260B	
400-160657-8	P66-ROX-101518-DUP	Total/NA	Water	8260B	
MB 400-417182/4	Method Blank	Total/NA	Water	8260B	
LCS 400-417182/1002	Lab Control Sample	Total/NA	Water	8260B	
400-160657-3 MS	ROST4PZE-ROX-101518	Total/NA	Water	8260B	
400-160657-3 MSD	ROST4PZE-ROX-101518	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 416425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160657-3	ROST4PZE-ROX-101518	Total/NA	Water	3520C	
400-160657-4	MW22-ROX-101518	Total/NA	Water	3520C	
400-160657-5	MW14-ROX-101518	Total/NA	Water	3520C	
400-160657-5 - RA	MW14-ROX-101518	Total/NA	Water	3520C	
400-160657-6	MW14-ROX-101518-EB	Total/NA	Water	3520C	
400-160657-7	P66-ROX-101518	Total/NA	Water	3520C	
400-160657-7 - DL	P66-ROX-101518	Total/NA	Water	3520C	
400-160657-8	P66-ROX-101518-DUP	Total/NA	Water	3520C	
400-160657-8 - DL	P66-ROX-101518-DUP	Total/NA	Water	3520C	
MB 400-416425/1-A	Method Blank	Total/NA	Water	3520C	
LCS 400-416425/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 400-416425/4-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-416425/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
LCSD 400-416425/5-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 416716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160657-5	MW14-ROX-101518	Total/NA	Water	8270D	416425
400-160657-6	MW14-ROX-101518-EB	Total/NA	Water	8270D	416425
MB 400-416425/1-A	Method Blank	Total/NA	Water	8270D	416425
LCS 400-416425/4-A	Lab Control Sample	Total/NA	Water	8270D	416425
LCSD 400-416425/5-A	Lab Control Sample Dup	Total/NA	Water	8270D	416425

Analysis Batch: 416798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160657-3	ROST4PZE-ROX-101518	Total/NA	Water	8270D LL	416425
400-160657-4	MW22-ROX-101518	Total/NA	Water	8270D LL	416425
400-160657-5	MW14-ROX-101518	Total/NA	Water	8270D LL	416425
400-160657-6	MW14-ROX-101518-EB	Total/NA	Water	8270D LL	416425
400-160657-7	P66-ROX-101518	Total/NA	Water	8270D LL	416425
400-160657-8	P66-ROX-101518-DUP	Total/NA	Water	8270D LL	416425
MB 400-416425/1-A	Method Blank	Total/NA	Water	8270D LL	416425
LCS 400-416425/2-A	Lab Control Sample	Total/NA	Water	8270D LL	416425
LCSD 400-416425/3-A	Lab Control Sample Dup	Total/NA	Water	8270D LL	416425

GC/MS Semi VOA (Continued)

Analysis Batch: 416937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160657-7 - DL	P66-ROX-101518	Total/NA	Water	8270D LL	416425
400-160657-8 - DL	P66-ROX-101518-DUP	Total/NA	Water	8270D LL	416425

Analysis Batch: 416965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160657-3	ROST4PZE-ROX-101518	Total/NA	Water	8270D	416425
400-160657-4	MW22-ROX-101518	Total/NA	Water	8270D	416425
400-160657-7	P66-ROX-101518	Total/NA	Water	8270D	416425
400-160657-8	P66-ROX-101518-DUP	Total/NA	Water	8270D	416425

Analysis Batch: 416989

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-416425/2-A	Lab Control Sample	Total/NA	Water	8270D	416425
LCSD 400-416425/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	416425

Analysis Batch: 417229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160657-5 - RA	MW14-ROX-101518	Total/NA	Water	8270D	416425

GC Semi VOA

Prep Batch: 416931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160657-1	TB-ROX-101518-8011	Total/NA	Water	8011	
400-160657-3	ROST4PZE-ROX-101518	Total/NA	Water	8011	
400-160657-4	MW22-ROX-101518	Total/NA	Water	8011	
400-160657-5	MW14-ROX-101518	Total/NA	Water	8011	
400-160657-6	MW14-ROX-101518-EB	Total/NA	Water	8011	
400-160657-7	P66-ROX-101518	Total/NA	Water	8011	
400-160657-8	P66-ROX-101518-DUP	Total/NA	Water	8011	
MB 400-416931/1-A	Method Blank	Total/NA	Water	8011	
LCS 400-416931/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 400-416931/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 417027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160657-1	TB-ROX-101518-8011	Total/NA	Water	8011	416931
400-160657-3	ROST4PZE-ROX-101518	Total/NA	Water	8011	416931
400-160657-4	MW22-ROX-101518	Total/NA	Water	8011	416931
400-160657-5	MW14-ROX-101518	Total/NA	Water	8011	416931
400-160657-6	MW14-ROX-101518-EB	Total/NA	Water	8011	416931
400-160657-7	P66-ROX-101518	Total/NA	Water	8011	416931
400-160657-8	P66-ROX-101518-DUP	Total/NA	Water	8011	416931
MB 400-416931/1-A	Method Blank	Total/NA	Water	8011	416931
LCS 400-416931/2-A	Lab Control Sample	Total/NA	Water	8011	416931
LCSD 400-416931/3-A	Lab Control Sample Dup	Total/NA	Water	8011	416931

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-417182/4
Matrix: Water
Analysis Batch: 417182

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/27/18 07:45	1
Acrolein	ND		20	10	ug/L			10/27/18 07:45	1
Acrylonitrile	ND		10	2.8	ug/L			10/27/18 07:45	1
Benzene	ND		1.0	0.38	ug/L			10/27/18 07:45	1
Bromobenzene	ND		1.0	0.54	ug/L			10/27/18 07:45	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/27/18 07:45	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Bromoform	ND		5.0	0.71	ug/L			10/27/18 07:45	1
Bromomethane	ND		1.0	0.98	ug/L			10/27/18 07:45	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/27/18 07:45	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Chloroethane	ND		1.0	0.76	ug/L			10/27/18 07:45	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/27/18 07:45	1
Chloroform	ND		1.0	0.60	ug/L			10/27/18 07:45	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/27/18 07:45	1
Chloromethane	ND		1.0	0.83	ug/L			10/27/18 07:45	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 07:45	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/27/18 07:45	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/27/18 07:45	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/27/18 07:45	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/27/18 07:45	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/27/18 07:45	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 07:45	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/27/18 07:45	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/27/18 07:45	1
2-Hexanone	ND		25	3.1	ug/L			10/27/18 07:45	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/27/18 07:45	1
Methylene bromide	ND		5.0	0.59	ug/L			10/27/18 07:45	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/27/18 07:45	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/27/18 07:45	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/27/18 07:45	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/27/18 07:45	1
Naphthalene	ND		1.0	1.0	ug/L			10/27/18 07:45	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/27/18 07:45	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/27/18 07:45	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/27/18 07:45	1
o-Xylene	ND		5.0	0.60	ug/L			10/27/18 07:45	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/27/18 07:45	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-417182/4
Matrix: Water
Analysis Batch: 417182

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/27/18 07:45	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/27/18 07:45	1
Styrene	ND		1.0	1.0	ug/L			10/27/18 07:45	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/27/18 07:45	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/27/18 07:45	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/27/18 07:45	1
Toluene	ND		1.0	0.70	ug/L			10/27/18 07:45	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 07:45	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/27/18 07:45	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/27/18 07:45	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/27/18 07:45	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/27/18 07:45	1
Trichloroethene	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/27/18 07:45	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/27/18 07:45	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/27/18 07:45	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/27/18 07:45	1
Vinyl acetate	ND		25	2.0	ug/L			10/27/18 07:45	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Xylenes, Total	ND		10	1.6	ug/L			10/27/18 07:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*78 - 118*		*10/27/18 07:45*	*1*
Dibromofluoromethane	*100*		*81 - 121*		*10/27/18 07:45*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*10/27/18 07:45*	*1*

Lab Sample ID: LCS 400-417182/1002
Matrix: Water
Analysis Batch: 417182

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	200	258		ug/L		129	43 - 160
Acrolein	500	513		ug/L		103	38 - 160
Acrylonitrile	500	675		ug/L		135	64 - 142
Benzene	50.0	47.5		ug/L		95	70 - 130
Bromobenzene	50.0	52.8		ug/L		106	70 - 132
Bromochloromethane	50.0	53.5		ug/L		107	70 - 130
Bromodichloromethane	50.0	46.5		ug/L		93	67 - 133
Bromoform	50.0	53.2		ug/L		106	57 - 140
Bromomethane	50.0	49.5		ug/L		99	10 - 160
2-Butanone (MEK)	200	208		ug/L		104	61 - 145
Carbon disulfide	50.0	44.4		ug/L		89	61 - 137
Carbon tetrachloride	50.0	43.5		ug/L		87	61 - 137
Chlorobenzene	50.0	51.6		ug/L		103	70 - 130
Dibromochloromethane	50.0	51.3		ug/L		103	67 - 135
Chloroethane	50.0	54.7		ug/L		109	55 - 141

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-417182/1002
Matrix: Water
Analysis Batch: 417182

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloroethyl vinyl ether	50.0	28.3		ug/L		57	10 - 160
Chloroform	50.0	45.3		ug/L		91	69 - 130
1-Chlorohexane	50.0	55.8		ug/L		112	69 - 130
Chloromethane	50.0	65.8		ug/L		132	58 - 137
cis-1,2-Dichloroethene	50.0	50.5		ug/L		101	68 - 130
cis-1,3-Dichloropropene	50.0	42.5		ug/L		85	69 - 132
1,2-Dichlorobenzene	50.0	53.7		ug/L		107	67 - 130
1,3-Dichlorobenzene	50.0	53.8		ug/L		108	70 - 130
1,4-Dichlorobenzene	50.0	53.1		ug/L		106	70 - 130
Dichlorodifluoromethane	50.0	52.4		ug/L		105	41 - 146
1,1-Dichloroethane	50.0	50.0		ug/L		100	70 - 130
1,2-Dichloroethane	50.0	48.6		ug/L		97	69 - 130
1,1-Dichloroethene	50.0	48.1		ug/L		96	63 - 134
1,2-Dichloropropane	50.0	48.8		ug/L		98	70 - 130
1,3-Dichloropropane	50.0	47.9		ug/L		96	70 - 130
2,2-Dichloropropane	50.0	32.3		ug/L		65	52 - 135
1,1-Dichloropropene	50.0	47.2		ug/L		94	70 - 130
Ethylbenzene	50.0	48.9		ug/L		98	70 - 130
Ethyl methacrylate	50.0	43.0		ug/L		86	68 - 130
Hexachlorobutadiene	50.0	48.8		ug/L		98	53 - 140
2-Hexanone	200	246		ug/L		123	65 - 137
Isopropylbenzene	50.0	50.2		ug/L		100	70 - 130
Methylene bromide	50.0	49.6		ug/L		99	70 - 130
Methylene Chloride	50.0	48.0		ug/L		96	66 - 135
4-Methyl-2-pentanone (MIBK)	200	246		ug/L		123	69 - 138
Methyl tert-butyl ether	50.0	41.8		ug/L		84	66 - 130
m-Xylene & p-Xylene	50.0	48.2		ug/L		96	70 - 130
Naphthalene	50.0	51.0		ug/L		102	47 - 149
n-Butylbenzene	50.0	52.8		ug/L		106	67 - 130
N-Propylbenzene	50.0	50.7		ug/L		101	70 - 130
o-Chlorotoluene	50.0	46.0		ug/L		92	70 - 130
o-Xylene	50.0	48.2		ug/L		96	70 - 130
p-Chlorotoluene	50.0	50.0		ug/L		100	70 - 130
p-Isopropyltoluene	50.0	53.1		ug/L		106	65 - 130
sec-Butylbenzene	50.0	52.5		ug/L		105	66 - 130
Styrene	50.0	49.7		ug/L		99	70 - 130
tert-Butylbenzene	50.0	48.3		ug/L		97	64 - 139
1,1,1,2-Tetrachloroethane	50.0	48.6		ug/L		97	67 - 131
1,1,2,2-Tetrachloroethane	50.0	51.0		ug/L		102	70 - 131
Tetrachloroethene	50.0	50.9		ug/L		102	65 - 130
Toluene	50.0	49.6		ug/L		99	70 - 130
trans-1,2-Dichloroethene	50.0	48.9		ug/L		98	70 - 130
trans-1,3-Dichloropropene	50.0	40.9		ug/L		82	63 - 130
1,2,3-Trichlorobenzene	50.0	50.2		ug/L		100	60 - 138
1,2,4-Trichlorobenzene	50.0	49.3		ug/L		99	60 - 140
1,1,1-Trichloroethane	50.0	43.7		ug/L		87	68 - 130
1,1,2-Trichloroethane	50.0	48.1		ug/L		96	70 - 130
Trichloroethene	50.0	51.1		ug/L		102	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-417182/1002
Matrix: Water
Analysis Batch: 417182

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	50.0	54.1		ug/L		108	65 - 138
1,2,3-Trichloropropane	50.0	53.9		ug/L		108	70 - 130
1,2,4-Trimethylbenzene	50.0	52.3		ug/L		105	70 - 130
1,3,5-Trimethylbenzene	50.0	52.4		ug/L		105	69 - 130
Vinyl acetate	100	90.9		ug/L		91	26 - 160
Vinyl chloride	50.0	54.9		ug/L		110	59 - 136
Xylenes, Total	100	96.4		ug/L		96	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*94*		*78 - 118*
Dibromofluoromethane	*99*		*81 - 121*
Toluene-d8 (Surr)	*96*		*80 - 120*

Lab Sample ID: 400-160657-3 MS
Matrix: Water
Analysis Batch: 417182

Client Sample ID: ROST4PZE-ROX-101518
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	ND	F1	200	576	F1	ug/L		288	43 - 150
Acrolein	ND		500	459		ug/L		92	38 - 150
Acrylonitrile	ND		500	679		ug/L		136	62 - 149
Benzene	1.1		50.0	49.5		ug/L		97	56 - 142
Bromobenzene	ND		50.0	50.4		ug/L		101	59 - 136
Bromochloromethane	ND		50.0	52.7		ug/L		105	64 - 140
Bromodichloromethane	ND		50.0	44.2		ug/L		88	59 - 143
Bromoform	ND		50.0	48.5		ug/L		97	50 - 140
Bromomethane	ND		50.0	48.0		ug/L		96	10 - 150
2-Butanone (MEK)	ND		200	203		ug/L		102	55 - 150
Carbon disulfide	ND		50.0	44.7		ug/L		89	48 - 150
Carbon tetrachloride	ND		50.0	42.9		ug/L		86	55 - 145
Chlorobenzene	ND		50.0	49.1		ug/L		98	64 - 130
Dibromochloromethane	ND		50.0	46.9		ug/L		94	56 - 143
Chloroethane	ND		50.0	52.6		ug/L		105	50 - 150
2-Chloroethyl vinyl ether	ND	F1	50.0	ND	F1	ug/L		0	10 - 150
Chloroform	ND		50.0	44.7		ug/L		89	60 - 141
1-Chlorohexane	ND		50.0	54.1		ug/L		108	56 - 136
Chloromethane	ND		50.0	64.3		ug/L		129	49 - 148
cis-1,2-Dichloroethene	ND		50.0	51.1		ug/L		102	59 - 143
cis-1,3-Dichloropropene	ND		50.0	41.5		ug/L		83	57 - 140
1,2-Dichlorobenzene	ND		50.0	50.3		ug/L		101	52 - 137
1,3-Dichlorobenzene	ND		50.0	50.1		ug/L		100	54 - 135
1,4-Dichlorobenzene	ND		50.0	50.2		ug/L		100	53 - 135
Dichlorodifluoromethane	ND		50.0	50.5		ug/L		101	16 - 150
1,1-Dichloroethane	ND		50.0	50.4		ug/L		101	61 - 144
1,2-Dichloroethane	ND		50.0	47.4		ug/L		95	60 - 141
1,1-Dichloroethene	ND		50.0	50.2		ug/L		100	54 - 147
1,2-Dichloropropane	ND		50.0	48.7		ug/L		97	66 - 137
1,3-Dichloropropane	ND		50.0	46.3		ug/L		93	66 - 133

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-160657-3 MS
Matrix: Water
Analysis Batch: 417182

Client Sample ID: ROST4PZE-ROX-101518
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,2-Dichloropropane	ND		50.0	33.1		ug/L		66	42 - 144
1,1-Dichloropropene	ND		50.0	48.9		ug/L		98	65 - 136
Ethylbenzene	ND		50.0	47.8		ug/L		96	58 - 131
Ethyl methacrylate	ND		50.0	42.0		ug/L		84	64 - 130
Hexachlorobutadiene	ND		50.0	44.7		ug/L		89	31 - 149
2-Hexanone	ND		200	234		ug/L		117	65 - 140
Isopropylbenzene	ND		50.0	48.2		ug/L		96	56 - 133
Methylene bromide	ND		50.0	47.6		ug/L		95	63 - 138
Methylene Chloride	ND		50.0	51.3		ug/L		103	60 - 146
4-Methyl-2-pentanone (MIBK)	ND		200	248		ug/L		124	63 - 146
Methyl tert-butyl ether	ND		50.0	40.7		ug/L		81	59 - 137
m-Xylene & p-Xylene	2.8	J	50.0	49.9		ug/L		94	57 - 130
Naphthalene	1.5		50.0	51.3		ug/L		100	25 - 150
n-Butylbenzene	ND		50.0	48.4		ug/L		97	41 - 142
N-Propylbenzene	ND		50.0	49.7		ug/L		99	51 - 138
o-Chlorotoluene	ND		50.0	49.4		ug/L		99	53 - 134
o-Xylene	1.4	J	50.0	48.3		ug/L		94	61 - 130
p-Chlorotoluene	ND		50.0	48.0		ug/L		96	54 - 133
p-Isopropyltoluene	0.71	J	50.0	50.8		ug/L		102	48 - 139
sec-Butylbenzene	ND		50.0	50.3		ug/L		101	50 - 138
Styrene	ND		50.0	47.0		ug/L		94	58 - 131
tert-Butylbenzene	ND		50.0	47.7		ug/L		95	54 - 146
1,1,1,2-Tetrachloroethane	ND		50.0	45.4		ug/L		91	59 - 137
1,1,2,2-Tetrachloroethane	ND		50.0	49.1		ug/L		98	66 - 135
Tetrachloroethene	ND		50.0	48.8		ug/L		98	52 - 133
Toluene	ND		50.0	48.5		ug/L		97	65 - 130
trans-1,2-Dichloroethene	ND		50.0	48.6		ug/L		97	61 - 143
trans-1,3-Dichloropropene	ND		50.0	38.2		ug/L		76	53 - 133
1,2,3-Trichlorobenzene	ND		50.0	48.0		ug/L		96	43 - 145
1,2,4-Trichlorobenzene	ND		50.0	46.9		ug/L		94	39 - 148
1,1,1-Trichloroethane	ND		50.0	43.8		ug/L		88	57 - 142
1,1,2-Trichloroethane	ND		50.0	47.4		ug/L		95	66 - 131
Trichloroethene	ND		50.0	50.0		ug/L		100	64 - 136
Trichlorofluoromethane	ND		50.0	49.7		ug/L		99	54 - 150
1,2,3-Trichloropropane	ND		50.0	52.6		ug/L		105	65 - 133
1,2,4-Trimethylbenzene	5.9		50.0	55.5		ug/L		99	50 - 139
1,3,5-Trimethylbenzene	1.8		50.0	53.1		ug/L		103	52 - 135
Vinyl acetate	ND		100	80.0		ug/L		80	26 - 150
Vinyl chloride	ND		50.0	52.8		ug/L		106	46 - 150
Xylenes, Total	4.2	J	100	98.2		ug/L		94	59 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*95*		*78 - 118*
Dibromofluoromethane	*95*		*81 - 121*
Toluene-d8 (Surr)	*98*		*80 - 120*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-160657-3 MSD
Matrix: Water
Analysis Batch: 417182

Client Sample ID: ROST4PZE-ROX-101518
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	ND	F1	200	618	F1	ug/L		309	43 - 150	7	30
Acrolein	ND		500	531		ug/L		106	38 - 150	14	31
Acrylonitrile	ND		500	710		ug/L		142	62 - 149	4	30
Benzene	1.1		50.0	51.3		ug/L		100	56 - 142	4	30
Bromobenzene	ND		50.0	49.9		ug/L		100	59 - 136	1	30
Bromochloromethane	ND		50.0	53.8		ug/L		108	64 - 140	2	30
Bromodichloromethane	ND		50.0	45.6		ug/L		91	59 - 143	3	30
Bromoform	ND		50.0	51.9		ug/L		104	50 - 140	7	30
Bromomethane	ND		50.0	55.1		ug/L		110	10 - 150	14	50
2-Butanone (MEK)	ND		200	222		ug/L		111	55 - 150	9	30
Carbon disulfide	ND		50.0	47.1		ug/L		94	48 - 150	5	30
Carbon tetrachloride	ND		50.0	46.0		ug/L		92	55 - 145	7	30
Chlorobenzene	ND		50.0	50.0		ug/L		100	64 - 130	2	30
Dibromochloromethane	ND		50.0	49.4		ug/L		99	56 - 143	5	30
Chloroethane	ND		50.0	61.0		ug/L		122	50 - 150	15	30
2-Chloroethyl vinyl ether	ND	F1	50.0	ND	F1	ug/L		0	10 - 150	NC	50
Chloroform	ND		50.0	47.7		ug/L		95	60 - 141	6	30
1-Chlorohexane	ND		50.0	55.2		ug/L		110	56 - 136	2	30
Chloromethane	ND		50.0	73.4		ug/L		147	49 - 148	13	31
cis-1,2-Dichloroethene	ND		50.0	53.2		ug/L		106	59 - 143	4	30
cis-1,3-Dichloropropene	ND		50.0	42.7		ug/L		85	57 - 140	3	30
1,2-Dichlorobenzene	ND		50.0	48.2		ug/L		96	52 - 137	4	30
1,3-Dichlorobenzene	ND		50.0	46.6		ug/L		93	54 - 135	7	30
1,4-Dichlorobenzene	ND		50.0	46.9		ug/L		94	53 - 135	7	30
Dichlorodifluoromethane	ND		50.0	57.6		ug/L		115	16 - 150	13	31
1,1-Dichloroethane	ND		50.0	53.3		ug/L		107	61 - 144	6	30
1,2-Dichloroethane	ND		50.0	49.0		ug/L		98	60 - 141	3	30
1,1-Dichloroethene	ND		50.0	53.7		ug/L		107	54 - 147	7	30
1,2-Dichloropropane	ND		50.0	51.3		ug/L		103	66 - 137	5	30
1,3-Dichloropropane	ND		50.0	49.1		ug/L		98	66 - 133	6	30
2,2-Dichloropropane	ND		50.0	36.6		ug/L		73	42 - 144	10	31
1,1-Dichloropropene	ND		50.0	50.1		ug/L		100	65 - 136	2	30
Ethylbenzene	ND		50.0	48.7		ug/L		97	58 - 131	2	30
Ethyl methacrylate	ND		50.0	45.0		ug/L		90	64 - 130	7	30
Hexachlorobutadiene	ND		50.0	40.2		ug/L		80	31 - 149	11	36
2-Hexanone	ND		200	255		ug/L		128	65 - 140	9	30
Isopropylbenzene	ND		50.0	49.3		ug/L		99	58 - 133	2	30
Methylene bromide	ND		50.0	48.5		ug/L		97	63 - 138	2	30
Methylene Chloride	ND		50.0	54.0		ug/L		108	60 - 146	5	32
4-Methyl-2-pentanone (MIBK)	ND		200	260		ug/L		130	63 - 146	5	30
Methyl tert-butyl ether	ND		50.0	43.6		ug/L		87	59 - 137	7	30
m-Xylene & p-Xylene	2.8	J	50.0	50.6		ug/L		96	57 - 130	1	30
Naphthalene	1.5		50.0	52.6		ug/L		102	25 - 150	2	30
n-Butylbenzene	ND		50.0	44.1		ug/L		88	41 - 142	9	31
N-Propylbenzene	ND		50.0	48.3		ug/L		97	51 - 138	3	30
o-Chlorotoluene	ND		50.0	48.1		ug/L		96	53 - 134	3	30
o-Xylene	1.4	J	50.0	49.3		ug/L		96	61 - 130	2	30
p-Chlorotoluene	ND		50.0	46.3		ug/L		93	54 - 133	4	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-160657-3 MSD
Matrix: Water
Analysis Batch: 417182

Client Sample ID: ROST4PZE-ROX-101518
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
p-Isopropyltoluene	0.71	J	50.0	47.8		ug/L		96	48 - 139	6	30
sec-Butylbenzene	ND		50.0	48.9		ug/L		98	50 - 138	3	30
Styrene	ND		50.0	47.3		ug/L		95	58 - 131	1	30
tert-Butylbenzene	ND		50.0	47.8		ug/L		96	54 - 146	0	30
1,1,1,2-Tetrachloroethane	ND		50.0	47.2		ug/L		94	59 - 137	4	30
1,1,2,2-Tetrachloroethane	ND		50.0	51.5		ug/L		103	66 - 135	5	30
Tetrachloroethene	ND		50.0	50.3		ug/L		101	52 - 133	3	30
Toluene	ND		50.0	51.1		ug/L		102	65 - 130	5	30
trans-1,2-Dichloroethene	ND		50.0	52.2		ug/L		104	61 - 143	7	30
trans-1,3-Dichloropropene	ND		50.0	39.8		ug/L		80	53 - 133	4	30
1,2,3-Trichlorobenzene	ND		50.0	44.3		ug/L		89	43 - 145	8	30
1,2,4-Trichlorobenzene	ND		50.0	42.7		ug/L		85	39 - 148	9	30
1,1,1-Trichloroethane	ND		50.0	47.1		ug/L		94	57 - 142	7	30
1,1,2-Trichloroethane	ND		50.0	49.6		ug/L		99	66 - 131	4	30
Trichloroethene	ND		50.0	53.2		ug/L		106	64 - 136	6	30
Trichlorofluoromethane	ND		50.0	57.9		ug/L		116	54 - 150	15	30
1,2,3-Trichloropropane	ND		50.0	54.7		ug/L		109	65 - 133	4	30
1,2,4-Trimethylbenzene	5.9		50.0	53.4		ug/L		95	50 - 139	4	30
1,3,5-Trimethylbenzene	1.8		50.0	50.5		ug/L		97	52 - 135	5	30
Vinyl acetate	ND		100	94.3		ug/L		94	26 - 150	16	33
Vinyl chloride	ND		50.0	62.7		ug/L		125	46 - 150	17	30
Xylenes, Total	4.2	J	100	99.8		ug/L		96	59 - 130	2	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*95*		*78 - 118*
Dibromofluoromethane	*95*		*81 - 121*
Toluene-d8 (Surr)	*98*		*80 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-416425/1-A
Matrix: Water
Analysis Batch: 416716

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416425

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.8	ug/L		10/22/18 13:25	10/24/18 12:51	1
Benzenethiol	ND		10	1.7	ug/L		10/22/18 13:25	10/24/18 12:51	1
Benzoic acid	ND		30	7.3	ug/L		10/22/18 13:25	10/24/18 12:51	1
Benzyl alcohol	ND		10	2.0	ug/L		10/22/18 13:25	10/24/18 12:51	1
Bis(2-chloroethoxy)methane	ND		10	0.69	ug/L		10/22/18 13:25	10/24/18 12:51	1
Bis(2-chloroethyl)ether	ND		10	0.74	ug/L		10/22/18 13:25	10/24/18 12:51	1
bis (2-chloroisopropyl) ether	ND		10	0.81	ug/L		10/22/18 13:25	10/24/18 12:51	1
Bis(2-ethylhexyl) phthalate	ND		10	5.0	ug/L		10/22/18 13:25	10/24/18 12:51	1
4-Bromophenyl phenyl ether	ND		10	0.32	ug/L		10/22/18 13:25	10/24/18 12:51	1
Butyl benzyl phthalate	ND		10	0.69	ug/L		10/22/18 13:25	10/24/18 12:51	1
4-Chloroaniline	ND		10	3.4	ug/L		10/22/18 13:25	10/24/18 12:51	1
4-Chloro-3-methylphenol	ND		10	3.8	ug/L		10/22/18 13:25	10/24/18 12:51	1
2-Chloronaphthalene	ND		10	0.52	ug/L		10/22/18 13:25	10/24/18 12:51	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-416425/1-A
Matrix: Water
Analysis Batch: 416716

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416425

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	ND		10	2.2	ug/L		10/22/18 13:25	10/24/18 12:51	1
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		10/22/18 13:25	10/24/18 12:51	1
Dibenz[a,h]acridine	ND		10	3.0	ug/L		10/22/18 13:25	10/24/18 12:51	1
Dibenzofuran	ND		10	0.52	ug/L		10/22/18 13:25	10/24/18 12:51	1
3,3'-Dichlorobenzidine	ND		10	2.6	ug/L		10/22/18 13:25	10/24/18 12:51	1
2,4-Dichlorophenol	ND		10	3.0	ug/L		10/22/18 13:25	10/24/18 12:51	1
Diethyl phthalate	ND		10	0.70	ug/L		10/22/18 13:25	10/24/18 12:51	1
2,4-Dimethylphenol	ND		10	3.5	ug/L		10/22/18 13:25	10/24/18 12:51	1
Dimethyl phthalate	ND		10	0.60	ug/L		10/22/18 13:25	10/24/18 12:51	1
Di-n-butyl phthalate	ND		10	2.7	ug/L		10/22/18 13:25	10/24/18 12:51	1
4,6-Dinitro-ortho-cresol	ND		10	2.0	ug/L		10/22/18 13:25	10/24/18 12:51	1
2,4-Dinitrophenol	ND		30	3.4	ug/L		10/22/18 13:25	10/24/18 12:51	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		10/22/18 13:25	10/24/18 12:51	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		10/22/18 13:25	10/24/18 12:51	1
Di-n-octyl phthalate	ND		10	0.44	ug/L		10/22/18 13:25	10/24/18 12:51	1
1,4-Dioxane	ND		10	1.0	ug/L		10/22/18 13:25	10/24/18 12:51	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		10/22/18 13:25	10/24/18 12:51	1
Hexachlorobenzene	ND		10	0.25	ug/L		10/22/18 13:25	10/24/18 12:51	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		10/22/18 13:25	10/24/18 12:51	1
Hexachloroethane	ND		10	4.2	ug/L		10/22/18 13:25	10/24/18 12:51	1
Indene	ND		10	1.0	ug/L		10/22/18 13:25	10/24/18 12:51	1
Isophorone	ND		10	0.57	ug/L		10/22/18 13:25	10/24/18 12:51	1
2-Methylphenol	ND		10	1.8	ug/L		10/22/18 13:25	10/24/18 12:51	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/22/18 13:25	10/24/18 12:51	1
2-Nitroaniline	ND		10	2.2	ug/L		10/22/18 13:25	10/24/18 12:51	1
3-Nitroaniline	ND		10	1.8	ug/L		10/22/18 13:25	10/24/18 12:51	1
4-Nitroaniline	ND		10	2.5	ug/L		10/22/18 13:25	10/24/18 12:51	1
Nitrobenzene	ND		10	0.55	ug/L		10/22/18 13:25	10/24/18 12:51	1
2-Nitrophenol	ND		10	0.65	ug/L		10/22/18 13:25	10/24/18 12:51	1
4-Nitrophenol	ND		10	2.1	ug/L		10/22/18 13:25	10/24/18 12:51	1
N-Nitrosodimethylamine	ND		10	3.5	ug/L		10/22/18 13:25	10/24/18 12:51	1
N-Nitrosodi-n-propylamine	ND		10	3.3	ug/L		10/22/18 13:25	10/24/18 12:51	1
N-Nitrosodiphenylamine	ND		10	0.47	ug/L		10/22/18 13:25	10/24/18 12:51	1
Pentachlorophenol	ND		20	1.8	ug/L		10/22/18 13:25	10/24/18 12:51	1
Phenol	ND		10	2.6	ug/L		10/22/18 13:25	10/24/18 12:51	1
Pyridine	ND		10	3.2	ug/L		10/22/18 13:25	10/24/18 12:51	1
Quinoline	ND		10	6.0	ug/L		10/22/18 13:25	10/24/18 12:51	1
2,4,5-Trichlorophenol	ND		10	3.7	ug/L		10/22/18 13:25	10/24/18 12:51	1
2,4,6-Trichlorophenol	ND		10	3.5	ug/L		10/22/18 13:25	10/24/18 12:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*37*		*34 - 120*	*10/22/18 13:25*	*10/24/18 12:51*	*1*
2-Fluorophenol	*30*		*10 - 120*	*10/22/18 13:25*	*10/24/18 12:51*	*1*
Nitrobenzene-d5	*37*		*27 - 120*	*10/22/18 13:25*	*10/24/18 12:51*	*1*
Phenol-d5	*37*		*10 - 120*	*10/22/18 13:25*	*10/24/18 12:51*	*1*
Terphenyl-d14	*54*		*53 - 125*	*10/22/18 13:25*	*10/24/18 12:51*	*1*
2,4,6-Tribromophenol	*56*		*15 - 135*	*10/22/18 13:25*	*10/24/18 12:51*	*1*

Lab Sample ID: LCS 400-416425/2-A
Matrix: Water
Analysis Batch: 416989

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416425

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aniline	30.0	26.4		ug/L		88	29 - 120
Benzoic acid	118	101		ug/L		86	10 - 150
Benzyl alcohol	30.0	26.9		ug/L		90	19 - 125
Bis(2-chloroethoxy)methane	30.0	25.0		ug/L		83	45 - 120
Bis(2-chloroethyl)ether	30.0	24.0		ug/L		80	48 - 120
bis (2-chloroisopropyl) ether	30.0	22.5		ug/L		75	30 - 125
Bis(2-ethylhexyl) phthalate	30.0	36.1		ug/L		120	48 - 150
4-Bromophenyl phenyl ether	30.0	27.7		ug/L		92	55 - 122
Butyl benzyl phthalate	30.0	29.1		ug/L		97	46 - 145
4-Chloroaniline	30.0	22.0		ug/L		73	30 - 120
4-Chloro-3-methylphenol	30.0	26.0		ug/L		87	39 - 140
2-Chloronaphthalene	30.0	23.2		ug/L		77	52 - 120
2-Chlorophenol	30.0	24.0		ug/L		80	34 - 120
4-Chlorophenyl phenyl ether	30.0	25.4		ug/L		85	58 - 124
Dibenz[a,h]acridine	30.0	27.6		ug/L		92	46 - 149
Dibenzofuran	30.0	25.2		ug/L		84	58 - 123
3,3'-Dichlorobenzidine	40.0	60.1	E *	ug/L		150	39 - 135
2,4-Dichlorophenol	30.0	25.9		ug/L		86	39 - 128
Diethyl phthalate	30.0	26.6		ug/L		89	44 - 146
2,4-Dimethylphenol	30.0	27.3		ug/L		91	44 - 120
Dimethyl phthalate	30.0	25.4		ug/L		85	50 - 131
Di-n-butyl phthalate	30.0	28.2		ug/L		94	55 - 131
4,6-Dinitro-ortho-cresol	60.0	56.1		ug/L		94	10 - 150
2,4-Dinitrophenol	60.0	55.3		ug/L		92	10 - 150
2,4-Dinitrotoluene	30.0	28.8		ug/L		96	58 - 140
2,6-Dinitrotoluene	30.0	26.9		ug/L		90	57 - 130
Di-n-octyl phthalate	30.0	27.4		ug/L		91	50 - 150
1,4-Dioxane	30.0	19.1		ug/L		64	25 - 120
1,2-Diphenylhydrazine (as Azobenzene)	30.0	26.5		ug/L		88	47 - 123
Hexachlorobenzene	30.0	29.5		ug/L		98	52 - 131
Hexachlorocyclopentadiene	30.0	8.17	J	ug/L		27	10 - 129
Hexachloroethane	30.0	16.0		ug/L		53	41 - 120
Indene	30.0	24.4		ug/L		81	47 - 120
Isophorone	30.0	25.1		ug/L		84	49 - 120
2-Methylphenol	30.0	25.1		ug/L		84	39 - 123
3 & 4 Methylphenol	30.0	25.3		ug/L		84	38 - 121
2-Nitroaniline	30.0	25.9		ug/L		86	47 - 150
3-Nitroaniline	30.0	24.2		ug/L		81	34 - 132
4-Nitroaniline	30.0	28.8		ug/L		96	41 - 135
Nitrobenzene	30.0	24.5		ug/L		82	47 - 120
2-Nitrophenol	30.0	26.7		ug/L		89	28 - 136
4-Nitrophenol	60.0	46.6		ug/L		78	10 - 150
N-Nitrosodimethylamine	30.0	22.3		ug/L		74	22 - 148
N-Nitrosodi-n-propylamine	30.0	26.4		ug/L		88	44 - 120
N-Nitrosodiphenylamine	29.8	27.0		ug/L		91	56 - 120
Pentachlorophenol	60.0	62.2		ug/L		104	15 - 141
Phenol	30.0	24.7		ug/L		82	33 - 120
Pyridine	60.0	37.3		ug/L		62	26 - 120
Quinoline	30.0	28.9		ug/L		96	51 - 129

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-416425/2-A
Matrix: Water
Analysis Batch: 416989

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416425

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-Trichlorophenol	30.0	26.9		ug/L		90	38 - 147
2,4,6-Trichlorophenol	30.0	26.4		ug/L		88	36 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*75*		*34 - 120*
2-Fluorophenol	*56*		*10 - 120*
Nitrobenzene-d5	*79*		*27 - 120*
Phenol-d5	*73*		*10 - 120*
Terphenyl-d14	*89*		*53 - 125*
2,4,6-Tribromophenol	*87*		*15 - 135*

Lab Sample ID: LCS 400-416425/4-A
Matrix: Water
Analysis Batch: 416716

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416425

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzenethiol	30.0	ND	*	ug/L		3	10 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*34*		*34 - 120*
2-Fluorophenol	*7*	*X*	*10 - 120*
Nitrobenzene-d5	*34*		*27 - 120*
Phenol-d5	*21*		*10 - 120*
Terphenyl-d14	*48*	*X*	*53 - 125*
2,4,6-Tribromophenol	*44*		*15 - 135*

Lab Sample ID: LCSD 400-416425/3-A
Matrix: Water
Analysis Batch: 416989

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416425

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aniline	30.0	21.6		ug/L		72	29 - 120	20	30
Benzoic acid	118	20.1	J *	ug/L		17	10 - 150	133	30
Benzyl alcohol	30.0	20.7		ug/L		69	19 - 125	26	30
Bis(2-chloroethoxy)methane	30.0	20.9		ug/L		70	45 - 120	18	30
Bis(2-chloroethyl)ether	30.0	20.0		ug/L		67	48 - 120	18	30
bis (2-chloroisopropyl) ether	30.0	18.1		ug/L		60	30 - 125	21	30
Bis(2-ethylhexyl) phthalate	30.0	21.6	*	ug/L		72	48 - 150	50	30
4-Bromophenyl phenyl ether	30.0	22.2		ug/L		74	55 - 122	22	30
Butyl benzyl phthalate	30.0	21.6		ug/L		72	46 - 145	30	30
4-Chloroaniline	30.0	20.2		ug/L		67	30 - 120	9	30
4-Chloro-3-methylphenol	30.0	20.5		ug/L		68	39 - 140	23	30
2-Chloronaphthalene	30.0	18.2		ug/L		61	52 - 120	24	30
2-Chlorophenol	30.0	13.6	*	ug/L		45	34 - 120	55	30
4-Chlorophenyl phenyl ether	30.0	21.6		ug/L		72	58 - 124	16	30
Dibenz[a,h]acridine	30.0	23.8		ug/L		79	46 - 149	15	30
Dibenzofuran	30.0	21.2		ug/L		71	58 - 123	17	30
3,3'-Dichlorobenzidine	40.0	45.6		ug/L		114	39 - 135	27	30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-416425/3-A
Matrix: Water
Analysis Batch: 416989

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416425

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4-Dichlorophenol	30.0	18.5	*	ug/L		62	39 - 128	33	30
Diethyl phthalate	30.0	22.2		ug/L		74	44 - 146	18	30
2,4-Dimethylphenol	30.0	20.9		ug/L		70	44 - 120	27	30
Dimethyl phthalate	30.0	21.6		ug/L		72	50 - 131	16	30
Di-n-butyl phthalate	30.0	23.5		ug/L		78	55 - 131	18	30
4,6-Dinitro-ortho-cresol	60.0	50.1		ug/L		84	10 - 150	11	30
2,4-Dinitrophenol	60.0	39.5	*	ug/L		66	10 - 150	33	30
2,4-Dinitrotoluene	30.0	24.6		ug/L		82	58 - 140	16	30
2,6-Dinitrotoluene	30.0	21.9		ug/L		73	57 - 130	20	30
Di-n-octyl phthalate	30.0	22.4		ug/L		75	50 - 150	20	30
1,4-Dioxane	30.0	12.3	*	ug/L		41	25 - 120	43	30
1,2-Diphenylhydrazine (as Azobenzene)	30.0	21.2		ug/L		71	47 - 123	22	30
Hexachlorobenzene	30.0	24.3		ug/L		81	52 - 131	19	30
Hexachlorocyclopentadiene	30.0	7.22	J	ug/L		24	10 - 129	12	30
Hexachloroethane	30.0	12.5		ug/L		42	41 - 120	24	30
Indene	30.0	18.8		ug/L		63	47 - 120	26	30
Isophorone	30.0	20.7		ug/L		69	49 - 120	19	30
2-Methylphenol	30.0	18.7		ug/L		62	39 - 123	29	30
3 & 4 Methylphenol	30.0	18.6	J *	ug/L		62	38 - 121	31	30
2-Nitroaniline	30.0	21.2		ug/L		71	47 - 150	20	30
3-Nitroaniline	30.0	21.5		ug/L		72	34 - 132	11	30
4-Nitroaniline	30.0	24.3		ug/L		81	41 - 135	17	30
Nitrobenzene	30.0	19.3		ug/L		64	47 - 120	24	30
2-Nitrophenol	30.0	19.2	*	ug/L		64	28 - 136	33	30
4-Nitrophenol	60.0	38.9		ug/L		65	10 - 150	18	30
N-Nitrosodimethylamine	30.0	18.3		ug/L		61	22 - 148	20	30
N-Nitrosodi-n-propylamine	30.0	20.8		ug/L		69	44 - 120	24	30
N-Nitrosodiphenylamine	29.8	21.4		ug/L		72	56 - 120	23	30
Pentachlorophenol	60.0	48.9		ug/L		81	15 - 141	24	30
Phenol	30.0	14.7	*	ug/L		49	33 - 120	51	30
Pyridine	60.0	27.1	*	ug/L		45	26 - 120	32	30
Quinoline	30.0	24.1		ug/L		80	51 - 129	18	30
2,4,5-Trichlorophenol	30.0	21.2		ug/L		71	38 - 147	24	30
2,4,6-Trichlorophenol	30.0	20.3		ug/L		68	36 - 139	26	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*60*		*34 - 120*
2-Fluorophenol	*19*		*10 - 120*
Nitrobenzene-d5	*63*		*27 - 120*
Phenol-d5	*46*		*10 - 120*
Terphenyl-d14	*65*		*53 - 125*
2,4,6-Tribromophenol	*73*		*15 - 135*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-416425/5-A
Matrix: Water
Analysis Batch: 416716

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416425

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzenethiol	30.0	ND	*	ug/L		0.6	10 - 120	131	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*37*		*34 - 120*
2-Fluorophenol	*11*		*10 - 120*
Nitrobenzene-d5	*38*		*27 - 120*
Phenol-d5	*27*		*10 - 120*
Terphenyl-d14	*54*		*53 - 125*
2,4,6-Tribromophenol	*36*		*15 - 135*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 400-416425/1-A
Matrix: Water
Analysis Batch: 416798

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416425

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 21:56	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 21:56	1
Anthracene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 21:56	1
Benzo[a]anthracene	ND		0.20	0.040	ug/L		10/22/18 13:25	10/24/18 21:56	1
Benzo[a]pyrene	ND		0.20	0.040	ug/L		10/22/18 13:25	10/24/18 21:56	1
Benzo[b]fluoranthene	ND		0.20	0.040	ug/L		10/22/18 13:25	10/24/18 21:56	1
Benzo[g,h,i]perylene	ND		0.20	0.040	ug/L		10/22/18 13:25	10/24/18 21:56	1
Benzo[k]fluoranthene	ND		0.20	0.040	ug/L		10/22/18 13:25	10/24/18 21:56	1
Chrysene	ND		0.20	0.040	ug/L		10/22/18 13:25	10/24/18 21:56	1
Dibenz(a,h)anthracene	ND		0.20	0.040	ug/L		10/22/18 13:25	10/24/18 21:56	1
Fluoranthene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 21:56	1
Fluorene	ND		0.20	0.021	ug/L		10/22/18 13:25	10/24/18 21:56	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.040	ug/L		10/22/18 13:25	10/24/18 21:56	1
Phenanthrene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 21:56	1
Pyrene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 21:56	1
1-Methylnaphthalene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 21:56	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		10/22/18 13:25	10/24/18 21:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*132*		*33 - 138*	*10/22/18 13:25*	*10/24/18 21:56*	*1*
2-Fluorobiphenyl	*70*		*15 - 122*	*10/22/18 13:25*	*10/24/18 21:56*	*1*
Nitrobenzene-d5	*119*		*19 - 130*	*10/22/18 13:25*	*10/24/18 21:56*	*1*

Lab Sample ID: LCS 400-416425/2-A
Matrix: Water
Analysis Batch: 416798

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416425

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	30.0	26.1		ug/L		87	41 - 120
Acenaphthylene	30.0	27.4		ug/L		91	44 - 120

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCS 400-416425/2-A
Matrix: Water
Analysis Batch: 416798

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416425

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Anthracene	30.0	30.7		ug/L		102	49 - 120
Benzo[a]anthracene	30.0	27.2		ug/L		91	61 - 135
Benzo[a]pyrene	30.0	29.6		ug/L		99	52 - 120
Benzo[b]fluoranthene	30.0	34.1		ug/L		114	53 - 134
Benzo[g,h,i]perylene	30.0	25.1		ug/L		84	47 - 133
Benzo[k]fluoranthene	30.0	31.7		ug/L		106	57 - 134
Chrysene	30.0	27.6		ug/L		92	55 - 122
Dibenz(a,h)anthracene	30.0	28.9		ug/L		96	48 - 146
Fluoranthene	30.0	27.1		ug/L		90	54 - 128
Fluorene	30.0	29.2		ug/L		97	45 - 125
Indeno[1,2,3-cd]pyrene	30.0	28.1		ug/L		94	43 - 142
Phenanthrene	30.0	29.5		ug/L		98	48 - 120
Pyrene	30.0	33.0		ug/L		110	48 - 132
1-Methylnaphthalene	30.0	29.3		ug/L		98	41 - 120
2-Methylnaphthalene	30.0	28.5		ug/L		95	32 - 124

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14	*101*		*33 - 138*
2-Fluorobiphenyl	*72*		*15 - 122*
Nitrobenzene-d5	*104*		*19 - 130*

Lab Sample ID: LCSD 400-416425/3-A
Matrix: Water
Analysis Batch: 416798

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416425

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	30.0	25.0		ug/L		83	41 - 120	4	56
Acenaphthylene	30.0	26.1		ug/L		87	44 - 120	5	56
Anthracene	30.0	29.8		ug/L		99	49 - 120	3	51
Benzo[a]anthracene	30.0	26.5		ug/L		88	61 - 135	3	49
Benzo[a]pyrene	30.0	29.3		ug/L		98	52 - 120	1	50
Benzo[b]fluoranthene	30.0	33.3		ug/L		111	53 - 134	2	54
Benzo[g,h,i]perylene	30.0	22.4		ug/L		75	47 - 133	11	50
Benzo[k]fluoranthene	30.0	30.5		ug/L		102	57 - 134	4	52
Chrysene	30.0	27.3		ug/L		91	55 - 122	1	50
Dibenz(a,h)anthracene	30.0	25.5		ug/L		85	48 - 146	12	50
Fluoranthene	30.0	27.5		ug/L		92	54 - 128	1	52
Fluorene	30.0	28.0		ug/L		93	45 - 125	4	56
Indeno[1,2,3-cd]pyrene	30.0	25.0		ug/L		83	43 - 142	12	51
Phenanthrene	30.0	28.7		ug/L		96	48 - 120	3	56
Pyrene	30.0	32.5		ug/L		108	48 - 132	2	52
1-Methylnaphthalene	30.0	29.9		ug/L		100	41 - 120	2	55
2-Methylnaphthalene	30.0	29.9		ug/L		100	32 - 124	5	57

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Terphenyl-d14	*92*		*33 - 138*
2-Fluorobiphenyl	*67*		*15 - 122*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCSD 400-416425/3-A
Matrix: Water
Analysis Batch: 416798

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416425

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Nitrobenzene-d5	102		19 - 130

Method: 8011 - EDB and DBCP in Water by Microextraction

Lab Sample ID: MB 400-416931/1-A
Matrix: Water
Analysis Batch: 417027

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416931

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0055	ug/L		10/25/18 11:36	10/25/18 19:05	1
1,2-Dibromoethane	ND		0.020	0.0050	ug/L		10/25/18 11:36	10/25/18 19:05	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94	p	51 - 149	10/25/18 11:36	10/25/18 19:05	1

Lab Sample ID: LCS 400-416931/2-A
Matrix: Water
Analysis Batch: 417027

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416931

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	0.100	0.0882		ug/L		88	60 - 140
1,2-Dibromoethane	0.100	0.121		ug/L		121	60 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	104		51 - 149

Lab Sample ID: LCSD 400-416931/3-A
Matrix: Water
Analysis Batch: 417027

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416931

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane	0.100	0.0809		ug/L		81	60 - 140	18	30
1,2-Dibromoethane	0.100	0.120	*	ug/L		120	60 - 140	35	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	98		51 - 149

Shell Oil Products US Chain Of Custody Record

AECOM

LAB (LOCATION)

- ☐ ACCUTEST (_____)
- ☐ CALSCIENCE (_____)
- ☑ TESTAMERICA (TestAmerica Pensacola; 3355 McLemore Dr Pensacola, FL 32514 (850-474-1001))
- ☐ Other Lab Vendor # 1364589 (TestAmerica)

Please Check Appropriate Box:

☐ SGW FDG	☐ PIPELINE	☐ RETAIL
☐ CHEMICALS	☐ CONSULTANT	☐ LUBES
☐ TRANSPORTATION	☑ OTHER _ ENV. SERVICES	

Print Bill To Contact Name:	PlaNet Site or Project ID
Bob Billman	25278
PO #	**GSAP Project ID**
60527968 - 01 03 004 / 60527968 - 01.03 0044	USPC/00114/R/02

☐ CHECK IF NO INCIDENT # APPLIES
DATE: 10 15 18
PAGE: 1 of 1

SAMPLING COMPANY: AECOM
LOG CODE:
SITE ADDRESS: Street and City: 900 South Central Ave; ROXANA
State: IL
AECOM Project / Task Number: Roxane Quarterly GW — 60527968 - 01.03.004 / 60527968 - 01.03.0044
ADDRESS: 100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA
EDF DELIVERABLE TO (Name, Company, Office Location):
PHONE NO:
E-MAIL:
AECOM Offset ID:
PROJECT CONTACT (Hardcopy or PDF Report to): Elizabeth Kunkel, Bob Billman, Melissa Remiger
TELEPHONE: 314-429-0100
FAX: 314-429-0462
E-mail To Contact (E-MAIL): bob.billman@aecom.com; elizabeth.kunkel@aecom.com; melissa.remiger@aecom.com
SAMPLER NAME(S) (Print): B. Howell M. Karrick
LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAY ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT

DELIVERABLES: ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) __EDD_____

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
* Please include "J" values on Reports
* Please provide sample receipt upon login

- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ EDD NOT NEEDED
- ☑ RECEIPT VERIFICATION REQUESTED
- ☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE: HCL	HNO3	H2SO4	NONE	OTHER	NO OF CONT.	NON-UNIT COST 60527968 - 01.03.004: VOC 8260	SVOC 8270	UNIT COST 60527968 - 01.03.0044: VOC 8011	PAH 8270LL
	TB-ROX-101518-8011	10/15/18	0000	Water	2					2			✓	
	TB-ROX-101518-8260		0000		2					2	✓			
	ROST4P2E-ROX-101518		0940		4			2		6	✓	✓	✓	✓
	MW22-ROX-101518		1030		4			2		6	✓	✓	✓	✓
	MW14-ROX-101518		1230		4			2		6	✓	✓	✓	✓
	MW14-ROX-101518-EB		1200		4			2		6	✓	✓	✓	✓
	P606-ROX-101518		1320		4			2		6	✓	✓	✓	✓
	P606-ROX-101518-DUP		1320		4			2		6	✓	✓	✓	✓

400-160657 COC

FIELD NOTES:
TEMPERATURE ON RECEIPT C°
Container PID Readings or Laboratory Notes

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Megan Karrick	Fedex: 4535 0239 0784; 4535 0239 0773;	10 15 18	1530
Relinquished by: (Signature)	Received by: (Signature) 4535 0239 0762; 7429 5930 8652	Date	Time
Relinquished by: (Signature)	Received by: (Signature) 2.2°C, 0.9°C, 2.0°C, 0.1°C 7128	Date 10/16/18	Time 0911

Version 14Dec15

Custody Seals: 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008

Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 400-160657-1
SDG Number: 90527968

Login Number: 160657
List Number: 1
Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.2°C, 0.9°C, 2.0°C, 0.1°C IR-8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160657-1
SDG: 90527968

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-16	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

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Roxana Groundwater Quarterly – 4th Quarter 2018 Data Review

Laboratory SDG: 400-160704-1

Data Reviewer: Melissa Remiger

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 11/7/2018

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2017

Sample Identification	Sample Identification
TB-ROX-101618-8011-SS	TB-ROX-101618-8260-SS
T12-ROX-101618	P59-ROX-101618
P93A-ROX-101618	

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes, however analysis of equipment blank for sample P93A-ROX-101618 was cancelled due to equipment blank quota previously met; no qualification of data was required.

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated the SVOC LCS/LCSD recoveries, and LCS/LCSD RPD, for benzenethiol, were outside evaluation criteria. Several SVOC and VOC by 8011 surrogate recoveries were outside criteria in several samples. VOCs in samples were diluted to bring target analytes into calibration range of the instrument. The continuing calibration verifications for several analytes were outside evaluation criteria, biased low. These issues are addressed further in the appropriate sections of this data review.

Three of 69 (2-chloroethyl vinyl ether, acrolein, and acrylonitrile) 8260 VOCs are acid-reactive compounds; results may be biased low due to the presence of HCl in the preservative.

The cooler receipt form indicated the analysis of equipment blank for sample P93A-ROX-101618 was cancelled; equipment blank quota was previously met. No qualification of data was required.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS/LCSD ID	Parameter	Analyte	LCS/ LCSD Recovery	RPD	LCS/LCSD/ RPD Criteria
LCS/LCSD 400-416612/4-A/5-A	SVOCs	Benzenethiol	**7/2**	**122**	10-120/30

Analytical data that required qualification based on LCS/LCSD data are included in the table below. Professional judgment was used to qualify, however not reject, data associated with benzenethiol in LCS/LCSD 400-416612/4-A/5-A; benzenethiol has been identified as a poor performing analyte under Method 8270.

Sample ID	Parameter	Analyte	Qualification
T12-ROX-101618	SVOCs	Benzenethiol	**UJ**
P59-ROX-101618	SVOCs	Benzenethiol	**UJ**
P93A-ROX-101618	SVOCs	Benzenethiol	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
T12-ROX-101618	SVOCs	Terphenyl-d_{14}	**46**	53-125
P59-ROX-101618	SVOCs	Terphenyl-d_{14}	**40**	53-125
P59-ROX-101618	VOCs by 8011	4-Bromofluorobenzene	**165**	51-149
P93A-ROX-101618	VOCs by 8011	4-Bromofluorobenzene	**151**	51-149

Qualifications due to surrogate recoveries were not required if only one of three SVOC base/neutral fraction surrogate recoveries were outside evaluation criteria in the associated SVOC samples. Analytical data reported as non-detect and associated with surrogate recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. No qualification of data was required.

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; analytes were detected in samples that were diluted.

12.0 Additional Qualifications

Were additional qualifications applied?

Yes, the continuing calibration verifications for several analytes were below acceptance criteria and are qualified as summarized in the following table.

Sample ID	Parameter	Analyte	Qualification
T12-ROX-101618	SVOCs	4,6-Dinitro-ortho-cresol	**UJ**
T12-ROX-101618	SVOCs	Hexachlorocyclopentadiene	**UJ**
T12-ROX-101618	SVOCs	4-Ntroaniline	**UJ**
T12-ROX-101618	SVOCs	4-Nitrophenol	**UJ**
P59-ROX-101618	SVOCs	4,6-Dinitro-ortho-cresol	**UJ**
P59-ROX-101618	SVOCs	Hexachlorocyclopentadiene	**UJ**
P59-ROX-101618	SVOCs	4-Ntroaniline	**UJ**
P59-ROX-101618	SVOCs	4-Nitrophenol	**UJ**
P93A-ROX-101618	SVOCs	4,6-Dinitro-ortho-cresol	**UJ**
P93A-ROX-101618	SVOCs	Hexachlorocyclopentadiene	**UJ**
P93A-ROX-101618	SVOCs	4-Ntroaniline	**UJ**
P93A-ROX-101618	SVOCs	4-Nitrophenol	**UJ**

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-160704-1
TestAmerica Sample Delivery Group: 60527968
Client Project/Site: ROXANA QUARTERLY

For:
AECOM Technical Services Inc.
100 N. Broadway
20th Floor
St. Louis, Missouri 63102

Attn: Elizabeth Kunkel

Authorized for release by:
11/2/2018 4:21:35 PM

Leah Klingensmith, Senior Project Manager
(615)301-5038
leah.klingensmith@testamericainc.com

LINKS

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Reviewed 11/7/18 LR

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-160704-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-160704-1

Comments
Analysis has been canceled per client request: P93A-ROX-101618-EB.

Receipt
The samples were received on 10/17/2018 8:57 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 1.1° C, 3.4° C and 3.8° C.

GC/MS VOA
Method(s) 8260B: The following samples were diluted to bring the concentration of target analytes within the calibration range: T12-ROX-101618 (400-160704-3), P59-ROX-101618 (400-160704-4) and P93A-ROX-101618 (400-160704-6). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: The preservative used in the sample containers provided is not compatible with some of the Method 8260 analytes requested. The following samples were received preserved with hydrochloric acid: TB-ROX-101618-8260-SS (400-160704-2), T12-ROX-101618 (400-160704-3), P59-ROX-101618 (400-160704-4) and P93A-ROX-101618 (400-160704-6). The requested target analyte list includes 2-chloroethyl vinyl ether, Acrolein and Acrylonitrile, which are acid-labile compounds that degrade in an acidic medium.

Method(s) 8260B: The initial calibration verification (ICV) analyzed in batch 400-390317 was outside method criteria for the following analytes: Acrolein and Dichlorodifluoromethane. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270D: Six surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following samples contained an allowable number of surrogate compounds outside limits: T12-ROX-101618 (400-160704-3) and P59-ROX-101618 (400-160704-4). These results have been reported and qualified.

Method(s) 8270D: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 400-416612 and analytical batch 400-416965 recovered outside control limits for the following analyte(s): Benzenethiol. Benzenethiol has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

Method(s) 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 400-416612 and analytical batch 400-416965 recovered outside control limits for the following analytes: Benzenethiol.

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 400-416965 recovered above the upper control limit for Dibenz[a,h]acridine. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: T12-ROX-101618 (400-160704-3), P59-ROX-101618 (400-160704-4), P93A-ROX-101618 (400-160704-6) and (MB 400-416612/1-A).

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 400-416965 recovered outside acceptance criteria, low biased, for 4,6-Dinitro-ortho-cresol, 4-Nitroaniline, 4-Nitrophenol and Hexachlorocyclopentadiene. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method(s) 8011: The continuing calibration verification (CCV) associated with batch 400-417869 recovered above the upper control limit for 1,2-Dibromo-3-Chloropropane and 1,2-Dibromoethane. The samples associated with this CCV were non-detects for the affected

Job ID: 400-160704-1 (Continued)

Laboratory: TestAmerica Pensacola (Continued)

analytes; therefore, the data have been reported. The following samples are impacted: TB-ROX-101618-8011-SS (400-160704-1), T12-ROX-101618 (400-160704-3), P59-ROX-101618 (400-160704-4) and P93A-ROX-101618 (400-160704-6).

Method(s) 8011: Surrogate recovery for the following samples were outside the upper control limit: P59-ROX-101618 (400-160704-4) and P93A-ROX-101618 (400-160704-6). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160704-1
SDG: 60527968

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-160704-1	TB-ROX-101618-8011-SS	Water	10/16/18 00:00	10/17/18 08:57
400-160704-2	TB-ROX-101618-8260-SS	Water	10/16/18 00:00	10/17/18 08:57
400-160704-3	T12-ROX-101618	Water	10/16/18 09:40	10/17/18 08:57
400-160704-4	P59-ROX-101618	Water	10/16/18 11:10	10/17/18 08:57
400-160704-6	P93A-ROX-101618	Water	10/16/18 12:45	10/17/18 08:57

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160704-1
SDG: 60527968

Client Sample ID: TB-ROX-101618-8011-SS — Lab Sample ID: 400-160704-1

No Detections.

Client Sample ID: TB-ROX-101618-8260-SS — Lab Sample ID: 400-160704-2

No Detections.

Client Sample ID: T12-ROX-101618 — Lab Sample ID: 400-160704-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2200		10	3.8	ug/L	10		8260B	Total/NA
Ethylbenzene	100		10	5.0	ug/L	10		8260B	Total/NA
Isopropylbenzene	34		10	5.3	ug/L	10		8260B	Total/NA
Methyl tert-butyl ether	8.6	J	10	7.4	ug/L	10		8260B	Total/NA
m-Xylene & p-Xylene	330		50	16	ug/L	10		8260B	Total/NA
Naphthalene	110		10	10	ug/L	10		8260B	Total/NA
N-Propylbenzene	56		10	6.9	ug/L	10		8260B	Total/NA
o-Xylene	14	J	50	6.0	ug/L	10		8260B	Total/NA
Toluene	85		10	7.0	ug/L	10		8260B	Total/NA
1,2,4-Trimethylbenzene	60		10	8.2	ug/L	10		8260B	Total/NA
1,3,5-Trimethylbenzene	16		10	5.6	ug/L	10		8260B	Total/NA
Xylenes, Total	350		100	16	ug/L	10		8260B	Total/NA
Acenaphthene	0.39		0.19	0.019	ug/L	1		8270D LL	Total/NA
Anthracene	0.16	J	0.19	0.019	ug/L	1		8270D LL	Total/NA
Fluoranthene	0.057	J	0.19	0.019	ug/L	1		8270D LL	Total/NA
Fluorene	0.46		0.19	0.020	ug/L	1		8270D LL	Total/NA
Phenanthrene	0.65		0.19	0.019	ug/L	1		8270D LL	Total/NA
Pyrene	0.054	J	0.19	0.019	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene	22		0.19	0.019	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	31		0.19	0.019	ug/L	1		8270D LL	Total/NA
Di-n-butyl phthalate	3.0	J	9.7	2.6	ug/L	1		8270D	Total/NA
Di-n-octyl phthalate	1.7	J	9.7	0.43	ug/L	1		8270D	Total/NA
Pentachlorophenol	1.8	J	19	1.8	ug/L	1		8270D	Total/NA
Phenol	32		9.7	2.5	ug/L	1		8270D	Total/NA

Client Sample ID: P59-ROX-101618 — Lab Sample ID: 400-160704-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	520		250	100	ug/L	10		8260B	Total/NA
Benzene	2300		10	3.8	ug/L	10		8260B	Total/NA
2-Butanone (MEK)	110	J	250	26	ug/L	10		8260B	Total/NA
Ethylbenzene	1100		10	5.0	ug/L	10		8260B	Total/NA
Isopropylbenzene	42		10	5.3	ug/L	10		8260B	Total/NA
m-Xylene & p-Xylene	1800		50	16	ug/L	10		8260B	Total/NA
Naphthalene	160		10	10	ug/L	10		8260B	Total/NA
N-Propylbenzene	86		10	6.9	ug/L	10		8260B	Total/NA
o-Xylene	230		50	6.0	ug/L	10		8260B	Total/NA
Toluene	1200		10	7.0	ug/L	10		8260B	Total/NA
1,2,4-Trimethylbenzene	480		10	8.2	ug/L	10		8260B	Total/NA
1,3,5-Trimethylbenzene	120		10	5.6	ug/L	10		8260B	Total/NA
Xylenes, Total	2000		100	16	ug/L	10		8260B	Total/NA
Acenaphthene	0.098	J	0.19	0.019	ug/L	1		8270D LL	Total/NA
Anthracene	1.8		0.19	0.019	ug/L	1		8270D LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: P59-ROX-101618 (Continued)

Lab Sample ID: 400-160704-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	0.31		0.19	0.039	ug/L	1		8270D LL	Total/NA
Benzo[a]pyrene	0.093	J	0.19	0.039	ug/L	1		8270D LL	Total/NA
Benzo[g,h,i]perylene	0.067	J	0.19	0.039	ug/L	1		8270D LL	Total/NA
Chrysene	0.63		0.19	0.039	ug/L	1		8270D LL	Total/NA
Fluoranthene	0.31		0.19	0.019	ug/L	1		8270D LL	Total/NA
Fluorene	1.0		0.19	0.020	ug/L	1		8270D LL	Total/NA
Phenanthrene	1.3		0.19	0.019	ug/L	1		8270D LL	Total/NA
Pyrene	0.65		0.19	0.019	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene	21		0.19	0.019	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	30		0.19	0.019	ug/L	1		8270D LL	Total/NA
2,4-Dimethylphenol	3.5	J	9.7	3.4	ug/L	1		8270D	Total/NA
Di-n-octyl phthalate	2.0	J	9.7	0.43	ug/L	1		8270D	Total/NA
Indene	9.2	J	9.7	0.97	ug/L	1		8270D	Total/NA
3 & 4 Methylphenol	3.8	J	19	1.0	ug/L	1		8270D	Total/NA
Phenol	12		9.7	2.5	ug/L	1		8270D	Total/NA

Client Sample ID: P93A-ROX-101618

Lab Sample ID: 400-160704-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	30000		200	76	ug/L	200		8260B	Total/NA
Acenaphthene	0.086	J	0.19	0.019	ug/L	1		8270D LL	Total/NA
Anthracene	0.045	J	0.19	0.019	ug/L	1		8270D LL	Total/NA
Fluoranthene	0.039	J	0.19	0.019	ug/L	1		8270D LL	Total/NA
Fluorene	0.095	J	0.19	0.020	ug/L	1		8270D LL	Total/NA
Phenanthrene	0.086	J	0.19	0.019	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene	2.6		0.19	0.019	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	0.75		0.19	0.019	ug/L	1		8270D LL	Total/NA
Di-n-octyl phthalate	2.0	J	9.7	0.43	ug/L	1		8270D	Total/NA
Phenol	88		9.7	2.5	ug/L	1		8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160704-1
SDG: 60527968

Client Sample ID: TB-ROX-101618-8011-SS
Date Collected: 10/16/18 00:00
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160704-1
Matrix: Water

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.029	0.0054	ug/L		10/29/18 16:11	11/01/18 11:04	1
1,2-Dibromoethane	ND		0.019	0.0049	ug/L		10/29/18 16:11	11/01/18 11:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*107*	*p*	*51 - 149*	*10/29/18 16:11*	*11/01/18 11:04*	*1*

Client Sample ID: TB-ROX-101618-8260-SS
Date Collected: 10/16/18 00:00
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160704-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/28/18 14:47	1
Acrolein	ND		20	10	ug/L			10/28/18 14:47	1
Acrylonitrile	ND		10	2.8	ug/L			10/28/18 14:47	1
Benzene	ND		1.0	0.38	ug/L			10/28/18 14:47	1
Bromobenzene	ND		1.0	0.54	ug/L			10/28/18 14:47	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/28/18 14:47	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/28/18 14:47	1
Bromoform	ND		5.0	0.71	ug/L			10/28/18 14:47	1
Bromomethane	ND		1.0	0.98	ug/L			10/28/18 14:47	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/28/18 14:47	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/28/18 14:47	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/28/18 14:47	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/28/18 14:47	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/28/18 14:47	1
Chloroethane	ND		1.0	0.76	ug/L			10/28/18 14:47	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/28/18 14:47	1
Chloroform	ND		1.0	0.60	ug/L			10/28/18 14:47	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/28/18 14:47	1
Chloromethane	ND		1.0	0.83	ug/L			10/28/18 14:47	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/28/18 14:47	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/28/18 14:47	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/28/18 14:47	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/28/18 14:47	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/28/18 14:47	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/28/18 14:47	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/28/18 14:47	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/28/18 14:47	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/28/18 14:47	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/28/18 14:47	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/28/18 14:47	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/28/18 14:47	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/28/18 14:47	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/28/18 14:47	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/28/18 14:47	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/28/18 14:47	1
2-Hexanone	ND		25	3.1	ug/L			10/28/18 14:47	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/28/18 14:47	1
Methylene bromide	ND		5.0	0.59	ug/L			10/28/18 14:47	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/28/18 14:47	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/28/18 14:47	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/28/18 14:47	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/28/18 14:47	1
Naphthalene	ND		1.0	1.0	ug/L			10/28/18 14:47	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/28/18 14:47	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/28/18 14:47	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/28/18 14:47	1
o-Xylene	ND		5.0	0.60	ug/L			10/28/18 14:47	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/28/18 14:47	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/28/18 14:47	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160704-1
SDG: 60527968

Client Sample ID: TB-ROX-101618-8260-SS
Date Collected: 10/16/18 00:00
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160704-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/28/18 14:47	1
Styrene	ND		1.0	1.0	ug/L			10/28/18 14:47	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/28/18 14:47	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/28/18 14:47	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/28/18 14:47	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/28/18 14:47	1
Toluene	ND		1.0	0.70	ug/L			10/28/18 14:47	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/28/18 14:47	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/28/18 14:47	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/28/18 14:47	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/28/18 14:47	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/28/18 14:47	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/28/18 14:47	1
Trichloroethene	ND		1.0	0.50	ug/L			10/28/18 14:47	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/28/18 14:47	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/28/18 14:47	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/28/18 14:47	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/28/18 14:47	1
Vinyl acetate	ND		25	2.0	ug/L			10/28/18 14:47	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/28/18 14:47	1
Xylenes, Total	ND		10	1.6	ug/L			10/28/18 14:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*78 - 118*		*10/28/18 14:47*	*1*
Dibromofluoromethane	*96*		*81 - 121*		*10/28/18 14:47*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*10/28/18 14:47*	*1*

Client Sample ID: T12-ROX-101618
Date Collected: 10/16/18 09:40
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160704-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		250	100	ug/L			10/27/18 15:17	10
Acrolein	ND		200	100	ug/L			10/27/18 15:17	10
Acrylonitrile	ND		100	28	ug/L			10/27/18 15:17	10
Benzene	2200		10	3.8	ug/L			10/27/18 15:17	10
Bromobenzene	ND		10	5.4	ug/L			10/27/18 15:17	10
Bromochloromethane	ND		10	5.2	ug/L			10/27/18 15:17	10
Bromodichloromethane	ND		10	5.0	ug/L			10/27/18 15:17	10
Bromoform	ND		50	7.1	ug/L			10/27/18 15:17	10
Bromomethane	ND		10	9.8	ug/L			10/27/18 15:17	10
2-Butanone (MEK)	ND		250	26	ug/L			10/27/18 15:17	10
Carbon disulfide	ND		10	5.0	ug/L			10/27/18 15:17	10
Carbon tetrachloride	ND		10	5.0	ug/L			10/27/18 15:17	10
Chlorobenzene	ND		10	5.0	ug/L			10/27/18 15:17	10
Dibromochloromethane	ND		10	5.0	ug/L			10/27/18 15:17	10
Chloroethane	ND		10	7.6	ug/L			10/27/18 15:17	10
2-Chloroethyl vinyl ether	ND		50	20	ug/L			10/27/18 15:17	10
Chloroform	ND		10	6.0	ug/L			10/27/18 15:17	10
1-Chlorohexane	ND		10	7.0	ug/L			10/27/18 15:17	10
Chloromethane	ND		10	8.3	ug/L			10/27/18 15:17	10
cis-1,2-Dichloroethene	ND		10	5.0	ug/L			10/27/18 15:17	10
cis-1,3-Dichloropropene	ND		50	5.0	ug/L			10/27/18 15:17	10
1,2-Dichlorobenzene	ND		10	5.0	ug/L			10/27/18 15:17	10
1,3-Dichlorobenzene	ND		10	5.4	ug/L			10/27/18 15:17	10
1,4-Dichlorobenzene	ND		10	6.4	ug/L			10/27/18 15:17	10
Dichlorodifluoromethane	ND		10	8.5	ug/L			10/27/18 15:17	10
1,1-Dichloroethane	ND		10	5.0	ug/L			10/27/18 15:17	10
1,2-Dichloroethane	ND		10	5.0	ug/L			10/27/18 15:17	10
1,1-Dichloroethene	ND		10	5.0	ug/L			10/27/18 15:17	10
1,2-Dichloropropane	ND		10	5.0	ug/L			10/27/18 15:17	10
1,3-Dichloropropane	ND		10	5.0	ug/L			10/27/18 15:17	10
2,2-Dichloropropane	ND		10	5.0	ug/L			10/27/18 15:17	10
1,1-Dichloropropene	ND		10	5.0	ug/L			10/27/18 15:17	10
Ethylbenzene	100		10	5.0	ug/L			10/27/18 15:17	10
Ethyl methacrylate	ND		10	6.0	ug/L			10/27/18 15:17	10
Hexachlorobutadiene	ND		50	9.0	ug/L			10/27/18 15:17	10
2-Hexanone	ND		250	31	ug/L			10/27/18 15:17	10
Isopropylbenzene	34		10	5.3	ug/L			10/27/18 15:17	10
Methylene bromide	ND		50	5.9	ug/L			10/27/18 15:17	10
Methylene Chloride	ND		50	30	ug/L			10/27/18 15:17	10
4-Methyl-2-pentanone (MIBK)	ND		250	18	ug/L			10/27/18 15:17	10
Methyl tert-butyl ether	8.6	J	10	7.4	ug/L			10/27/18 15:17	10
m-Xylene & p-Xylene	330		50	16	ug/L			10/27/18 15:17	10
Naphthalene	110		10	10	ug/L			10/27/18 15:17	10
n-Butylbenzene	ND		10	7.6	ug/L			10/27/18 15:17	10
N-Propylbenzene	56		10	6.9	ug/L			10/27/18 15:17	10
o-Chlorotoluene	ND		10	5.7	ug/L			10/27/18 15:17	10
o-Xylene	14	J	50	6.0	ug/L			10/27/18 15:17	10
p-Chlorotoluene	ND		10	5.6	ug/L			10/27/18 15:17	10
p-Isopropyltoluene	ND		10	7.1	ug/L			10/27/18 15:17	10

Client Sample ID: T12-ROX-101618

Date Collected: 10/16/18 09:40
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160704-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		10	7.0	ug/L			10/27/18 15:17	10
Styrene	ND		10	10	ug/L			10/27/18 15:17	10
tert-Butylbenzene	ND		10	6.3	ug/L			10/27/18 15:17	10
1,1,1,2-Tetrachloroethane	ND		10	5.2	ug/L			10/27/18 15:17	10
1,1,2,2-Tetrachloroethane	ND		10	5.0	ug/L			10/27/18 15:17	10
Tetrachloroethene	ND		10	5.8	ug/L			10/27/18 15:17	10
Toluene	85		10	7.0	ug/L			10/27/18 15:17	10
trans-1,2-Dichloroethene	ND		10	5.0	ug/L			10/27/18 15:17	10
trans-1,3-Dichloropropene	ND		50	5.0	ug/L			10/27/18 15:17	10
1,2,3-Trichlorobenzene	ND		10	7.0	ug/L			10/27/18 15:17	10
1,2,4-Trichlorobenzene	ND		10	8.2	ug/L			10/27/18 15:17	10
1,1,1-Trichloroethane	ND		10	5.0	ug/L			10/27/18 15:17	10
1,1,2-Trichloroethane	ND		50	5.0	ug/L			10/27/18 15:17	10
Trichloroethene	ND		10	5.0	ug/L			10/27/18 15:17	10
Trichlorofluoromethane	ND		10	5.2	ug/L			10/27/18 15:17	10
1,2,3-Trichloropropane	ND		50	8.4	ug/L			10/27/18 15:17	10
1,2,4-Trimethylbenzene	60		10	8.2	ug/L			10/27/18 15:17	10
1,3,5-Trimethylbenzene	16		10	5.6	ug/L			10/27/18 15:17	10
Vinyl acetate	ND		250	20	ug/L			10/27/18 15:17	10
Vinyl chloride	ND		10	5.0	ug/L			10/27/18 15:17	10
Xylenes, Total	350		100	16	ug/L			10/27/18 15:17	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*78 - 118*		*10/27/18 15:17*	*10*
Dibromofluoromethane	*90*		*81 - 121*		*10/27/18 15:17*	*10*
Toluene-d8 (Surr)	*98*		*80 - 120*		*10/27/18 15:17*	*10*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.39		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 18:39	1
Acenaphthylene	ND		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 18:39	1
Anthracene	0.16	J	0.19	0.019	ug/L		10/23/18 14:09	10/25/18 18:39	1
Benzo[a]anthracene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 18:39	1
Benzo[a]pyrene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 18:39	1
Benzo[b]fluoranthene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 18:39	1
Benzo[g,h,i]perylene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 18:39	1
Benzo[k]fluoranthene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 18:39	1
Chrysene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 18:39	1
Dibenz(a,h)anthracene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 18:39	1
Fluoranthene	0.057	J	0.19	0.019	ug/L		10/23/18 14:09	10/25/18 18:39	1
Fluorene	0.46		0.19	0.020	ug/L		10/23/18 14:09	10/25/18 18:39	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 18:39	1
Phenanthrene	0.65		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 18:39	1
Pyrene	0.054	J	0.19	0.019	ug/L		10/23/18 14:09	10/25/18 18:39	1
1-Methylnaphthalene	22		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 18:39	1
2-Methylnaphthalene	31		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 18:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*65*		*33 - 138*	*10/23/18 14:09*	*10/25/18 18:39*	*1*
2-Fluorobiphenyl	*77*		*15 - 122*	*10/23/18 14:09*	*10/25/18 18:39*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	73		19 - 130	10/23/18 14:09	10/25/18 18:39	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.7	3.7	ug/L		10/23/18 14:09	10/25/18 18:17	1
Benzenethiol	ND	UJ	9.7	1.6	ug/L		10/23/18 14:09	10/25/18 18:17	1
Benzoic acid	ND		29	7.1	ug/L		10/23/18 14:09	10/25/18 18:17	1
Benzyl alcohol	ND		9.7	1.9	ug/L		10/23/18 14:09	10/25/18 18:17	1
Bis(2-chloroethoxy)methane	ND		9.7	0.67	ug/L		10/23/18 14:09	10/25/18 18:17	1
Bis(2-chloroethyl)ether	ND		9.7	0.72	ug/L		10/23/18 14:09	10/25/18 18:17	1
bis (2-chloroisopropyl) ether	ND		9.7	0.79	ug/L		10/23/18 14:09	10/25/18 18:17	1
Bis(2-ethylhexyl) phthalate	ND		9.7	4.9	ug/L		10/23/18 14:09	10/25/18 18:17	1
4-Bromophenyl phenyl ether	ND		9.7	0.31	ug/L		10/23/18 14:09	10/25/18 18:17	1
Butyl benzyl phthalate	ND		9.7	0.67	ug/L		10/23/18 14:09	10/25/18 18:17	1
4-Chloroaniline	ND		9.7	3.3	ug/L		10/23/18 14:09	10/25/18 18:17	1
4-Chloro-3-methylphenol	ND		9.7	3.7	ug/L		10/23/18 14:09	10/25/18 18:17	1
2-Chloronaphthalene	ND		9.7	0.50	ug/L		10/23/18 14:09	10/25/18 18:17	1
2-Chlorophenol	ND		9.7	2.1	ug/L		10/23/18 14:09	10/25/18 18:17	1
4-Chlorophenyl phenyl ether	ND		9.7	1.9	ug/L		10/23/18 14:09	10/25/18 18:17	1
Dibenz[a,h]acridine	ND		9.7	2.9	ug/L		10/23/18 14:09	10/25/18 18:17	1
Dibenzofuran	ND		9.7	0.50	ug/L		10/23/18 14:09	10/25/18 18:17	1
3,3'-Dichlorobenzidine	ND	*	9.7	2.5	ug/L		10/23/18 14:09	10/25/18 18:17	1
2,4-Dichlorophenol	ND		9.7	2.9	ug/L		10/23/18 14:09	10/25/18 18:17	1
Diethyl phthalate	ND		9.7	0.68	ug/L		10/23/18 14:09	10/25/18 18:17	1
2,4-Dimethylphenol	ND		9.7	3.4	ug/L		10/23/18 14:09	10/25/18 18:17	1
Dimethyl phthalate	ND		9.7	0.58	ug/L		10/23/18 14:09	10/25/18 18:17	1
Di-n-butyl phthalate	3.0	J	9.7	2.6	ug/L		10/23/18 14:09	10/25/18 18:17	1
4,6-Dinitro-ortho-cresol	ND	UJ	9.7	1.9	ug/L		10/23/18 14:09	10/25/18 18:17	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		10/23/18 14:09	10/25/18 18:17	1
2,4-Dinitrotoluene	ND		9.7	1.8	ug/L		10/23/18 14:09	10/25/18 18:17	1
2,6-Dinitrotoluene	ND		9.7	1.8	ug/L		10/23/18 14:09	10/25/18 18:17	1
Di-n-octyl phthalate	1.7	J	9.7	0.43	ug/L		10/23/18 14:09	10/25/18 18:17	1
1,4-Dioxane	ND		9.7	0.97	ug/L		10/23/18 14:09	10/25/18 18:17	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.7	0.97	ug/L		10/23/18 14:09	10/25/18 18:17	1
Hexachlorobenzene	ND		9.7	0.24	ug/L		10/23/18 14:09	10/25/18 18:17	1
Hexachlorocyclopentadiene	ND	UJ	19	2.5	ug/L		10/23/18 14:09	10/25/18 18:17	1
Hexachloroethane	ND		9.7	4.1	ug/L		10/23/18 14:09	10/25/18 18:17	1
Indene	ND		9.7	0.97	ug/L		10/23/18 14:09	10/25/18 18:17	1
Isophorone	ND		9.7	0.55	ug/L		10/23/18 14:09	10/25/18 18:17	1
2-Methylphenol	ND		9.7	1.7	ug/L		10/23/18 14:09	10/25/18 18:17	1
3 & 4 Methylphenol	ND		19	1.0	ug/L		10/23/18 14:09	10/25/18 18:17	1
2-Nitroaniline	ND		9.7	2.1	ug/L		10/23/18 14:09	10/25/18 18:17	1
3-Nitroaniline	ND		9.7	1.7	ug/L		10/23/18 14:09	10/25/18 18:17	1
4-Nitroaniline	ND	UJ	9.7	2.4	ug/L		10/23/18 14:09	10/25/18 18:17	1
Nitrobenzene	ND		9.7	0.53	ug/L		10/23/18 14:09	10/25/18 18:17	1
2-Nitrophenol	ND		9.7	0.63	ug/L		10/23/18 14:09	10/25/18 18:17	1
4-Nitrophenol	ND	UJ	9.7	2.0	ug/L		10/23/18 14:09	10/25/18 18:17	1
N-Nitrosodimethylamine	ND		9.7	3.4	ug/L		10/23/18 14:09	10/25/18 18:17	1

Client Sample ID: T12-ROX-101618

Date Collected: 10/16/18 09:40
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160704-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.7	3.2	ug/L		10/23/18 14:09	10/25/18 18:17	1
N-Nitrosodiphenylamine	ND		9.7	0.46	ug/L		10/23/18 14:09	10/25/18 18:17	1
Pentachlorophenol	1.8	J	19	1.8	ug/L		10/23/18 14:09	10/25/18 18:17	1
Phenol	32		9.7	2.5	ug/L		10/23/18 14:09	10/25/18 18:17	1
Pyridine	ND		9.7	3.1	ug/L		10/23/18 14:09	10/25/18 18:17	1
Quinoline	ND		9.7	5.8	ug/L		10/23/18 14:09	10/25/18 18:17	1
2,4,5-Trichlorophenol	ND		9.7	3.6	ug/L		10/23/18 14:09	10/25/18 18:17	1
2,4,6-Trichlorophenol	ND		9.7	3.4	ug/L		10/23/18 14:09	10/25/18 18:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*48*		*34 - 120*	*10/23/18 14:09*	*10/25/18 18:17*	*1*
2-Fluorophenol	*36*		*10 - 120*	*10/23/18 14:09*	*10/25/18 18:17*	*1*
Nitrobenzene-d5	*51*		*27 - 120*	*10/23/18 14:09*	*10/25/18 18:17*	*1*
Phenol-d5	*53*		*10 - 120*	*10/23/18 14:09*	*10/25/18 18:17*	*1*
Terphenyl-d14	*46*	*X*	*53 - 125*	*10/23/18 14:09*	*10/25/18 18:17*	*1*
2,4,6-Tribromophenol	*68*		*15 - 135*	*10/23/18 14:09*	*10/25/18 18:17*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.029	0.0053	ug/L		10/29/18 16:11	11/01/18 11:35	1
1,2-Dibromoethane	ND		0.019	0.0048	ug/L		10/29/18 16:11	11/01/18 11:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*107*	*p*	*51 - 149*	*10/29/18 16:11*	*11/01/18 11:35*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160704-1
SDG: 60527968

Client Sample ID: P59-ROX-101618
Date Collected: 10/16/18 11:10
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160704-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	520		250	100	ug/L			10/27/18 15:43	10
Acrolein	ND		200	100	ug/L			10/27/18 15:43	10
Acrylonitrile	ND		100	28	ug/L			10/27/18 15:43	10
Benzene	2300		10	3.8	ug/L			10/27/18 15:43	10
Bromobenzene	ND		10	5.4	ug/L			10/27/18 15:43	10
Bromochloromethane	ND		10	5.2	ug/L			10/27/18 15:43	10
Bromodichloromethane	ND		10	5.0	ug/L			10/27/18 15:43	10
Bromoform	ND		50	7.1	ug/L			10/27/18 15:43	10
Bromomethane	ND		10	9.8	ug/L			10/27/18 15:43	10
2-Butanone (MEK)	110	J	250	26	ug/L			10/27/18 15:43	10
Carbon disulfide	ND		10	5.0	ug/L			10/27/18 15:43	10
Carbon tetrachloride	ND		10	5.0	ug/L			10/27/18 15:43	10
Chlorobenzene	ND		10	5.0	ug/L			10/27/18 15:43	10
Dibromochloromethane	ND		10	5.0	ug/L			10/27/18 15:43	10
Chloroethane	ND		10	7.6	ug/L			10/27/18 15:43	10
2-Chloroethyl vinyl ether	ND		50	20	ug/L			10/27/18 15:43	10
Chloroform	ND		10	6.0	ug/L			10/27/18 15:43	10
1-Chlorohexane	ND		10	7.0	ug/L			10/27/18 15:43	10
Chloromethane	ND		10	8.3	ug/L			10/27/18 15:43	10
cis-1,2-Dichloroethene	ND		10	5.0	ug/L			10/27/18 15:43	10
cis-1,3-Dichloropropene	ND		50	5.0	ug/L			10/27/18 15:43	10
1,2-Dichlorobenzene	ND		10	5.0	ug/L			10/27/18 15:43	10
1,3-Dichlorobenzene	ND		10	5.4	ug/L			10/27/18 15:43	10
1,4-Dichlorobenzene	ND		10	6.4	ug/L			10/27/18 15:43	10
Dichlorodifluoromethane	ND		10	8.5	ug/L			10/27/18 15:43	10
1,1-Dichloroethane	ND		10	5.0	ug/L			10/27/18 15:43	10
1,2-Dichloroethane	ND		10	5.0	ug/L			10/27/18 15:43	10
1,1-Dichloroethene	ND		10	5.0	ug/L			10/27/18 15:43	10
1,2-Dichloropropane	ND		10	5.0	ug/L			10/27/18 15:43	10
1,3-Dichloropropane	ND		10	5.0	ug/L			10/27/18 15:43	10
2,2-Dichloropropane	ND		10	5.0	ug/L			10/27/18 15:43	10
1,1-Dichloropropene	ND		10	5.0	ug/L			10/27/18 15:43	10
Ethylbenzene	1100		10	5.0	ug/L			10/27/18 15:43	10
Ethyl methacrylate	ND		10	6.0	ug/L			10/27/18 15:43	10
Hexachlorobutadiene	ND		50	9.0	ug/L			10/27/18 15:43	10
2-Hexanone	ND		250	31	ug/L			10/27/18 15:43	10
Isopropylbenzene	42		10	5.3	ug/L			10/27/18 15:43	10
Methylene bromide	ND		50	5.9	ug/L			10/27/18 15:43	10
Methylene Chloride	ND		50	30	ug/L			10/27/18 15:43	10
4-Methyl-2-pentanone (MIBK)	ND		250	18	ug/L			10/27/18 15:43	10
Methyl tert-butyl ether	ND		10	7.4	ug/L			10/27/18 15:43	10
m-Xylene & p-Xylene	1800		50	16	ug/L			10/27/18 15:43	10
Naphthalene	160		10	10	ug/L			10/27/18 15:43	10
n-Butylbenzene	ND		10	7.6	ug/L			10/27/18 15:43	10
N-Propylbenzene	86		10	6.9	ug/L			10/27/18 15:43	10
o-Chlorotoluene	ND		10	5.7	ug/L			10/27/18 15:43	10
o-Xylene	230		50	6.0	ug/L			10/27/18 15:43	10
p-Chlorotoluene	ND		10	5.6	ug/L			10/27/18 15:43	10
p-Isopropyltoluene	ND		10	7.1	ug/L			10/27/18 15:43	10

Client Sample ID: P59-ROX-101618

Date Collected: 10/16/18 11:10
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160704-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		10	7.0	ug/L			10/27/18 15:43	10
Styrene	ND		10	10	ug/L			10/27/18 15:43	10
tert-Butylbenzene	ND		10	6.3	ug/L			10/27/18 15:43	10
1,1,1,2-Tetrachloroethane	ND		10	5.2	ug/L			10/27/18 15:43	10
1,1,2,2-Tetrachloroethane	ND		10	5.0	ug/L			10/27/18 15:43	10
Tetrachloroethene	ND		10	5.8	ug/L			10/27/18 15:43	10
Toluene	1200		10	7.0	ug/L			10/27/18 15:43	10
trans-1,2-Dichloroethene	ND		10	5.0	ug/L			10/27/18 15:43	10
trans-1,3-Dichloropropene	ND		50	5.0	ug/L			10/27/18 15:43	10
1,2,3-Trichlorobenzene	ND		10	7.0	ug/L			10/27/18 15:43	10
1,2,4-Trichlorobenzene	ND		10	8.2	ug/L			10/27/18 15:43	10
1,1,1-Trichloroethane	ND		10	5.0	ug/L			10/27/18 15:43	10
1,1,2-Trichloroethane	ND		50	5.0	ug/L			10/27/18 15:43	10
Trichloroethene	ND		10	5.0	ug/L			10/27/18 15:43	10
Trichlorofluoromethane	ND		10	5.2	ug/L			10/27/18 15:43	10
1,2,3-Trichloropropane	ND		50	8.4	ug/L			10/27/18 15:43	10
1,2,4-Trimethylbenzene	480		10	8.2	ug/L			10/27/18 15:43	10
1,3,5-Trimethylbenzene	120		10	5.6	ug/L			10/27/18 15:43	10
Vinyl acetate	ND		250	20	ug/L			10/27/18 15:43	10
Vinyl chloride	ND		10	5.0	ug/L			10/27/18 15:43	10
Xylenes, Total	2000		100	16	ug/L			10/27/18 15:43	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*92*		*78 - 118*		*10/27/18 15:43*	*10*
Dibromofluoromethane	*90*		*81 - 121*		*10/27/18 15:43*	*10*
Toluene-d8 (Surr)	*97*		*80 - 120*		*10/27/18 15:43*	*10*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.098	J	0.19	0.019	ug/L		10/23/18 14:09	10/25/18 18:55	1
Acenaphthylene	ND		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 18:55	1
Anthracene	1.8		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 18:55	1
Benzo[a]anthracene	0.31		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 18:55	1
Benzo[a]pyrene	0.093	J	0.19	0.039	ug/L		10/23/18 14:09	10/25/18 18:55	1
Benzo[b]fluoranthene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 18:55	1
Benzo[g,h,i]perylene	0.067	J	0.19	0.039	ug/L		10/23/18 14:09	10/25/18 18:55	1
Benzo[k]fluoranthene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 18:55	1
Chrysene	0.63		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 18:55	1
Dibenz(a,h)anthracene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 18:55	1
Fluoranthene	0.31		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 18:55	1
Fluorene	1.0		0.19	0.020	ug/L		10/23/18 14:09	10/25/18 18:55	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 18:55	1
Phenanthrene	1.3		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 18:55	1
Pyrene	0.65		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 18:55	1
1-Methylnaphthalene	21		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 18:55	1
2-Methylnaphthalene	30		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 18:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*58*		*33 - 138*	*10/23/18 14:09*	*10/25/18 18:55*	*1*
2-Fluorobiphenyl	*40*		*15 - 122*	*10/23/18 14:09*	*10/25/18 18:55*	*1*

Client Sample ID: P59-ROX-101618

Date Collected: 10/16/18 11:10
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160704-4

Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	54		19 - 130	10/23/18 14:09	10/25/18 18:55	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.7	3.7	ug/L		10/23/18 14:09	10/25/18 18:38	1
Benzenethiol	ND	UJ	9.7	1.7	ug/L		10/23/18 14:09	10/25/18 18:38	1
Benzoic acid	ND		29	7.1	ug/L		10/23/18 14:09	10/25/18 18:38	1
Benzyl alcohol	ND		9.7	1.9	ug/L		10/23/18 14:09	10/25/18 18:38	1
Bis(2-chloroethoxy)methane	ND		9.7	0.67	ug/L		10/23/18 14:09	10/25/18 18:38	1
Bis(2-chloroethyl)ether	ND		9.7	0.72	ug/L		10/23/18 14:09	10/25/18 18:38	1
bis (2-chloroisopropyl) ether	ND		9.7	0.79	ug/L		10/23/18 14:09	10/25/18 18:38	1
Bis(2-ethylhexyl) phthalate	ND		9.7	4.9	ug/L		10/23/18 14:09	10/25/18 18:38	1
4-Bromophenyl phenyl ether	ND		9.7	0.31	ug/L		10/23/18 14:09	10/25/18 18:38	1
Butyl benzyl phthalate	ND		9.7	0.67	ug/L		10/23/18 14:09	10/25/18 18:38	1
4-Chloroaniline	ND		9.7	3.3	ug/L		10/23/18 14:09	10/25/18 18:38	1
4-Chloro-3-methylphenol	ND		9.7	3.7	ug/L		10/23/18 14:09	10/25/18 18:38	1
2-Chloronaphthalene	ND		9.7	0.51	ug/L		10/23/18 14:09	10/25/18 18:38	1
2-Chlorophenol	ND		9.7	2.1	ug/L		10/23/18 14:09	10/25/18 18:38	1
4-Chlorophenyl phenyl ether	ND		9.7	1.9	ug/L		10/23/18 14:09	10/25/18 18:38	1
Dibenz[a,h]acridine	ND		9.7	2.9	ug/L		10/23/18 14:09	10/25/18 18:38	1
Dibenzofuran	ND		9.7	0.51	ug/L		10/23/18 14:09	10/25/18 18:38	1
3,3'-Dichlorobenzidine	ND	*	9.7	2.5	ug/L		10/23/18 14:09	10/25/18 18:38	1
2,4-Dichlorophenol	ND		9.7	2.9	ug/L		10/23/18 14:09	10/25/18 18:38	1
Diethyl phthalate	ND		9.7	0.68	ug/L		10/23/18 14:09	10/25/18 18:38	1
2,4-Dimethylphenol	3.5	J	9.7	3.4	ug/L		10/23/18 14:09	10/25/18 18:38	1
Dimethyl phthalate	ND		9.7	0.58	ug/L		10/23/18 14:09	10/25/18 18:38	1
Di-n-butyl phthalate	ND		9.7	2.6	ug/L		10/23/18 14:09	10/25/18 18:38	1
4,6-Dinitro-ortho-cresol	ND	UJ	9.7	1.9	ug/L		10/23/18 14:09	10/25/18 18:38	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		10/23/18 14:09	10/25/18 18:38	1
2,4-Dinitrotoluene	ND		9.7	1.8	ug/L		10/23/18 14:09	10/25/18 18:38	1
2,6-Dinitrotoluene	ND		9.7	1.8	ug/L		10/23/18 14:09	10/25/18 18:38	1
Di-n-octyl phthalate	2.0	J	9.7	0.43	ug/L		10/23/18 14:09	10/25/18 18:38	1
1,4-Dioxane	ND		9.7	0.97	ug/L		10/23/18 14:09	10/25/18 18:38	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.7	0.97	ug/L		10/23/18 14:09	10/25/18 18:38	1
Hexachlorobenzene	ND		9.7	0.24	ug/L		10/23/18 14:09	10/25/18 18:38	1
Hexachlorocyclopentadiene	ND	UJ	19	2.5	ug/L		10/23/18 14:09	10/25/18 18:38	1
Hexachloroethane	ND		9.7	4.1	ug/L		10/23/18 14:09	10/25/18 18:38	1
Indene	9.2	J	9.7	0.97	ug/L		10/23/18 14:09	10/25/18 18:38	1
Isophorone	ND		9.7	0.55	ug/L		10/23/18 14:09	10/25/18 18:38	1
2-Methylphenol	ND		9.7	1.7	ug/L		10/23/18 14:09	10/25/18 18:38	1
3 & 4 Methylphenol	3.8	J	19	1.0	ug/L		10/23/18 14:09	10/25/18 18:38	1
2-Nitroaniline	ND		9.7	2.1	ug/L		10/23/18 14:09	10/25/18 18:38	1
3-Nitroaniline	ND		9.7	1.7	ug/L		10/23/18 14:09	10/25/18 18:38	1
4-Nitroaniline	ND	UJ	9.7	2.4	ug/L		10/23/18 14:09	10/25/18 18:38	1
Nitrobenzene	ND		9.7	0.53	ug/L		10/23/18 14:09	10/25/18 18:38	1
2-Nitrophenol	ND		9.7	0.63	ug/L		10/23/18 14:09	10/25/18 18:38	1
4-Nitrophenol	ND	UJ	9.7	2.0	ug/L		10/23/18 14:09	10/25/18 18:38	1
N-Nitrosodimethylamine	ND		9.7	3.4	ug/L		10/23/18 14:09	10/25/18 18:38	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.7	3.2	ug/L		10/23/18 14:09	10/25/18 18:38	1
N-Nitrosodiphenylamine	ND		9.7	0.46	ug/L		10/23/18 14:09	10/25/18 18:38	1
Pentachlorophenol	ND		19	1.8	ug/L		10/23/18 14:09	10/25/18 18:38	1
Phenol	12		9.7	2.5	ug/L		10/23/18 14:09	10/25/18 18:38	1
Pyridine	ND		9.7	3.1	ug/L		10/23/18 14:09	10/25/18 18:38	1
Quinoline	ND		9.7	5.8	ug/L		10/23/18 14:09	10/25/18 18:38	1
2,4,5-Trichlorophenol	ND		9.7	3.6	ug/L		10/23/18 14:09	10/25/18 18:38	1
2,4,6-Trichlorophenol	ND		9.7	3.4	ug/L		10/23/18 14:09	10/25/18 18:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*44*		*34 - 120*	*10/23/18 14:09*	*10/25/18 18:38*	*1*
2-Fluorophenol	*28*		*10 - 120*	*10/23/18 14:09*	*10/25/18 18:38*	*1*
Nitrobenzene-d5	*46*		*27 - 120*	*10/23/18 14:09*	*10/25/18 18:38*	*1*
Phenol-d5	*49*		*10 - 120*	*10/23/18 14:09*	*10/25/18 18:38*	*1*
Terphenyl-d14	*40*	X	*53 - 125*	*10/23/18 14:09*	*10/25/18 18:38*	*1*
2,4,6-Tribromophenol	*73*		*15 - 135*	*10/23/18 14:09*	*10/25/18 18:38*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.029	0.0054	ug/L		10/29/18 16:11	11/01/18 12:07	1
1,2-Dibromoethane	ND		0.020	0.0049	ug/L		10/29/18 16:11	11/01/18 12:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*165*	pX	*51 - 149*	*10/29/18 16:11*	*11/01/18 12:07*	*1*

Client Sample ID: P93A-ROX-101618
Date Collected: 10/16/18 12:45
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160704-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5000	2000	ug/L			10/27/18 16:09	200
Acrolein	ND		4000	2000	ug/L			10/27/18 16:09	200
Acrylonitrile	ND		2000	560	ug/L			10/27/18 16:09	200
Benzene	30000		200	76	ug/L			10/27/18 16:09	200
Bromobenzene	ND		200	110	ug/L			10/27/18 16:09	200
Bromochloromethane	ND		200	100	ug/L			10/27/18 16:09	200
Bromodichloromethane	ND		200	100	ug/L			10/27/18 16:09	200
Bromoform	ND		1000	140	ug/L			10/27/18 16:09	200
Bromomethane	ND		200	200	ug/L			10/27/18 16:09	200
2-Butanone (MEK)	ND		5000	520	ug/L			10/27/18 16:09	200
Carbon disulfide	ND		200	100	ug/L			10/27/18 16:09	200
Carbon tetrachloride	ND		200	100	ug/L			10/27/18 16:09	200
Chlorobenzene	ND		200	100	ug/L			10/27/18 16:09	200
Dibromochloromethane	ND		200	100	ug/L			10/27/18 16:09	200
Chloroethane	ND		200	150	ug/L			10/27/18 16:09	200
2-Chloroethyl vinyl ether	ND		1000	400	ug/L			10/27/18 16:09	200
Chloroform	ND		200	120	ug/L			10/27/18 16:09	200
1-Chlorohexane	ND		200	140	ug/L			10/27/18 16:09	200
Chloromethane	ND		200	170	ug/L			10/27/18 16:09	200
cis-1,2-Dichloroethene	ND		200	100	ug/L			10/27/18 16:09	200
cis-1,3-Dichloropropene	ND		1000	100	ug/L			10/27/18 16:09	200
1,2-Dichlorobenzene	ND		200	100	ug/L			10/27/18 16:09	200
1,3-Dichlorobenzene	ND		200	110	ug/L			10/27/18 16:09	200
1,4-Dichlorobenzene	ND		200	130	ug/L			10/27/18 16:09	200
Dichlorodifluoromethane	ND		200	170	ug/L			10/27/18 16:09	200
1,1-Dichloroethane	ND		200	100	ug/L			10/27/18 16:09	200
1,2-Dichloroethane	ND		200	100	ug/L			10/27/18 16:09	200
1,1-Dichloroethene	ND		200	100	ug/L			10/27/18 16:09	200
1,2-Dichloropropane	ND		200	100	ug/L			10/27/18 16:09	200
1,3-Dichloropropane	ND		200	100	ug/L			10/27/18 16:09	200
2,2-Dichloropropane	ND		200	100	ug/L			10/27/18 16:09	200
1,1-Dichloropropene	ND		200	100	ug/L			10/27/18 16:09	200
Ethylbenzene	ND		200	100	ug/L			10/27/18 16:09	200
Ethyl methacrylate	ND		200	120	ug/L			10/27/18 16:09	200
Hexachlorobutadiene	ND		1000	180	ug/L			10/27/18 16:09	200
2-Hexanone	ND		5000	620	ug/L			10/27/18 16:09	200
Isopropylbenzene	ND		200	110	ug/L			10/27/18 16:09	200
Methylene bromide	ND		1000	120	ug/L			10/27/18 16:09	200
Methylene Chloride	ND		1000	600	ug/L			10/27/18 16:09	200
4-Methyl-2-pentanone (MIBK)	ND		5000	360	ug/L			10/27/18 16:09	200
Methyl tert-butyl ether	ND		200	150	ug/L			10/27/18 16:09	200
m-Xylene & p-Xylene	ND		1000	320	ug/L			10/27/18 16:09	200
Naphthalene	ND		200	200	ug/L			10/27/18 16:09	200
n-Butylbenzene	ND		200	150	ug/L			10/27/18 16:09	200
N-Propylbenzene	ND		200	140	ug/L			10/27/18 16:09	200
o-Chlorotoluene	ND		200	110	ug/L			10/27/18 16:09	200
o-Xylene	ND		1000	120	ug/L			10/27/18 16:09	200
p-Chlorotoluene	ND		200	110	ug/L			10/27/18 16:09	200
p-Isopropyltoluene	ND		200	140	ug/L			10/27/18 16:09	200

Client Sample ID: P93A-ROX-101618

Date Collected: 10/16/18 12:45
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160704-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		200	140	ug/L			10/27/18 16:09	200
Styrene	ND		200	200	ug/L			10/27/18 16:09	200
tert-Butylbenzene	ND		200	130	ug/L			10/27/18 16:09	200
1,1,1,2-Tetrachloroethane	ND		200	100	ug/L			10/27/18 16:09	200
1,1,2,2-Tetrachloroethane	ND		200	100	ug/L			10/27/18 16:09	200
Tetrachloroethene	ND		200	120	ug/L			10/27/18 16:09	200
Toluene	ND		200	140	ug/L			10/27/18 16:09	200
trans-1,2-Dichloroethene	ND		200	100	ug/L			10/27/18 16:09	200
trans-1,3-Dichloropropene	ND		1000	100	ug/L			10/27/18 16:09	200
1,2,3-Trichlorobenzene	ND		200	140	ug/L			10/27/18 16:09	200
1,2,4-Trichlorobenzene	ND		200	160	ug/L			10/27/18 16:09	200
1,1,1-Trichloroethane	ND		200	100	ug/L			10/27/18 16:09	200
1,1,2-Trichloroethane	ND		1000	100	ug/L			10/27/18 16:09	200
Trichloroethene	ND		200	100	ug/L			10/27/18 16:09	200
Trichlorofluoromethane	ND		200	100	ug/L			10/27/18 16:09	200
1,2,3-Trichloropropane	ND		1000	170	ug/L			10/27/18 16:09	200
1,2,4-Trimethylbenzene	ND		200	160	ug/L			10/27/18 16:09	200
1,3,5-Trimethylbenzene	ND		200	110	ug/L			10/27/18 16:09	200
Vinyl acetate	ND		5000	400	ug/L			10/27/18 16:09	200
Vinyl chloride	ND		200	100	ug/L			10/27/18 16:09	200
Xylenes, Total	ND		2000	320	ug/L			10/27/18 16:09	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*78 - 118*		*10/27/18 16:09*	*200*
Dibromofluoromethane	*94*		*81 - 121*		*10/27/18 16:09*	*200*
Toluene-d8 (Surr)	*97*		*80 - 120*		*10/27/18 16:09*	*200*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.086	J	0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:10	1
Acenaphthylene	ND		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:10	1
Anthracene	0.045	J	0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:10	1
Benzo[a]anthracene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:10	1
Benzo[a]pyrene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:10	1
Benzo[b]fluoranthene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:10	1
Benzo[g,h,i]perylene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:10	1
Benzo[k]fluoranthene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:10	1
Chrysene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:10	1
Dibenz(a,h)anthracene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:10	1
Fluoranthene	0.039	J	0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:10	1
Fluorene	0.095	J	0.19	0.020	ug/L		10/23/18 14:09	10/25/18 19:10	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:10	1
Phenanthrene	0.086	J	0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:10	1
Pyrene	ND		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:10	1
1-Methylnaphthalene	2.6		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:10	1
2-Methylnaphthalene	0.75		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*75*		*33 - 138*	*10/23/18 14:09*	*10/25/18 19:10*	*1*
2-Fluorobiphenyl	*76*		*15 - 122*	*10/23/18 14:09*	*10/25/18 19:10*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	68		19 - 130	10/23/18 14:09	10/25/18 19:10	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.7	3.7	ug/L		10/23/18 14:09	10/25/18 19:00	1
Benzenethiol	ND	UJ	9.7	1.6	ug/L		10/23/18 14:09	10/25/18 19:00	1
Benzoic acid	ND		29	7.1	ug/L		10/23/18 14:09	10/25/18 19:00	1
Benzyl alcohol	ND		9.7	1.9	ug/L		10/23/18 14:09	10/25/18 19:00	1
Bis(2-chloroethoxy)methane	ND		9.7	0.67	ug/L		10/23/18 14:09	10/25/18 19:00	1
Bis(2-chloroethyl)ether	ND		9.7	0.72	ug/L		10/23/18 14:09	10/25/18 19:00	1
bis (2-chloroisopropyl) ether	ND		9.7	0.78	ug/L		10/23/18 14:09	10/25/18 19:00	1
Bis(2-ethylhexyl) phthalate	ND		9.7	4.8	ug/L		10/23/18 14:09	10/25/18 19:00	1
4-Bromophenyl phenyl ether	ND		9.7	0.31	ug/L		10/23/18 14:09	10/25/18 19:00	1
Butyl benzyl phthalate	ND		9.7	0.67	ug/L		10/23/18 14:09	10/25/18 19:00	1
4-Chloroaniline	ND		9.7	3.3	ug/L		10/23/18 14:09	10/25/18 19:00	1
4-Chloro-3-methylphenol	ND		9.7	3.7	ug/L		10/23/18 14:09	10/25/18 19:00	1
2-Chloronaphthalene	ND		9.7	0.50	ug/L		10/23/18 14:09	10/25/18 19:00	1
2-Chlorophenol	ND		9.7	2.1	ug/L		10/23/18 14:09	10/25/18 19:00	1
4-Chlorophenyl phenyl ether	ND		9.7	1.9	ug/L		10/23/18 14:09	10/25/18 19:00	1
Dibenz[a,h]acridine	ND		9.7	2.9	ug/L		10/23/18 14:09	10/25/18 19:00	1
Dibenzofuran	ND		9.7	0.50	ug/L		10/23/18 14:09	10/25/18 19:00	1
3,3'-Dichlorobenzidine	ND	*	9.7	2.5	ug/L		10/23/18 14:09	10/25/18 19:00	1
2,4-Dichlorophenol	ND		9.7	2.9	ug/L		10/23/18 14:09	10/25/18 19:00	1
Diethyl phthalate	ND		9.7	0.68	ug/L		10/23/18 14:09	10/25/18 19:00	1
2,4-Dimethylphenol	ND		9.7	3.4	ug/L		10/23/18 14:09	10/25/18 19:00	1
Dimethyl phthalate	ND		9.7	0.58	ug/L		10/23/18 14:09	10/25/18 19:00	1
Di-n-butyl phthalate	ND		9.7	2.6	ug/L		10/23/18 14:09	10/25/18 19:00	1
4,6-Dinitro-ortho-cresol	ND	UJ	9.7	1.9	ug/L		10/23/18 14:09	10/25/18 19:00	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		10/23/18 14:09	10/25/18 19:00	1
2,4-Dinitrotoluene	ND		9.7	1.8	ug/L		10/23/18 14:09	10/25/18 19:00	1
2,6-Dinitrotoluene	ND		9.7	1.8	ug/L		10/23/18 14:09	10/25/18 19:00	1
Di-n-octyl phthalate	2.0	J	9.7	0.43	ug/L		10/23/18 14:09	10/25/18 19:00	1
1,4-Dioxane	ND		9.7	0.97	ug/L		10/23/18 14:09	10/25/18 19:00	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.7	0.97	ug/L		10/23/18 14:09	10/25/18 19:00	1
Hexachlorobenzene	ND		9.7	0.24	ug/L		10/23/18 14:09	10/25/18 19:00	1
Hexachlorocyclopentadiene	ND	UJ	19	2.5	ug/L		10/23/18 14:09	10/25/18 19:00	1
Hexachloroethane	ND		9.7	4.1	ug/L		10/23/18 14:09	10/25/18 19:00	1
Indene	ND		9.7	0.97	ug/L		10/23/18 14:09	10/25/18 19:00	1
Isophorone	ND		9.7	0.55	ug/L		10/23/18 14:09	10/25/18 19:00	1
2-Methylphenol	ND		9.7	1.7	ug/L		10/23/18 14:09	10/25/18 19:00	1
3 & 4 Methylphenol	ND		19	1.0	ug/L		10/23/18 14:09	10/25/18 19:00	1
2-Nitroaniline	ND		9.7	2.1	ug/L		10/23/18 14:09	10/25/18 19:00	1
3-Nitroaniline	ND		9.7	1.7	ug/L		10/23/18 14:09	10/25/18 19:00	1
4-Nitroaniline	ND	UJ	9.7	2.4	ug/L		10/23/18 14:09	10/25/18 19:00	1
Nitrobenzene	ND		9.7	0.53	ug/L		10/23/18 14:09	10/25/18 19:00	1
2-Nitrophenol	ND		9.7	0.63	ug/L		10/23/18 14:09	10/25/18 19:00	1
4-Nitrophenol	ND	UJ	9.7	2.0	ug/L		10/23/18 14:09	10/25/18 19:00	1
N-Nitrosodimethylamine	ND		9.7	3.4	ug/L		10/23/18 14:09	10/25/18 19:00	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160704-1
SDG: 60527968

Client Sample ID: P93A-ROX-101618
Date Collected: 10/16/18 12:45
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160704-6
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.7	3.2	ug/L		10/23/18 14:09	10/25/18 19:00	1
N-Nitrosodiphenylamine	ND		9.7	0.45	ug/L		10/23/18 14:09	10/25/18 19:00	1
Pentachlorophenol	ND		19	1.8	ug/L		10/23/18 14:09	10/25/18 19:00	1
Phenol	88		9.7	2.5	ug/L		10/23/18 14:09	10/25/18 19:00	1
Pyridine	ND		9.7	3.1	ug/L		10/23/18 14:09	10/25/18 19:00	1
Quinoline	ND		9.7	5.8	ug/L		10/23/18 14:09	10/25/18 19:00	1
2,4,5-Trichlorophenol	ND		9.7	3.6	ug/L		10/23/18 14:09	10/25/18 19:00	1
2,4,6-Trichlorophenol	ND		9.7	3.4	ug/L		10/23/18 14:09	10/25/18 19:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*59*		*34 - 120*	*10/23/18 14:09*	*10/25/18 19:00*	*1*
2-Fluorophenol	*58*		*10 - 120*	*10/23/18 14:09*	*10/25/18 19:00*	*1*
Nitrobenzene-d5	*65*		*27 - 120*	*10/23/18 14:09*	*10/25/18 19:00*	*1*
Phenol-d5	*68*		*10 - 120*	*10/23/18 14:09*	*10/25/18 19:00*	*1*
Terphenyl-d14	*66*		*53 - 125*	*10/23/18 14:09*	*10/25/18 19:00*	*1*
2,4,6-Tribromophenol	*78*		*15 - 135*	*10/23/18 14:09*	*10/25/18 19:00*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.029	0.0054	ug/L		10/29/18 16:11	11/01/18 14:42	1
1,2-Dibromoethane	ND		0.020	0.0049	ug/L		10/29/18 16:11	11/01/18 14:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*151*	*X*	*51 - 149*	*10/29/18 16:11*	*11/01/18 14:42*	*1*

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.
X	Surrogate is outside control limits
*	RPD of the LCS and LCSD exceeds the control limits

GC Semi VOA

Qualifier	Qualifier Description
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160704-1
SDG: 60527968

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(78-118)	(81-121)	(80-120)
400-160704-2	TB-ROX-101618-8260-SS	95	96	102
400-160704-3	T12-ROX-101618	95	90	98
400-160704-4	P59-ROX-101618	92	90	97
400-160704-6	P93A-ROX-101618	95	94	97
LCS 400-417182/1002	Lab Control Sample	94	99	96
LCS 400-417272/1002	Lab Control Sample	93	97	97
MB 400-417182/4	Method Blank	93	100	98
MB 400-417272/4	Method Blank	94	97	101

Surrogate Legend

BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPHL	TBP
Lab Sample ID	Client Sample ID	(34-120)	(10-120)	(27-120)	(10-120)	(53-125)	(15-135)
400-160704-3	T12-ROX-101618	48	36	51	53	46 X	68
400-160704-4	P59-ROX-101618	44	28	46	49	40 X	73
400-160704-6	P93A-ROX-101618	59	58	65	68	66	78
LCS 400-416612/2-A - RA	Lab Control Sample	85	33	88	71	94	110
LCS 400-416612/4-A	Lab Control Sample	43	15	51	32	59	34
LCSD 400-416612/3-A - RA	Lab Control Sample Dup	88	39	89	75	94	112
LCSD 400-416612/5-A	Lab Control Sample Dup	47	17	54	38	63	37
MB 400-416612/1-A	Method Blank	52	29	62	57	75	53

Surrogate Legend

FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPHL = Terphenyl-d14
TBP = 2,4,6-Tribromophenol

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		TPHL	FBP	NBZ
Lab Sample ID	Client Sample ID	(33-138)	(15-122)	(19-130)
400-160704-3	T12-ROX-101618	65	77	73
400-160704-4	P59-ROX-101618	58	40	54
400-160704-6	P93A-ROX-101618	75	76	68
LCS 400-416612/2-A	Lab Control Sample	79	81	80
LCSD 400-416612/3-A	Lab Control Sample Dup	78	81	82
MB 400-416612/1-A	Method Blank	96	79	73

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160704-1
SDG: 60527968

Surrogate Legend
TPHL = Terphenyl-d14
FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5

Method: 8011 - EDB and DBCP in Water by Microextraction

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		BFB2
Lab Sample ID	Client Sample ID	(51-149)
400-160704-1	TB-ROX-101618-8011-SS	107 p
400-160704-3	T12-ROX-101618	107 p
400-160704-4	P59-ROX-101618	165 p X
400-160704-6	P93A-ROX-101618	151 p X
LCS 400-417470/2-A	Lab Control Sample	125 p
LCSD 400-417470/3-A	Lab Control Sample Dup	117 p
MB 400-417470/1-A	Method Blank	108 p

Surrogate Legend
BFB = 4-Bromofluorobenzene

Method Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160704-1
SDG: 60527968

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL PEN
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	TAL PEN
8011	EDB and DBCP in Water by Microextraction	EPA	TAL PEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL PEN
5030B	Purge and Trap	SW846	TAL PEN
8011	Microextraction	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Client Sample ID: TB-ROX-101618-8011-SS

Lab Sample ID: 400-160704-1
Matrix: Water

Date Collected: 10/16/18 00:00
Date Received: 10/17/18 08:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35.9 mL	35 mL	417470	10/29/18 16:11	SAB	TAL PEN
Total/NA	Analysis	8011		1			417869	11/01/18 11:04	DS	TAL PEN

Client Sample ID: TB-ROX-101618-8260-SS

Lab Sample ID: 400-160704-2
Matrix: Water

Date Collected: 10/16/18 00:00
Date Received: 10/17/18 08:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417272	10/28/18 14:47	RS	TAL PEN

Client Sample ID: T12-ROX-101618

Lab Sample ID: 400-160704-3
Matrix: Water

Date Collected: 10/16/18 09:40
Date Received: 10/17/18 08:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	5 mL	5 mL	417182	10/27/18 15:17	CAR	TAL PEN
Total/NA	Prep	3520C			1030.4 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416965	10/25/18 18:17	VC1	TAL PEN
Total/NA	Prep	3520C			1030.4 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416937	10/25/18 18:39	RM	TAL PEN
Total/NA	Prep	8011			36.6 mL	35 mL	417470	10/29/18 16:11	SAB	TAL PEN
Total/NA	Analysis	8011		1			417869	11/01/18 11:35	DS	TAL PEN

Client Sample ID: P59-ROX-101618

Lab Sample ID: 400-160704-4
Matrix: Water

Date Collected: 10/16/18 11:10
Date Received: 10/17/18 08:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	5 mL	5 mL	417182	10/27/18 15:43	CAR	TAL PEN
Total/NA	Prep	3520C			1028.8 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416965	10/25/18 18:38	VC1	TAL PEN
Total/NA	Prep	3520C			1028.8 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416937	10/25/18 18:55	RM	TAL PEN
Total/NA	Prep	8011			35.8 mL	35 mL	417470	10/29/18 16:11	SAB	TAL PEN
Total/NA	Analysis	8011		1			417869	11/01/18 12:07	DS	TAL PEN

Client Sample ID: P93A-ROX-101618

Lab Sample ID: 400-160704-6
Matrix: Water

Date Collected: 10/16/18 12:45
Date Received: 10/17/18 08:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		200	5 mL	5 mL	417182	10/27/18 16:09	CAR	TAL PEN

Client Sample ID: P93A-ROX-101618

Date Collected: 10/16/18 12:45
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160704-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1033.8 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416965	10/25/18 19:00	VC1	TAL PEN
Total/NA	Prep	3520C			1033.8 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416937	10/25/18 19:10	RM	TAL PEN
Total/NA	Prep	8011			35.7 mL	35 mL	417470	10/29/18 16:11	SAB	TAL PEN
Total/NA	Analysis	8011		1			417869	11/01/18 14:42	DS	TAL PEN

Client Sample ID: Method Blank

Date Collected: N/A
Date Received: N/A

Lab Sample ID: MB 400-416612/1-A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416965	10/25/18 16:32	VC1	TAL PEN
Total/NA	Prep	3520C			1000 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416937	10/25/18 17:51	RM	TAL PEN

Client Sample ID: Method Blank

Date Collected: N/A
Date Received: N/A

Lab Sample ID: MB 400-417182/4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417182	10/27/18 07:45	CAR	TAL PEN

Client Sample ID: Method Blank

Date Collected: N/A
Date Received: N/A

Lab Sample ID: MB 400-417272/4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417272	10/28/18 12:08	RS	TAL PEN

Client Sample ID: Method Blank

Date Collected: N/A
Date Received: N/A

Lab Sample ID: MB 400-417470/1-A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	417470	10/29/18 16:11	SAB	TAL PEN
Total/NA	Analysis	8011		1			417869	11/01/18 00:26	DS	TAL PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-416612/2-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C	RA		1000 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D	RA	1			417121	10/26/18 17:43	KJA	TAL PEN
Total/NA	Prep	3520C			1000 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416965	10/25/18 16:53	VC1	TAL PEN
Total/NA	Prep	3520C			1000 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D LL		5			416937	10/25/18 18:07	RM	TAL PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-416612/4-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416965	10/25/18 17:35	VC1	TAL PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-417182/1002

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417182	10/27/18 06:55	CAR	TAL PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-417272/1002

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417272	10/28/18 11:06	RS	TAL PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-417470/2-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	417470	10/29/18 16:11	SAB	TAL PEN
Total/NA	Analysis	8011		1			417869	11/01/18 00:59	DS	TAL PEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 400-416612/3-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C	RA		1000 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D	RA	1			417121	10/26/18 18:08	KJA	TAL PEN
Total/NA	Prep	3520C			1000 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416965	10/25/18 17:14	VC1	TAL PEN
Total/NA	Prep	3520C			1000 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D LL		5			416937	10/25/18 18:23	RM	TAL PEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 400-416612/5-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416965	10/25/18 17:56	VC1	TAL PEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 400-417470/3-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	417470	10/29/18 16:11	SAB	TAL PEN
Total/NA	Analysis	8011		1			417869	11/01/18 01:30	DS	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

GC/MS VOA

Analysis Batch: 417182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160704-3	T12-ROX-101618	Total/NA	Water	8260B	
400-160704-4	P59-ROX-101618	Total/NA	Water	8260B	
400-160704-6	P93A-ROX-101618	Total/NA	Water	8260B	
MB 400-417182/4	Method Blank	Total/NA	Water	8260B	
LCS 400-417182/1002	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 417272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160704-2	TB-ROX-101618-8260-SS	Total/NA	Water	8260B	
MB 400-417272/4	Method Blank	Total/NA	Water	8260B	
LCS 400-417272/1002	Lab Control Sample	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 416612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160704-3	T12-ROX-101618	Total/NA	Water	3520C	
400-160704-4	P59-ROX-101618	Total/NA	Water	3520C	
400-160704-6	P93A-ROX-101618	Total/NA	Water	3520C	
MB 400-416612/1-A	Method Blank	Total/NA	Water	3520C	
LCS 400-416612/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 400-416612/2-A - RA	Lab Control Sample	Total/NA	Water	3520C	
LCS 400-416612/4-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-416612/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
LCSD 400-416612/3-A - RA	Lab Control Sample Dup	Total/NA	Water	3520C	
LCSD 400-416612/5-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 416937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160704-3	T12-ROX-101618	Total/NA	Water	8270D LL	416612
400-160704-4	P59-ROX-101618	Total/NA	Water	8270D LL	416612
400-160704-6	P93A-ROX-101618	Total/NA	Water	8270D LL	416612
MB 400-416612/1-A	Method Blank	Total/NA	Water	8270D LL	416612
LCS 400-416612/2-A	Lab Control Sample	Total/NA	Water	8270D LL	416612
LCSD 400-416612/3-A	Lab Control Sample Dup	Total/NA	Water	8270D LL	416612

Analysis Batch: 416965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160704-3	T12-ROX-101618	Total/NA	Water	8270D	416612
400-160704-4	P59-ROX-101618	Total/NA	Water	8270D	416612
400-160704-6	P93A-ROX-101618	Total/NA	Water	8270D	416612
MB 400-416612/1-A	Method Blank	Total/NA	Water	8270D	416612
LCS 400-416612/2-A	Lab Control Sample	Total/NA	Water	8270D	416612
LCS 400-416612/4-A	Lab Control Sample	Total/NA	Water	8270D	416612
LCSD 400-416612/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	416612
LCSD 400-416612/5-A	Lab Control Sample Dup	Total/NA	Water	8270D	416612

Analysis Batch: 417121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-416612/2-A - RA	Lab Control Sample	Total/NA	Water	8270D	416612

GC/MS Semi VOA (Continued)

Analysis Batch: 417121 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 400-416612/3-A - RA	Lab Control Sample Dup	Total/NA	Water	8270D	416612

GC Semi VOA

Prep Batch: 417470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160704-1	TB-ROX-101618-8011-SS	Total/NA	Water	8011	
400-160704-3	T12-ROX-101618	Total/NA	Water	8011	
400-160704-4	P59-ROX-101618	Total/NA	Water	8011	
400-160704-6	P93A-ROX-101618	Total/NA	Water	8011	
MB 400-417470/1-A	Method Blank	Total/NA	Water	8011	
LCS 400-417470/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 400-417470/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 417869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160704-1	TB-ROX-101618-8011-SS	Total/NA	Water	8011	417470
400-160704-3	T12-ROX-101618	Total/NA	Water	8011	417470
400-160704-4	P59-ROX-101618	Total/NA	Water	8011	417470
400-160704-6	P93A-ROX-101618	Total/NA	Water	8011	417470
MB 400-417470/1-A	Method Blank	Total/NA	Water	8011	417470
LCS 400-417470/2-A	Lab Control Sample	Total/NA	Water	8011	417470
LCSD 400-417470/3-A	Lab Control Sample Dup	Total/NA	Water	8011	417470

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-417182/4
Matrix: Water
Analysis Batch: 417182

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/27/18 07:45	1
Acrolein	ND		20	10	ug/L			10/27/18 07:45	1
Acrylonitrile	ND		10	2.8	ug/L			10/27/18 07:45	1
Benzene	ND		1.0	0.38	ug/L			10/27/18 07:45	1
Bromobenzene	ND		1.0	0.54	ug/L			10/27/18 07:45	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/27/18 07:45	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Bromoform	ND		5.0	0.71	ug/L			10/27/18 07:45	1
Bromomethane	ND		1.0	0.98	ug/L			10/27/18 07:45	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/27/18 07:45	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Chloroethane	ND		1.0	0.76	ug/L			10/27/18 07:45	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/27/18 07:45	1
Chloroform	ND		1.0	0.60	ug/L			10/27/18 07:45	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/27/18 07:45	1
Chloromethane	ND		1.0	0.83	ug/L			10/27/18 07:45	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 07:45	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/27/18 07:45	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/27/18 07:45	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/27/18 07:45	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/27/18 07:45	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/27/18 07:45	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 07:45	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/27/18 07:45	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/27/18 07:45	1
2-Hexanone	ND		25	3.1	ug/L			10/27/18 07:45	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/27/18 07:45	1
Methylene bromide	ND		5.0	0.59	ug/L			10/27/18 07:45	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/27/18 07:45	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/27/18 07:45	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/27/18 07:45	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/27/18 07:45	1
Naphthalene	ND		1.0	1.0	ug/L			10/27/18 07:45	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/27/18 07:45	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/27/18 07:45	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/27/18 07:45	1
o-Xylene	ND		5.0	0.60	ug/L			10/27/18 07:45	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/27/18 07:45	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-417182/4
Matrix: Water
Analysis Batch: 417182

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/27/18 07:45	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/27/18 07:45	1
Styrene	ND		1.0	1.0	ug/L			10/27/18 07:45	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/27/18 07:45	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/27/18 07:45	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/27/18 07:45	1
Toluene	ND		1.0	0.70	ug/L			10/27/18 07:45	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/27/18 07:45	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/27/18 07:45	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/27/18 07:45	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/27/18 07:45	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/27/18 07:45	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/27/18 07:45	1
Trichloroethene	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/27/18 07:45	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/27/18 07:45	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/27/18 07:45	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/27/18 07:45	1
Vinyl acetate	ND		25	2.0	ug/L			10/27/18 07:45	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/27/18 07:45	1
Xylenes, Total	ND		10	1.6	ug/L			10/27/18 07:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*78 - 118*		*10/27/18 07:45*	*1*
Dibromofluoromethane	*100*		*81 - 121*		*10/27/18 07:45*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*10/27/18 07:45*	*1*

Lab Sample ID: LCS 400-417182/1002
Matrix: Water
Analysis Batch: 417182

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	200	258		ug/L		129	43 - 160
Acrolein	500	513		ug/L		103	38 - 160
Acrylonitrile	500	675		ug/L		135	64 - 142
Benzene	50.0	47.5		ug/L		95	70 - 130
Bromobenzene	50.0	52.8		ug/L		106	70 - 132
Bromochloromethane	50.0	53.5		ug/L		107	70 - 130
Bromodichloromethane	50.0	46.5		ug/L		93	67 - 133
Bromoform	50.0	53.2		ug/L		106	57 - 140
Bromomethane	50.0	49.5		ug/L		99	10 - 160
2-Butanone (MEK)	200	208		ug/L		104	61 - 145
Carbon disulfide	50.0	44.4		ug/L		89	61 - 137
Carbon tetrachloride	50.0	43.5		ug/L		87	61 - 137
Chlorobenzene	50.0	51.6		ug/L		103	70 - 130
Dibromochloromethane	50.0	51.3		ug/L		103	67 - 135
Chloroethane	50.0	54.7		ug/L		109	55 - 141

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-417182/1002
Matrix: Water
Analysis Batch: 417182

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloroethyl vinyl ether	50.0	28.3		ug/L		57	10 - 160
Chloroform	50.0	45.3		ug/L		91	69 - 130
1-Chlorohexane	50.0	55.8		ug/L		112	69 - 130
Chloromethane	50.0	65.8		ug/L		132	58 - 137
cis-1,2-Dichloroethene	50.0	50.5		ug/L		101	68 - 130
cis-1,3-Dichloropropene	50.0	42.5		ug/L		85	69 - 132
1,2-Dichlorobenzene	50.0	53.7		ug/L		107	67 - 130
1,3-Dichlorobenzene	50.0	53.8		ug/L		108	70 - 130
1,4-Dichlorobenzene	50.0	53.1		ug/L		106	70 - 130
Dichlorodifluoromethane	50.0	52.4		ug/L		105	41 - 146
1,1-Dichloroethane	50.0	50.0		ug/L		100	70 - 130
1,2-Dichloroethane	50.0	48.6		ug/L		97	69 - 130
1,1-Dichloroethene	50.0	48.1		ug/L		96	63 - 134
1,2-Dichloropropane	50.0	48.8		ug/L		98	70 - 130
1,3-Dichloropropane	50.0	47.9		ug/L		96	70 - 130
2,2-Dichloropropane	50.0	32.3		ug/L		65	52 - 135
1,1-Dichloropropene	50.0	47.2		ug/L		94	70 - 130
Ethylbenzene	50.0	48.9		ug/L		98	70 - 130
Ethyl methacrylate	50.0	43.0		ug/L		86	68 - 130
Hexachlorobutadiene	50.0	48.8		ug/L		98	53 - 140
2-Hexanone	200	246		ug/L		123	65 - 137
Isopropylbenzene	50.0	50.2		ug/L		100	70 - 130
Methylene bromide	50.0	49.6		ug/L		99	70 - 130
Methylene Chloride	50.0	48.0		ug/L		96	66 - 135
4-Methyl-2-pentanone (MIBK)	200	246		ug/L		123	69 - 138
Methyl tert-butyl ether	50.0	41.8		ug/L		84	66 - 130
m-Xylene & p-Xylene	50.0	48.2		ug/L		96	70 - 130
Naphthalene	50.0	51.0		ug/L		102	47 - 149
n-Butylbenzene	50.0	52.8		ug/L		106	67 - 130
N-Propylbenzene	50.0	50.7		ug/L		101	70 - 130
o-Chlorotoluene	50.0	46.0		ug/L		92	70 - 130
o-Xylene	50.0	48.2		ug/L		96	70 - 130
p-Chlorotoluene	50.0	50.0		ug/L		100	70 - 130
p-Isopropyltoluene	50.0	53.1		ug/L		106	65 - 130
sec-Butylbenzene	50.0	52.5		ug/L		105	66 - 130
Styrene	50.0	49.7		ug/L		99	70 - 130
tert-Butylbenzene	50.0	48.3		ug/L		97	64 - 139
1,1,1,2-Tetrachloroethane	50.0	48.6		ug/L		97	67 - 131
1,1,2,2-Tetrachloroethane	50.0	51.0		ug/L		102	70 - 131
Tetrachloroethene	50.0	50.9		ug/L		102	65 - 130
Toluene	50.0	49.6		ug/L		99	70 - 130
trans-1,2-Dichloroethene	50.0	48.9		ug/L		98	70 - 130
trans-1,3-Dichloropropene	50.0	40.9		ug/L		82	63 - 130
1,2,3-Trichlorobenzene	50.0	50.2		ug/L		100	60 - 138
1,2,4-Trichlorobenzene	50.0	49.3		ug/L		99	60 - 140
1,1,1-Trichloroethane	50.0	43.7		ug/L		87	68 - 130
1,1,2-Trichloroethane	50.0	48.1		ug/L		96	70 - 130
Trichloroethene	50.0	51.1		ug/L		102	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-417182/1002
Matrix: Water
Analysis Batch: 417182

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	50.0	54.1		ug/L		108	65 - 138
1,2,3-Trichloropropane	50.0	53.9		ug/L		108	70 - 130
1,2,4-Trimethylbenzene	50.0	52.3		ug/L		105	70 - 130
1,3,5-Trimethylbenzene	50.0	52.4		ug/L		105	69 - 130
Vinyl acetate	100	90.9		ug/L		91	26 - 160
Vinyl chloride	50.0	54.9		ug/L		110	59 - 136
Xylenes, Total	100	96.4		ug/L		96	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*94*		*78 - 118*
Dibromofluoromethane	*99*		*81 - 121*
Toluene-d8 (Surr)	*96*		*80 - 120*

Lab Sample ID: MB 400-417272/4
Matrix: Water
Analysis Batch: 417272

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/28/18 12:08	1
Acrolein	ND		20	10	ug/L			10/28/18 12:08	1
Acrylonitrile	ND		10	2.8	ug/L			10/28/18 12:08	1
Benzene	ND		1.0	0.38	ug/L			10/28/18 12:08	1
Bromobenzene	ND		1.0	0.54	ug/L			10/28/18 12:08	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/28/18 12:08	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/28/18 12:08	1
Bromoform	ND		5.0	0.71	ug/L			10/28/18 12:08	1
Bromomethane	ND		1.0	0.98	ug/L			10/28/18 12:08	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/28/18 12:08	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/28/18 12:08	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/28/18 12:08	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/28/18 12:08	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/28/18 12:08	1
Chloroethane	ND		1.0	0.76	ug/L			10/28/18 12:08	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/28/18 12:08	1
Chloroform	ND		1.0	0.60	ug/L			10/28/18 12:08	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/28/18 12:08	1
Chloromethane	ND		1.0	0.83	ug/L			10/28/18 12:08	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/28/18 12:08	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/28/18 12:08	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/28/18 12:08	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/28/18 12:08	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/28/18 12:08	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/28/18 12:08	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/28/18 12:08	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/28/18 12:08	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/28/18 12:08	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/28/18 12:08	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/28/18 12:08	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-417272/4
Matrix: Water
Analysis Batch: 417272

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/28/18 12:08	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/28/18 12:08	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/28/18 12:08	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/28/18 12:08	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/28/18 12:08	1
2-Hexanone	ND		25	3.1	ug/L			10/28/18 12:08	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/28/18 12:08	1
Methylene bromide	ND		5.0	0.59	ug/L			10/28/18 12:08	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/28/18 12:08	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/28/18 12:08	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/28/18 12:08	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/28/18 12:08	1
Naphthalene	ND		1.0	1.0	ug/L			10/28/18 12:08	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/28/18 12:08	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/28/18 12:08	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/28/18 12:08	1
o-Xylene	ND		5.0	0.60	ug/L			10/28/18 12:08	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/28/18 12:08	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/28/18 12:08	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/28/18 12:08	1
Styrene	ND		1.0	1.0	ug/L			10/28/18 12:08	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/28/18 12:08	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/28/18 12:08	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/28/18 12:08	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/28/18 12:08	1
Toluene	ND		1.0	0.70	ug/L			10/28/18 12:08	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/28/18 12:08	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/28/18 12:08	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/28/18 12:08	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/28/18 12:08	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/28/18 12:08	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/28/18 12:08	1
Trichloroethene	ND		1.0	0.50	ug/L			10/28/18 12:08	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/28/18 12:08	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/28/18 12:08	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/28/18 12:08	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/28/18 12:08	1
Vinyl acetate	ND		25	2.0	ug/L			10/28/18 12:08	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/28/18 12:08	1
Xylenes, Total	ND		10	1.6	ug/L			10/28/18 12:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*78 - 118*		*10/28/18 12:08*	*1*
Dibromofluoromethane	*97*		*81 - 121*		*10/28/18 12:08*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*10/28/18 12:08*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-417272/1002
Matrix: Water
Analysis Batch: 417272

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	200	247		ug/L		124	43 - 160
Acrolein	500	512		ug/L		102	38 - 160
Acrylonitrile	500	634		ug/L		127	64 - 142
Benzene	50.0	44.2		ug/L		88	70 - 130
Bromobenzene	50.0	51.1		ug/L		102	70 - 132
Bromochloromethane	50.0	48.4		ug/L		97	70 - 130
Bromodichloromethane	50.0	41.9		ug/L		84	67 - 133
Bromoform	50.0	51.3		ug/L		103	57 - 140
Bromomethane	50.0	47.9		ug/L		96	10 - 160
2-Butanone (MEK)	200	194		ug/L		97	61 - 145
Carbon disulfide	50.0	40.3		ug/L		81	61 - 137
Carbon tetrachloride	50.0	40.6		ug/L		81	61 - 137
Chlorobenzene	50.0	49.5		ug/L		99	70 - 130
Dibromochloromethane	50.0	48.9		ug/L		98	67 - 135
Chloroethane	50.0	53.4		ug/L		107	55 - 141
2-Chloroethyl vinyl ether	50.0	31.6		ug/L		63	10 - 160
Chloroform	50.0	41.5		ug/L		83	69 - 130
1-Chlorohexane	50.0	53.0		ug/L		106	69 - 130
Chloromethane	50.0	65.5		ug/L		131	58 - 137
cis-1,2-Dichloroethene	50.0	47.6		ug/L		95	68 - 130
cis-1,3-Dichloropropene	50.0	40.2		ug/L		80	69 - 132
1,2-Dichlorobenzene	50.0	51.9		ug/L		104	67 - 130
1,3-Dichlorobenzene	50.0	52.4		ug/L		105	70 - 130
1,4-Dichlorobenzene	50.0	52.9		ug/L		106	70 - 130
Dichlorodifluoromethane	50.0	51.0		ug/L		102	41 - 146
1,1-Dichloroethane	50.0	46.0		ug/L		92	70 - 130
1,2-Dichloroethane	50.0	42.9		ug/L		86	69 - 130
1,1-Dichloroethene	50.0	45.4		ug/L		91	63 - 134
1,2-Dichloropropane	50.0	45.3		ug/L		91	70 - 130
1,3-Dichloropropane	50.0	44.9		ug/L		90	70 - 130
2,2-Dichloropropane	50.0	32.1		ug/L		64	52 - 135
1,1-Dichloropropene	50.0	43.7		ug/L		87	70 - 130
Ethylbenzene	50.0	47.2		ug/L		94	70 - 130
Ethyl methacrylate	50.0	40.7		ug/L		81	68 - 130
Hexachlorobutadiene	50.0	48.8		ug/L		98	53 - 140
2-Hexanone	200	236		ug/L		118	65 - 137
Isopropylbenzene	50.0	49.1		ug/L		98	70 - 130
Methylene bromide	50.0	45.3		ug/L		91	70 - 130
Methylene Chloride	50.0	45.4		ug/L		91	66 - 135
4-Methyl-2-pentanone (MIBK)	200	227		ug/L		114	69 - 138
Methyl tert-butyl ether	50.0	38.6		ug/L		77	66 - 130
m-Xylene & p-Xylene	50.0	47.2		ug/L		94	70 - 130
Naphthalene	50.0	51.8		ug/L		104	47 - 149
n-Butylbenzene	50.0	52.2		ug/L		104	67 - 130
N-Propylbenzene	50.0	50.4		ug/L		101	70 - 130
o-Chlorotoluene	50.0	51.1		ug/L		102	70 - 130
o-Xylene	50.0	46.9		ug/L		94	70 - 130
p-Chlorotoluene	50.0	49.8		ug/L		100	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-417272/1002
Matrix: Water
Analysis Batch: 417272

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
p-Isopropyltoluene	50.0	53.3		ug/L		107	65 - 130
sec-Butylbenzene	50.0	52.2		ug/L		104	66 - 130
Styrene	50.0	48.3		ug/L		97	70 - 130
tert-Butylbenzene	50.0	48.0		ug/L		96	64 - 139
1,1,1,2-Tetrachloroethane	50.0	46.8		ug/L		94	67 - 131
1,1,2,2-Tetrachloroethane	50.0	49.6		ug/L		99	70 - 131
Tetrachloroethene	50.0	49.5		ug/L		99	65 - 130
Toluene	50.0	47.8		ug/L		96	70 - 130
trans-1,2-Dichloroethene	50.0	45.4		ug/L		91	70 - 130
trans-1,3-Dichloropropene	50.0	39.4		ug/L		79	63 - 130
1,2,3-Trichlorobenzene	50.0	49.6		ug/L		99	60 - 138
1,2,4-Trichlorobenzene	50.0	49.5		ug/L		99	60 - 140
1,1,1-Trichloroethane	50.0	40.9		ug/L		82	68 - 130
1,1,2-Trichloroethane	50.0	45.6		ug/L		91	70 - 130
Trichloroethene	50.0	47.4		ug/L		95	70 - 130
Trichlorofluoromethane	50.0	50.7		ug/L		101	65 - 138
1,2,3-Trichloropropane	50.0	52.1		ug/L		104	70 - 130
1,2,4-Trimethylbenzene	50.0	50.6		ug/L		101	70 - 130
1,3,5-Trimethylbenzene	50.0	52.2		ug/L		104	69 - 130
Vinyl acetate	100	88.2		ug/L		88	26 - 160
Vinyl chloride	50.0	55.3		ug/L		111	59 - 136
Xylenes, Total	100	94.1		ug/L		94	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*93*		*78 - 118*
Dibromofluoromethane	*97*		*81 - 121*
Toluene-d8 (Surr)	*97*		*80 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-416612/1-A
Matrix: Water
Analysis Batch: 416965

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416612

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.8	ug/L		10/23/18 14:09	10/25/18 16:32	1
Benzenethiol	ND		10	1.7	ug/L		10/23/18 14:09	10/25/18 16:32	1
Benzoic acid	ND		30	7.3	ug/L		10/23/18 14:09	10/25/18 16:32	1
Benzyl alcohol	ND		10	2.0	ug/L		10/23/18 14:09	10/25/18 16:32	1
Bis(2-chloroethoxy)methane	ND		10	0.69	ug/L		10/23/18 14:09	10/25/18 16:32	1
Bis(2-chloroethyl)ether	ND		10	0.74	ug/L		10/23/18 14:09	10/25/18 16:32	1
bis (2-chloroisopropyl) ether	ND		10	0.81	ug/L		10/23/18 14:09	10/25/18 16:32	1
Bis(2-ethylhexyl) phthalate	ND		10	5.0	ug/L		10/23/18 14:09	10/25/18 16:32	1
4-Bromophenyl phenyl ether	ND		10	0.32	ug/L		10/23/18 14:09	10/25/18 16:32	1
Butyl benzyl phthalate	ND		10	0.69	ug/L		10/23/18 14:09	10/25/18 16:32	1
4-Chloroaniline	ND		10	3.4	ug/L		10/23/18 14:09	10/25/18 16:32	1
4-Chloro-3-methylphenol	ND		10	3.8	ug/L		10/23/18 14:09	10/25/18 16:32	1
2-Chloronaphthalene	ND		10	0.52	ug/L		10/23/18 14:09	10/25/18 16:32	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-416612/1-A
Matrix: Water
Analysis Batch: 416965

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416612

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	ND		10	2.2	ug/L		10/23/18 14:09	10/25/18 16:32	1
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		10/23/18 14:09	10/25/18 16:32	1
Dibenz[a,h]acridine	ND		10	3.0	ug/L		10/23/18 14:09	10/25/18 16:32	1
Dibenzofuran	ND		10	0.52	ug/L		10/23/18 14:09	10/25/18 16:32	1
3,3'-Dichlorobenzidine	ND		10	2.6	ug/L		10/23/18 14:09	10/25/18 16:32	1
2,4-Dichlorophenol	ND		10	3.0	ug/L		10/23/18 14:09	10/25/18 16:32	1
Diethyl phthalate	ND		10	0.70	ug/L		10/23/18 14:09	10/25/18 16:32	1
2,4-Dimethylphenol	ND		10	3.5	ug/L		10/23/18 14:09	10/25/18 16:32	1
Dimethyl phthalate	ND		10	0.60	ug/L		10/23/18 14:09	10/25/18 16:32	1
Di-n-butyl phthalate	ND		10	2.7	ug/L		10/23/18 14:09	10/25/18 16:32	1
4,6-Dinitro-ortho-cresol	ND		10	2.0	ug/L		10/23/18 14:09	10/25/18 16:32	1
2,4-Dinitrophenol	ND		30	3.4	ug/L		10/23/18 14:09	10/25/18 16:32	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		10/23/18 14:09	10/25/18 16:32	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		10/23/18 14:09	10/25/18 16:32	1
Di-n-octyl phthalate	ND		10	0.44	ug/L		10/23/18 14:09	10/25/18 16:32	1
1,4-Dioxane	ND		10	1.0	ug/L		10/23/18 14:09	10/25/18 16:32	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		10/23/18 14:09	10/25/18 16:32	1
Hexachlorobenzene	ND		10	0.25	ug/L		10/23/18 14:09	10/25/18 16:32	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		10/23/18 14:09	10/25/18 16:32	1
Hexachloroethane	ND		10	4.2	ug/L		10/23/18 14:09	10/25/18 16:32	1
Indene	ND		10	1.0	ug/L		10/23/18 14:09	10/25/18 16:32	1
Isophorone	ND		10	0.57	ug/L		10/23/18 14:09	10/25/18 16:32	1
2-Methylphenol	ND		10	1.8	ug/L		10/23/18 14:09	10/25/18 16:32	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/23/18 14:09	10/25/18 16:32	1
2-Nitroaniline	ND		10	2.2	ug/L		10/23/18 14:09	10/25/18 16:32	1
3-Nitroaniline	ND		10	1.8	ug/L		10/23/18 14:09	10/25/18 16:32	1
4-Nitroaniline	ND		10	2.5	ug/L		10/23/18 14:09	10/25/18 16:32	1
Nitrobenzene	ND		10	0.55	ug/L		10/23/18 14:09	10/25/18 16:32	1
2-Nitrophenol	ND		10	0.65	ug/L		10/23/18 14:09	10/25/18 16:32	1
4-Nitrophenol	ND		10	2.1	ug/L		10/23/18 14:09	10/25/18 16:32	1
N-Nitrosodimethylamine	ND		10	3.5	ug/L		10/23/18 14:09	10/25/18 16:32	1
N-Nitrosodi-n-propylamine	ND		10	3.3	ug/L		10/23/18 14:09	10/25/18 16:32	1
N-Nitrosodiphenylamine	ND		10	0.47	ug/L		10/23/18 14:09	10/25/18 16:32	1
Pentachlorophenol	ND		20	1.8	ug/L		10/23/18 14:09	10/25/18 16:32	1
Phenol	ND		10	2.6	ug/L		10/23/18 14:09	10/25/18 16:32	1
Pyridine	ND		10	3.2	ug/L		10/23/18 14:09	10/25/18 16:32	1
Quinoline	ND		10	6.0	ug/L		10/23/18 14:09	10/25/18 16:32	1
2,4,5-Trichlorophenol	ND		10	3.7	ug/L		10/23/18 14:09	10/25/18 16:32	1
2,4,6-Trichlorophenol	ND		10	3.5	ug/L		10/23/18 14:09	10/25/18 16:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*52*		*34 - 120*	*10/23/18 14:09*	*10/25/18 16:32*	*1*
2-Fluorophenol	*29*		*10 - 120*	*10/23/18 14:09*	*10/25/18 16:32*	*1*
Nitrobenzene-d5	*62*		*27 - 120*	*10/23/18 14:09*	*10/25/18 16:32*	*1*
Phenol-d5	*57*		*10 - 120*	*10/23/18 14:09*	*10/25/18 16:32*	*1*
Terphenyl-d14	*75*		*53 - 125*	*10/23/18 14:09*	*10/25/18 16:32*	*1*
2,4,6-Tribromophenol	*53*		*15 - 135*	*10/23/18 14:09*	*10/25/18 16:32*	*1*

Lab Sample ID: LCS 400-416612/2-A
Matrix: Water
Analysis Batch: 416965

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416612

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
3,3'-Dichlorobenzidine	40.0	34.9		ug/L		87	39 - 135

Lab Sample ID: LCS 400-416612/4-A
Matrix: Water
Analysis Batch: 416965

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416612

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzenethiol	30.0	2.12	J *	ug/L		7	10 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*43*		*34 - 120*
2-Fluorophenol	*15*		*10 - 120*
Nitrobenzene-d5	*51*		*27 - 120*
Phenol-d5	*32*		*10 - 120*
Terphenyl-d14	*59*		*53 - 125*
2,4,6-Tribromophenol	*34*		*15 - 135*

Lab Sample ID: LCSD 400-416612/3-A
Matrix: Water
Analysis Batch: 416965

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416612

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
3,3'-Dichlorobenzidine	40.0	36.8		ug/L		92	39 - 135	5	30

Lab Sample ID: LCSD 400-416612/5-A
Matrix: Water
Analysis Batch: 416965

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416612

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzenethiol	30.0	ND	*	ug/L		2	10 - 120	122	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*47*		*34 - 120*
2-Fluorophenol	*17*		*10 - 120*
Nitrobenzene-d5	*54*		*27 - 120*
Phenol-d5	*38*		*10 - 120*
Terphenyl-d14	*63*		*53 - 125*
2,4,6-Tribromophenol	*37*		*15 - 135*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RA

Lab Sample ID: LCS 400-416612/2-A
Matrix: Water
Analysis Batch: 417121

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416612

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aniline - RA	30.0	32.0		ug/L		107	29 - 120
Benzoic acid - RA	118	97.9		ug/L		83	10 - 150
Benzyl alcohol - RA	30.0	27.6		ug/L		92	19 - 125

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RA (Continued)

Lab Sample ID: LCS 400-416612/2-A
Matrix: Water
Analysis Batch: 417121

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416612

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bis(2-chloroethoxy)methane - RA	30.0	28.2		ug/L		94	45 - 120
Bis(2-chloroethyl)ether - RA	30.0	24.2		ug/L		81	48 - 120
bis (2-chloroisopropyl) ether - RA	30.0	22.5		ug/L		75	30 - 125
Bis(2-ethylhexyl) phthalate - RA	30.0	26.9		ug/L		90	48 - 150
4-Bromophenyl phenyl ether - RA	30.0	29.4		ug/L		98	55 - 122
Butyl benzyl phthalate - RA	30.0	27.2		ug/L		91	46 - 145
4-Chloroaniline - RA	30.0	25.5		ug/L		85	30 - 120
4-Chloro-3-methylphenol - RA	30.0	32.0		ug/L		107	39 - 140
2-Chloronaphthalene - RA	30.0	23.7		ug/L		79	52 - 120
2-Chlorophenol - RA	30.0	20.9		ug/L		70	34 - 120
4-Chlorophenyl phenyl ether - RA	30.0	28.0		ug/L		93	58 - 124
Dibenz[a,h]acridine - RA	30.0	26.0		ug/L		87	46 - 149
Dibenzofuran - RA	30.0	27.4		ug/L		91	58 - 123
2,4-Dichlorophenol - RA	30.0	27.7		ug/L		92	39 - 128
Diethyl phthalate - RA	30.0	29.6		ug/L		99	44 - 146
2,4-Dimethylphenol - RA	30.0	28.9		ug/L		96	44 - 120
Dimethyl phthalate - RA	30.0	29.0		ug/L		97	50 - 131
Di-n-butyl phthalate - RA	30.0	30.3		ug/L		101	55 - 131
4,6-Dinitro-ortho-cresol - RA	60.0	68.4		ug/L		114	10 - 150
2,4-Dinitrophenol - RA	60.0	65.9		ug/L		110	10 - 150
2,4-Dinitrotoluene - RA	30.0	33.5		ug/L		112	58 - 140
2,6-Dinitrotoluene - RA	30.0	29.9		ug/L		100	57 - 130
Di-n-octyl phthalate - RA	30.0	28.2		ug/L		94	50 - 150
1,4-Dioxane - RA	30.0	14.2		ug/L		47	25 - 120
1,2-Diphenylhydrazine (as Azobenzene) - RA	30.0	26.7		ug/L		89	47 - 123
Hexachlorobenzene - RA	30.0	31.5		ug/L		105	52 - 131
Hexachlorocyclopentadiene - RA	30.0	11.9	J	ug/L		40	10 - 129
Hexachloroethane - RA	30.0	17.7		ug/L		59	41 - 120
Indene - RA	30.0	26.1		ug/L		87	47 - 120
Isophorone - RA	30.0	27.5		ug/L		92	49 - 120
2-Methylphenol - RA	30.0	26.8		ug/L		89	39 - 123
3 & 4 Methylphenol - RA	30.0	25.4		ug/L		85	38 - 121
2-Nitroaniline - RA	30.0	28.9		ug/L		96	47 - 150
3-Nitroaniline - RA	30.0	29.2		ug/L		97	34 - 132
4-Nitroaniline - RA	30.0	31.5		ug/L		105	41 - 135
Nitrobenzene - RA	30.0	26.8		ug/L		89	47 - 120
2-Nitrophenol - RA	30.0	27.3		ug/L		91	28 - 136
4-Nitrophenol - RA	60.0	59.4		ug/L		99	10 - 150
N-Nitrosodimethylamine - RA	30.0	26.9		ug/L		90	22 - 148
N-Nitrosodi-n-propylamine - RA	30.0	27.1		ug/L		90	44 - 120
N-Nitrosodiphenylamine - RA	29.8	28.5		ug/L		96	56 - 120
Pentachlorophenol - RA	60.0	68.3		ug/L		114	15 - 141
Phenol - RA	30.0	21.7		ug/L		72	33 - 120
Pyridine - RA	60.0	37.2		ug/L		62	26 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RA (Continued)

Lab Sample ID: LCS 400-416612/2-A
Matrix: Water
Analysis Batch: 417121

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416612

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Quinoline - RA	30.0	34.3		ug/L		114	51 - 129
2,4,5-Trichlorophenol - RA	30.0	29.9		ug/L		100	38 - 147
2,4,6-Trichlorophenol - RA	30.0	27.9		ug/L		93	36 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl - RA	*85*		*34 - 120*
2-Fluorophenol - RA	*33*		*10 - 120*
Nitrobenzene-d5 - RA	*88*		*27 - 120*
Phenol-d5 - RA	*71*		*10 - 120*
Terphenyl-d14 - RA	*94*		*53 - 125*
2,4,6-Tribromophenol - RA	*110*		*15 - 135*

Lab Sample ID: LCSD 400-416612/3-A
Matrix: Water
Analysis Batch: 417121

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416612

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aniline - RA	30.0	34.5		ug/L		115	29 - 120	8	30
Benzoic acid - RA	118	93.8		ug/L		80	10 - 150	4	30
Benzyl alcohol - RA	30.0	30.5		ug/L		102	19 - 125	10	30
Bis(2-chloroethoxy)methane - RA	30.0	29.4		ug/L		98	45 - 120	4	30
Bis(2-chloroethyl)ether - RA	30.0	25.4		ug/L		85	48 - 120	5	30
bis (2-chloroisopropyl) ether - RA	30.0	24.4		ug/L		81	30 - 125	8	30
Bis(2-ethylhexyl) phthalate - RA	30.0	26.6		ug/L		89	48 - 150	1	30
4-Bromophenyl phenyl ether - RA	30.0	30.0		ug/L		100	55 - 122	2	30
Butyl benzyl phthalate - RA	30.0	27.4		ug/L		91	46 - 145	1	30
4-Chloroaniline - RA	30.0	26.9		ug/L		90	30 - 120	5	30
4-Chloro-3-methylphenol - RA	30.0	33.7		ug/L		112	39 - 140	5	30
2-Chloronaphthalene - RA	30.0	27.0		ug/L		90	52 - 120	13	30
2-Chlorophenol - RA	30.0	23.5		ug/L		78	34 - 120	12	30
4-Chlorophenyl phenyl ether - RA	30.0	29.2		ug/L		97	58 - 124	4	30
Dibenz[a,h]acridine - RA	30.0	23.6		ug/L		79	46 - 149	10	30
Dibenzofuran - RA	30.0	28.8		ug/L		96	58 - 123	5	30
2,4-Dichlorophenol - RA	30.0	29.4		ug/L		98	39 - 128	6	30
Diethyl phthalate - RA	30.0	31.5		ug/L		105	44 - 146	6	30
2,4-Dimethylphenol - RA	30.0	31.2		ug/L		104	44 - 120	8	30
Dimethyl phthalate - RA	30.0	31.0		ug/L		103	50 - 131	7	30
Di-n-butyl phthalate - RA	30.0	30.1		ug/L		100	55 - 131	1	30
4,6-Dinitro-ortho-cresol - RA	60.0	73.1		ug/L		122	10 - 150	7	30
2,4-Dinitrophenol - RA	60.0	67.3		ug/L		112	10 - 150	2	30
2,4-Dinitrotoluene - RA	30.0	35.8		ug/L		119	58 - 140	6	30
2,6-Dinitrotoluene - RA	30.0	32.8		ug/L		109	57 - 130	9	30
Di-n-octyl phthalate - RA	30.0	26.7		ug/L		89	50 - 150	5	30
1,4-Dioxane - RA	30.0	17.2		ug/L		57	25 - 120	19	30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RA (Continued)

Lab Sample ID: LCSD 400-416612/3-A
Matrix: Water
Analysis Batch: 417121

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416612

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Diphenylhydrazine (as Azobenzene) - RA	30.0	27.9		ug/L		93	47 - 123	4	30
Hexachlorobenzene - RA	30.0	32.6		ug/L		109	52 - 131	3	30
Hexachlorocyclopentadiene - RA	30.0	10.7	J	ug/L		36	10 - 129	10	30
Hexachloroethane - RA	30.0	18.6		ug/L		62	41 - 120	5	30
Indene - RA	30.0	28.2		ug/L		94	47 - 120	7	30
Isophorone - RA	30.0	29.2		ug/L		97	49 - 120	6	30
2-Methylphenol - RA	30.0	29.2		ug/L		97	39 - 123	9	30
3 & 4 Methylphenol - RA	30.0	28.2		ug/L		94	38 - 121	10	30
2-Nitroaniline - RA	30.0	29.4		ug/L		98	47 - 150	2	30
3-Nitroaniline - RA	30.0	29.8		ug/L		99	34 - 132	2	30
4-Nitroaniline - RA	30.0	32.7		ug/L		109	41 - 135	4	30
Nitrobenzene - RA	30.0	28.2		ug/L		94	47 - 120	5	30
2-Nitrophenol - RA	30.0	29.4		ug/L		98	28 - 136	8	30
4-Nitrophenol - RA	60.0	61.8		ug/L		103	10 - 150	4	30
N-Nitrosodimethylamine - RA	30.0	28.7		ug/L		96	22 - 148	7	30
N-Nitrosodi-n-propylamine - RA	30.0	29.6		ug/L		99	44 - 120	9	30
N-Nitrosodiphenylamine - RA	29.8	30.6		ug/L		103	56 - 120	7	30
Pentachlorophenol - RA	60.0	69.6		ug/L		116	15 - 141	2	30
Phenol - RA	30.0	24.3		ug/L		81	33 - 120	12	30
Pyridine - RA	60.0	41.4		ug/L		69	26 - 120	11	30
Quinoline - RA	30.0	35.5		ug/L		118	51 - 129	4	30
2,4,5-Trichlorophenol - RA	30.0	32.2		ug/L		107	38 - 147	7	30
2,4,6-Trichlorophenol - RA	30.0	30.7		ug/L		102	36 - 139	9	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl - RA	*88*		*34 - 120*
2-Fluorophenol - RA	*39*		*10 - 120*
Nitrobenzene-d5 - RA	*89*		*27 - 120*
Phenol-d5 - RA	*75*		*10 - 120*
Terphenyl-d14 - RA	*94*		*53 - 125*
2,4,6-Tribromophenol - RA	*112*		*15 - 135*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 400-416612/1-A
Matrix: Water
Analysis Batch: 416937

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416612

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/23/18 14:09	10/25/18 17:51	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/23/18 14:09	10/25/18 17:51	1
Anthracene	ND		0.20	0.020	ug/L		10/23/18 14:09	10/25/18 17:51	1
Benzo[a]anthracene	ND		0.20	0.040	ug/L		10/23/18 14:09	10/25/18 17:51	1
Benzo[a]pyrene	ND		0.20	0.040	ug/L		10/23/18 14:09	10/25/18 17:51	1
Benzo[b]fluoranthene	ND		0.20	0.040	ug/L		10/23/18 14:09	10/25/18 17:51	1
Benzo[g,h,i]perylene	ND		0.20	0.040	ug/L		10/23/18 14:09	10/25/18 17:51	1
Benzo[k]fluoranthene	ND		0.20	0.040	ug/L		10/23/18 14:09	10/25/18 17:51	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: MB 400-416612/1-A
Matrix: Water
Analysis Batch: 416937

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416612

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	ND		0.20	0.040	ug/L		10/23/18 14:09	10/25/18 17:51	1
Dibenz(a,h)anthracene	ND		0.20	0.040	ug/L		10/23/18 14:09	10/25/18 17:51	1
Fluoranthene	ND		0.20	0.020	ug/L		10/23/18 14:09	10/25/18 17:51	1
Fluorene	ND		0.20	0.021	ug/L		10/23/18 14:09	10/25/18 17:51	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.040	ug/L		10/23/18 14:09	10/25/18 17:51	1
Phenanthrene	ND		0.20	0.020	ug/L		10/23/18 14:09	10/25/18 17:51	1
Pyrene	ND		0.20	0.020	ug/L		10/23/18 14:09	10/25/18 17:51	1
1-Methylnaphthalene	ND		0.20	0.020	ug/L		10/23/18 14:09	10/25/18 17:51	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		10/23/18 14:09	10/25/18 17:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*96*		*33 - 138*	*10/23/18 14:09*	*10/25/18 17:51*	*1*
2-Fluorobiphenyl	*79*		*15 - 122*	*10/23/18 14:09*	*10/25/18 17:51*	*1*
Nitrobenzene-d5	*73*		*19 - 130*	*10/23/18 14:09*	*10/25/18 17:51*	*1*

Lab Sample ID: LCS 400-416612/2-A
Matrix: Water
Analysis Batch: 416937

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416612

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	30.0	27.4		ug/L		91	41 - 120
Acenaphthylene	30.0	26.9		ug/L		90	44 - 120
Anthracene	30.0	25.7		ug/L		86	49 - 120
Benzo[a]anthracene	30.0	24.1		ug/L		80	61 - 135
Benzo[a]pyrene	30.0	26.4		ug/L		88	52 - 120
Benzo[b]fluoranthene	30.0	28.2		ug/L		94	53 - 134
Benzo[g,h,i]perylene	30.0	23.0		ug/L		77	47 - 133
Benzo[k]fluoranthene	30.0	26.8		ug/L		89	57 - 134
Chrysene	30.0	25.3		ug/L		84	55 - 122
Dibenz(a,h)anthracene	30.0	22.5		ug/L		75	48 - 146
Fluoranthene	30.0	25.8		ug/L		86	54 - 128
Fluorene	30.0	29.1		ug/L		97	45 - 125
Indeno[1,2,3-cd]pyrene	30.0	21.5		ug/L		72	43 - 142
Phenanthrene	30.0	26.1		ug/L		87	48 - 120
Pyrene	30.0	25.3		ug/L		84	48 - 132
1-Methylnaphthalene	30.0	21.2		ug/L		71	41 - 120
2-Methylnaphthalene	30.0	20.9		ug/L		70	32 - 124

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14	*79*		*33 - 138*
2-Fluorobiphenyl	*81*		*15 - 122*
Nitrobenzene-d5	*80*		*19 - 130*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCSD 400-416612/3-A
Matrix: Water
Analysis Batch: 416937

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416612

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	30.0	27.7		ug/L		92	41 - 120	1	56
Acenaphthylene	30.0	27.7		ug/L		92	44 - 120	3	56
Anthracene	30.0	25.0		ug/L		83	49 - 120	2	51
Benzo[a]anthracene	30.0	23.8		ug/L		79	61 - 135	2	49
Benzo[a]pyrene	30.0	25.5		ug/L		85	52 - 120	4	50
Benzo[b]fluoranthene	30.0	26.2		ug/L		87	53 - 134	7	54
Benzo[g,h,i]perylene	30.0	23.1		ug/L		77	47 - 133	0	50
Benzo[k]fluoranthene	30.0	27.2		ug/L		91	57 - 134	1	52
Chrysene	30.0	24.9		ug/L		83	55 - 122	1	50
Dibenz(a,h)anthracene	30.0	22.0		ug/L		73	48 - 146	2	50
Fluoranthene	30.0	24.5		ug/L		82	54 - 128	5	52
Fluorene	30.0	29.1		ug/L		97	45 - 125	0	56
Indeno[1,2,3-cd]pyrene	30.0	21.4		ug/L		71	43 - 142	1	51
Phenanthrene	30.0	25.5		ug/L		85	48 - 120	2	56
Pyrene	30.0	24.8		ug/L		83	48 - 132	2	52
1-Methylnaphthalene	30.0	22.1		ug/L		74	41 - 120	4	55
2-Methylnaphthalene	30.0	21.7		ug/L		72	32 - 124	4	57

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Terphenyl-d14	*78*		*33 - 138*
2-Fluorobiphenyl	*81*		*15 - 122*
Nitrobenzene-d5	*82*		*19 - 130*

Method: 8011 - EDB and DBCP in Water by Microextraction

Lab Sample ID: MB 400-417470/1-A
Matrix: Water
Analysis Batch: 417869

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 417470

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0055	ug/L		10/29/18 16:11	11/01/18 00:26	1
1,2-Dibromoethane	ND		0.020	0.0050	ug/L		10/29/18 16:11	11/01/18 00:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*108*	*p*	*51 - 149*	*10/29/18 16:11*	*11/01/18 00:26*	*1*

Lab Sample ID: LCS 400-417470/2-A
Matrix: Water
Analysis Batch: 417869

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 417470

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	0.100	0.115		ug/L		115	60 - 140
1,2-Dibromoethane	0.100	0.0689	p	ug/L		69	60 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*125*	*p*	*51 - 149*

Method: 8011 - EDB and DBCP in Water by Microextraction (Continued)

Lab Sample ID: LCSD 400-417470/3-A
Matrix: Water
Analysis Batch: 417869

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 417470

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane			0.100	0.102		ug/L		102	60 - 140	12	30
1,2-Dibromoethane			0.100	0.0863		ug/L		86	60 - 140	22	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*117*	*p*	*51 - 149*

LAB (LOCATION)

Shell Oil Products US Chain Of Custody Record

AECOM

☐ ACCUTEST (_____)
☐ CALSCIENCE (_____)
☑ TESTAMERICA (TestAmerica Pensacola; 3355 McLemore Dr. Pensacola, FL 32514 (850-474-1001))
☐ Other (Lab Vendor # 1364589 (TestAmerica))

Please Check Appropriate Box:

☐ SGW FDG	☐ PIPELINE	☐ RETAIL
☐ CHEMICALS	☐ CONSULTANT	☐ LUBES
☐ TRANSPORTATION	☑ OTHER _ENV. SERVICES	

Print Bill To Contact Name:	PlaNet Site or Project ID	☐ CHECK IF NO INCIDENT # APPLIES DATE: 10/16/18
Bob Billman	25278	
PO #	**GSAP Project ID**	PAGE: 1 of 1
60527968 - 01.03.004 / 60527968 - 01.03.0044	USPC/00114/R/02	

SAMPLING COMPANY: AECOM — LOG CODE:
ADDRESS: 100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA
PROJECT CONTACT (Hardcopy or PDF Report to): Elizabeth Kunkel, Bob Billman, Melissa Remiger
TELEPHONE: 314-429-0100 — FAX: 314-429-0462 — Bill To Contact E-MAIL: bob.billman@aecom.com; elizabeth.kunkel@aecom.com; melissa.remiger@aecom.com

SITE ADDRESS: Street and City: 900 South Central Ave; ROXANA — State: IL
AECOM Project / Task Number: Roxana Quarterly GW — 60527968 - 01.03.004 / 60527968 - 01.03.0044
CONFIDENTIAL DELIVERABLE TO (Name, Company, Office Location): — PHONE NO.: — E-MAIL: — AECOM Other ID:
SAMPLER NAME(S) (Print): J. PETERS, T. JONES

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT

DELIVERABLES: ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
* Please include "J" values on Reports
* Please provide sample receipt upon login

SPLIT REPORT

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	UNIT COST 60527968 - 01.03.004: VOC 8011	PAH 8270LL	NON-UNIT COST 60527968 - 01.03.0044: VOC 8260	SVOC 8270	FIELD NOTES: Container PID Readings or Laboratory Notes
	TB-ROX-101618-8011-EE	10/16	0000	WATER	2					2	X				
	TB-ROX-101618-8260-EE	10/16	0000		2					2			X		SPLIT REPORT
	T12-ROX-101618	10/16	0940		4			2		6	X	X	X	X	
	P59-ROX-101618	10/16	1110		4			2		6	X	X	X	X	
	P93A-ROX-101618	10/16	1155		4			2		6	X	X	X	X	
	P93A-ROX-101618	10/16	1245	↓	4			2		6	X	X	X	X	

400-160704 COC

TEMPERATURE ON RECEIPT C°

	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	FEDEX	10/16/18	1500
Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Received by: (Signature)	10-17-18	8:57

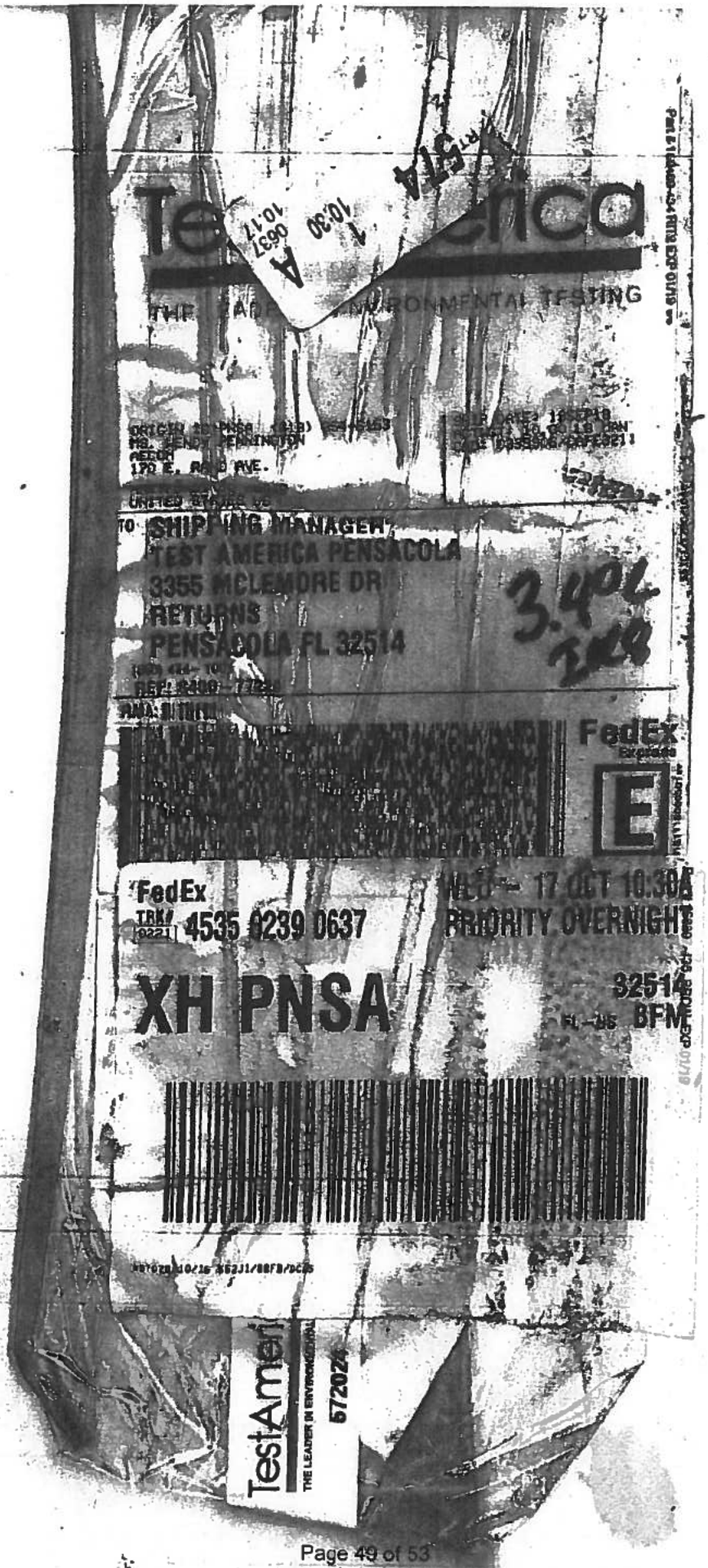
Version: 14Dec15

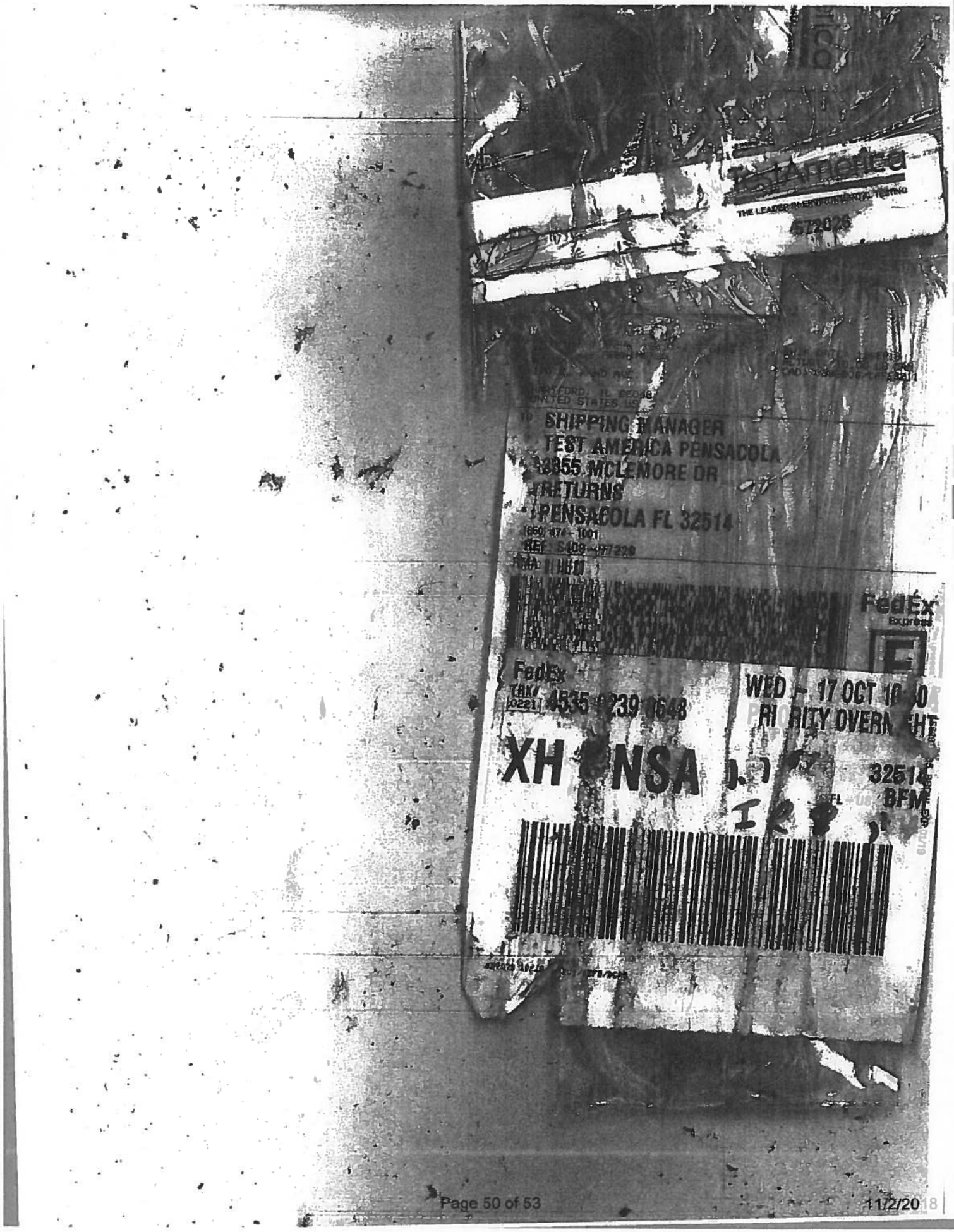
* Custody seals and tracking numbers same as Roxana

3.4°C, 3.8°C, 1.1°C IR8

Page 48 of 53

11/2/2018


Test America
THE LEADER IN ENVIRONMENTAL TESTING
SHIPPING MANAGER
TEST AMERICA PENSACOLA
3355 MCLEMORE DR
RETURNS
PENSACOLA FL 32514
3.4oz
FedEx
E
FedEx
TRK# 4535 0239 0637
WED - 17 OCT 10:30A
PRIORITY OVERNIGHT
XH PNSA
32514
FL-US
BFM
TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
672026


SHIPPING MANAGER
TEST AMERICA PENSACOLA
3355 MCLEMORE DR
RETURNS
PENSACOLA FL 32514
FedEx
WED - 17 OCT
PRIORITY OVERN
XH PNSA
32514
FL
BFM


TestAmerica
3355 MCLEMORE DR
RETURNS
PENSACOLA FL 32514
FedEx
WED - 17 OCT 10:30A
PRIORITY OVERNIGHT
XH PNSA
32514
FL-US BFM
574

Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 400-160704-1
SDG Number: 60527968

Login Number: 160704
List Number: 1
Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.4°C, 3.8°C, 1.1°C IR-8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160704-1
SDG: 60527968

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-18 *
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-16	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

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Roxana Groundwater Quarterly – 4th Quarter 2018 Data Review

Laboratory SDG: 400-160707-1

Data Reviewer: Melissa Remiger

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 11/8/2018

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2017

Sample Identification	Sample Identification
TB-ROX-101618-8011	TB-ROX-101618-8260
P74-ROX-101618	P57-ROX-101618
P57-ROX-101618-Dup	P58-ROX-101618

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated the SVOC LCS/LCSD recoveries for benzenethiol and 3,3'-dichlorobenzidine, and LCS/LCSD RPD for benzenethiol, were outside evaluation criteria. Several SVOC/PAH and VOC by 8011 surrogate recoveries were outside criteria in several samples. In field duplicate pair P57-ROX-101618/P57-ROX-101618-Dup results for 1-methylnaphthalene were qualified due to field duplicate RPD above evaluation criteria; therefore results were qualified as estimated (**J**/**J**). VOCs in several samples were diluted to bring target analytes into calibration range of the instrument. The continuing calibration verifications for several analytes were outside evaluation criteria, biased low. These issues are addressed further in the appropriate sections of this data review.

Three of 69 (2-chloroethyl vinyl ether, acrolein, and acrylonitrile) 8260 VOCs are acid-reactive compounds; results may be biased low due to the presence of HCl in the preservative.

The cooler receipt form did not indicate any problems.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS/LCSD ID	Parameter	Analyte	LCS/ LCSD Recovery	RPD	LCS/LCSD/ RPD Criteria
LCS/LCSD 400-416612/4-A/5-A	SVOCs	Benzenethiol	**7/2**	**122**	10-120/30
LCS/LCSD 400-416612/2-A/3-A	SVOCs	3,3'-Dichlorobenzidine	**170/177**	4	39-135/30

Analytical data that required qualification based on LCS/LCSD data are included in the table below. Professional judgment was used to qualify, however not reject, data associated with benzenethiol in LCS/LCSD 400-416612/4-A/5-A; benzenethiol has been identified as a poor performing analyte under Method 8270. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Sample ID	Parameter	Analyte	Qualification
P74-ROX-101618	SVOCs	Benzenethiol	**UJ**
P57-ROX-101618	SVOCs	Benzenethiol	**UJ**
P57-ROX-101618-Dup	SVOCs	Benzenethiol	**UJ**
P58-ROX-101618	SVOCs	Benzenethiol	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
P74-ROX-101618	SVOCs	Terphenyl-d_{14}	**46**	53-125
P57-ROX-101618	SVOCs	Terphenyl-d_{14}	**37**	53-125
P57-ROX-101618	VOCs by 8011	4-Bromofluorobenzene	**150**	51-149
P57-ROX-101618-Dup	SVOCs	Terphenyl-d_{14}	**44**	53-125
P57-ROX-101618-Dup	VOCs by 8011	4-Bromofluorobenzene	**172**	51-149
P58-ROX-101618	PAHs	Terphenyl-d_{14}	**30**	33-138
P58-ROX-101618	SVOCs	Terphenyl-d_{14}	**23**	53-125

Qualifications due to surrogate recoveries were not required if only one of three SVOC base/neutral fraction surrogate recoveries were outside evaluation criteria in the associated SVOC/PAH samples. Analytical data reported as non-detect and associated with surrogate recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. No qualification of data was required.

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
P57-ROX-101618	P57-ROX-101618-Dup

Were field duplicates within evaluation criteria?

No

Field ID	Field Duplicate ID	Parameter	Analyte	RPD	Qualification
P57-ROX-101618	P57-ROX-101618-Dup	PAHs	1-Methylnaphthalene	**25**	**J/J**

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; analytes were detected in samples that were diluted.

12.0 Additional Qualifications

Were additional qualifications applied?

Yes, the continuing calibration verifications for several analytes were below acceptance criteria and are qualified as summarized in the following table.

Sample ID	Parameter	Analyte	Qualification
P74-ROX-101618	SVOCs	4,6-Dinitro-ortho-cresol	**UJ**
P74-ROX-101618	SVOCs	Hexachlorocyclopentadiene	**UJ**
P74-ROX-101618	SVOCs	4-Ntroaniline	**UJ**
P74-ROX-101618	SVOCs	4-Nitrophenol	**UJ**
P57-ROX-101618	SVOCs	4,6-Dinitro-ortho-cresol	**UJ**
P57-ROX-101618	SVOCs	Hexachlorocyclopentadiene	**UJ**
P57-ROX-101618	SVOCs	4-Ntroaniline	**UJ**
P57-ROX-101618	SVOCs	4-Nitrophenol	**UJ**
P57-ROX-101618-Dup	SVOCs	4,6-Dinitro-ortho-cresol	**UJ**
P57-ROX-101618-Dup	SVOCs	Hexachlorocyclopentadiene	**UJ**
P57-ROX-101618-Dup	SVOCs	4-Ntroaniline	**UJ**
P57-ROX-101618-Dup	SVOCs	4-Nitrophenol	**UJ**
P58-ROX-101618	SVOCs	4,6-Dinitro-ortho-cresol	**UJ**

Sample ID	Parameter	Analyte	Qualification
P58-ROX-101618	SVOCs	Hexachlorocyclopentadiene	**UJ**
P58-ROX-101618	SVOCs	4-Ntroaniline	**UJ**
P58-ROX-101618	SVOCs	4-Nitrophenol	**UJ**

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-160707-1
TestAmerica Sample Delivery Group: 60527968
Client Project/Site: ROXANA QUARTERLY

For:
AECOM Technical Services Inc.
100 N. Broadway
20th Floor
St. Louis, Missouri 63102

Attn: Elizabeth Kunkel

Authorized for release by:
11/2/2018 4:27:05 PM

Leah Klingensmith, Senior Project Manager
(615)301-5038
leah.klingensmith@testamericainc.com

LINKS

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Have a Question? Ask The Expert

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Reviewed 11/8/18 LR

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Certification Summary 50

Job ID: 400-160707-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-160707-1

Comments
No additional comments.

Receipt
The samples were received on 10/17/2018 8:57 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 1.1° C, 3.4° C and 3.8° C.

GC/MS VOA
Method(s) 8260B: The following samples were diluted to bring the concentration of target analytes within the calibration range: P57-ROX-101618 (400-160707-4), P57-ROX-101618-DUP (400-160707-5) and P58-ROX-101618 (400-160707-6). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: The preservative used in the sample containers provided is not compatible with some of the Method 8260 analytes requested. The following samples were received preserved with hydrochloric acid: TB-ROX-101618-8260 (400-160707-2), P74-ROX-101618 (400-160707-3), P57-ROX-101618 (400-160707-4), P57-ROX-101618-DUP (400-160707-5) and P58-ROX-101618 (400-160707-6). The requested target analyte list include 2-chloroethyl vinyl ether, Acrolein and Acrylonitrile, which are acid-labile compounds that degrade in an acidic medium.

Method(s) 8260B: The initial calibration verification (ICV) analyzed in batch 400-390317 was outside method criteria for the following analytes: Acrolein and Dichlorodifluoromethane. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270D LL: Three surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: P58-ROX-101618 (400-160707-6). These results have been reported and qualified.

Method(s) 8270D: Three surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following samples contained an allowable number of surrogate compounds outside limits: P74-ROX-101618 (400-160707-3), P57-ROX-101618 (400-160707-4), P57-ROX-101618-DUP (400-160707-5) and P58-ROX-101618 (400-160707-6). These results have been reported and qualified.

Method(s) 8270D: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 400-416612 and analytical batch 400-416965 recovered outside control limits for the following analyte: Benzenethiol. Benzenethiol has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. Batch precision also exceeded control limits for these analyte(s). These results have been reported and qualified.

Method(s) 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 400-416612 and analytical batch 400-416965 recovered outside control limits for the following analytes: Benzenethiol.

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 400-416965 recovered above the upper control limit for Dibenz[a,h]acridine. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: P74-ROX-101618 (400-160707-3), P57-ROX-101618 (400-160707-4), P57-ROX-101618-DUP (400-160707-5) and P58-ROX-101618 (400-160707-6).

Method(s) 8270D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 400-416612 and analytical batch 400-417121 recovered outside control limits for the following analytes: 3,3'-Dichlorobenzidine. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 400-416965 recovered outside acceptance criteria,

Job ID: 400-160707-1 (Continued)

Laboratory: TestAmerica Pensacola (Continued)

low biased, for 4,6-Dinitro-ortho-cresol, Hexachlorocyclopentadiene, 4-Nitroaniline and 4-Nitrophenol. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method(s) 8011: The continuing calibration verification (CCV) associated with batch 400-417869 recovered above the upper control limit for 1,2-Dibromo-3-Chloropropane and 1,2-Dibromoethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: TB-ROX-101618-8011 (400-160707-1), P74-ROX-101618 (400-160707-3), P57-ROX-101618 (400-160707-4), P57-ROX-101618-DUP (400-160707-5) and P58-ROX-101618 (400-160707-6).

Method(s) 8011: Surrogate recovery for the following samples were outside the upper control limit: P57-ROX-101618 (400-160707-4) and P57-ROX-101618-DUP (400-160707-5). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160707-1
SDG: 60527968

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-160707-1	TB-ROX-101618-8011	Water	10/16/18 00:00	10/17/18 08:57
400-160707-2	TB-ROX-101618-8260	Water	10/16/18 00:00	10/17/18 08:57
400-160707-3	P74-ROX-101618	Water	10/16/18 09:45	10/17/18 08:57
400-160707-4	P57-ROX-101618	Water	10/16/18 10:50	10/17/18 08:57
400-160707-5	P57-ROX-101618-DUP	Water	10/16/18 10:50	10/17/18 08:57
400-160707-6	P58-ROX-101618	Water	10/16/18 12:30	10/17/18 08:57

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160707-1
SDG: 60527968

Client Sample ID: TB-ROX-101618-8011 — Lab Sample ID: 400-160707-1

No Detections.

Client Sample ID: TB-ROX-101618-8260 — Lab Sample ID: 400-160707-2

No Detections.

Client Sample ID: P74-ROX-101618 — Lab Sample ID: 400-160707-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	300		1.0	0.38	ug/L	1		8260B	Total/NA
Carbon disulfide	0.50	J	1.0	0.50	ug/L	1		8260B	Total/NA
Ethylbenzene	1.9		1.0	0.50	ug/L	1		8260B	Total/NA
Methyl tert-butyl ether	22		1.0	0.74	ug/L	1		8260B	Total/NA
m-Xylene & p-Xylene	2.5	J	5.0	1.6	ug/L	1		8260B	Total/NA
Naphthalene	1.4		1.0	1.0	ug/L	1		8260B	Total/NA
Toluene	2.3		1.0	0.70	ug/L	1		8260B	Total/NA
1,2,4-Trimethylbenzene	5.3		1.0	0.82	ug/L	1		8260B	Total/NA
1,3,5-Trimethylbenzene	1.4		1.0	0.56	ug/L	1		8260B	Total/NA
Xylenes, Total	3.0	J	10	1.6	ug/L	1		8260B	Total/NA
Fluorene	0.071	J	0.19	0.020	ug/L	1		8270D LL	Total/NA
Phenanthrene	0.040	J	0.19	0.019	ug/L	1		8270D LL	Total/NA
Pyrene	0.020	J	0.19	0.019	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene	1.3		0.19	0.019	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	1.4		0.19	0.019	ug/L	1		8270D LL	Total/NA
Phenol	3.5	J	9.7	2.5	ug/L	1		8270D	Total/NA

Client Sample ID: P57-ROX-101618 — Lab Sample ID: 400-160707-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	34000		200	76	ug/L	200		8260B	Total/NA
Carbon disulfide	100	J	200	100	ug/L	200		8260B	Total/NA
Ethylbenzene	150	J	200	100	ug/L	200		8260B	Total/NA
Acenaphthene	0.23		0.19	0.019	ug/L	1		8270D LL	Total/NA
Fluorene	0.33		0.19	0.020	ug/L	1		8270D LL	Total/NA
Phenanthrene	0.36		0.19	0.019	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene	21	J	0.19	0.019	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	27		0.19	0.019	ug/L	1		8270D LL	Total/NA
Phenol	23		9.7	2.5	ug/L	1		8270D	Total/NA

Client Sample ID: P57-ROX-101618-DUP — Lab Sample ID: 400-160707-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	34000		200	76	ug/L	200		8260B	Total/NA
Ethylbenzene	140	J	200	100	ug/L	200		8260B	Total/NA
Acenaphthene	0.21		0.19	0.019	ug/L	1		8270D LL	Total/NA
Fluorene	0.43		0.19	0.020	ug/L	1		8270D LL	Total/NA
Phenanthrene	0.59		0.19	0.019	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene	27	J	0.19	0.019	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	34		0.19	0.019	ug/L	1		8270D LL	Total/NA
Phenol	35		9.7	2.5	ug/L	1		8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160707-1
SDG: 60527968

Client Sample ID: P58-ROX-101618

Lab Sample ID: 400-160707-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	190000		1000	380	ug/L	1000		8260B	Total/NA
Acenaphthene	0.60		0.19	0.019	ug/L	1		8270D LL	Total/NA
Benzo[a]pyrene	0.18	J	0.19	0.039	ug/L	1		8270D LL	Total/NA
Benzo[b]fluoranthene	0.10	J	0.19	0.039	ug/L	1		8270D LL	Total/NA
Benzo[k]fluoranthene	0.057	J	0.19	0.039	ug/L	1		8270D LL	Total/NA
Chrysene	0.32		0.19	0.039	ug/L	1		8270D LL	Total/NA
Fluorene	1.1		0.19	0.020	ug/L	1		8270D LL	Total/NA
Phenanthrene	1.1		0.19	0.019	ug/L	1		8270D LL	Total/NA
Pyrene	0.69		0.19	0.019	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene	29		0.19	0.019	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	21		0.19	0.019	ug/L	1		8270D LL	Total/NA
Dibenzofuran	1.4	J	9.7	0.50	ug/L	1		8270D	Total/NA
3 & 4 Methylphenol	1.0	J	19	1.0	ug/L	1		8270D	Total/NA
Phenol	93		9.7	2.5	ug/L	1		8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160707-1
SDG: 60527968

Client Sample ID: TB-ROX-101618-8011
Date Collected: 10/16/18 00:00
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160707-1
Matrix: Water

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.031	0.0056	ug/L		10/29/18 16:11	11/01/18 21:00	1
1,2-Dibromoethane	ND		0.020	0.0051	ug/L		10/29/18 16:11	11/01/18 21:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*117*	*p*	*51 - 149*	*10/29/18 16:11*	*11/01/18 21:00*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160707-1
SDG: 60527968

Client Sample ID: TB-ROX-101618-8260
Date Collected: 10/16/18 00:00
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160707-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/28/18 14:20	1
Acrolein	ND		20	10	ug/L			10/28/18 14:20	1
Acrylonitrile	ND		10	2.8	ug/L			10/28/18 14:20	1
Benzene	ND		1.0	0.38	ug/L			10/28/18 14:20	1
Bromobenzene	ND		1.0	0.54	ug/L			10/28/18 14:20	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/28/18 14:20	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/28/18 14:20	1
Bromoform	ND		5.0	0.71	ug/L			10/28/18 14:20	1
Bromomethane	ND		1.0	0.98	ug/L			10/28/18 14:20	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/28/18 14:20	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/28/18 14:20	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/28/18 14:20	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/28/18 14:20	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/28/18 14:20	1
Chloroethane	ND		1.0	0.76	ug/L			10/28/18 14:20	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/28/18 14:20	1
Chloroform	ND		1.0	0.60	ug/L			10/28/18 14:20	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/28/18 14:20	1
Chloromethane	ND		1.0	0.83	ug/L			10/28/18 14:20	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/28/18 14:20	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/28/18 14:20	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/28/18 14:20	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/28/18 14:20	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/28/18 14:20	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/28/18 14:20	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/28/18 14:20	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/28/18 14:20	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/28/18 14:20	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/28/18 14:20	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/28/18 14:20	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/28/18 14:20	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/28/18 14:20	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/28/18 14:20	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/28/18 14:20	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/28/18 14:20	1
2-Hexanone	ND		25	3.1	ug/L			10/28/18 14:20	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/28/18 14:20	1
Methylene bromide	ND		5.0	0.59	ug/L			10/28/18 14:20	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/28/18 14:20	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/28/18 14:20	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/28/18 14:20	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/28/18 14:20	1
Naphthalene	ND		1.0	1.0	ug/L			10/28/18 14:20	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/28/18 14:20	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/28/18 14:20	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/28/18 14:20	1
o-Xylene	ND		5.0	0.60	ug/L			10/28/18 14:20	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/28/18 14:20	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/28/18 14:20	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160707-1
SDG: 60527968

Client Sample ID: TB-ROX-101618-8260
Date Collected: 10/16/18 00:00
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160707-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/28/18 14:20	1
Styrene	ND		1.0	1.0	ug/L			10/28/18 14:20	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/28/18 14:20	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/28/18 14:20	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/28/18 14:20	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/28/18 14:20	1
Toluene	ND		1.0	0.70	ug/L			10/28/18 14:20	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/28/18 14:20	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/28/18 14:20	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/28/18 14:20	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/28/18 14:20	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/28/18 14:20	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/28/18 14:20	1
Trichloroethene	ND		1.0	0.50	ug/L			10/28/18 14:20	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/28/18 14:20	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/28/18 14:20	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/28/18 14:20	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/28/18 14:20	1
Vinyl acetate	ND		25	2.0	ug/L			10/28/18 14:20	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/28/18 14:20	1
Xylenes, Total	ND		10	1.6	ug/L			10/28/18 14:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*78 - 118*		*10/28/18 14:20*	*1*
Dibromofluoromethane	*95*		*81 - 121*		*10/28/18 14:20*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*10/28/18 14:20*	*1*

Client Sample ID: P74-ROX-101618

Date Collected: 10/16/18 09:45
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160707-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/28/18 20:30	1
Acrolein	ND		20	10	ug/L			10/28/18 20:30	1
Acrylonitrile	ND		10	2.8	ug/L			10/28/18 20:30	1
Benzene	300		1.0	0.38	ug/L			10/28/18 20:30	1
Bromobenzene	ND		1.0	0.54	ug/L			10/28/18 20:30	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/28/18 20:30	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/28/18 20:30	1
Bromoform	ND		5.0	0.71	ug/L			10/28/18 20:30	1
Bromomethane	ND		1.0	0.98	ug/L			10/28/18 20:30	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/28/18 20:30	1
Carbon disulfide	0.50	J	1.0	0.50	ug/L			10/28/18 20:30	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/28/18 20:30	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/28/18 20:30	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/28/18 20:30	1
Chloroethane	ND		1.0	0.76	ug/L			10/28/18 20:30	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/28/18 20:30	1
Chloroform	ND		1.0	0.60	ug/L			10/28/18 20:30	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/28/18 20:30	1
Chloromethane	ND		1.0	0.83	ug/L			10/28/18 20:30	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/28/18 20:30	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/28/18 20:30	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/28/18 20:30	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/28/18 20:30	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/28/18 20:30	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/28/18 20:30	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/28/18 20:30	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/28/18 20:30	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/28/18 20:30	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/28/18 20:30	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/28/18 20:30	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/28/18 20:30	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/28/18 20:30	1
Ethylbenzene	1.9		1.0	0.50	ug/L			10/28/18 20:30	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/28/18 20:30	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/28/18 20:30	1
2-Hexanone	ND		25	3.1	ug/L			10/28/18 20:30	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/28/18 20:30	1
Methylene bromide	ND		5.0	0.59	ug/L			10/28/18 20:30	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/28/18 20:30	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/28/18 20:30	1
Methyl tert-butyl ether	22		1.0	0.74	ug/L			10/28/18 20:30	1
m-Xylene & p-Xylene	2.5	J	5.0	1.6	ug/L			10/28/18 20:30	1
Naphthalene	1.4		1.0	1.0	ug/L			10/28/18 20:30	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/28/18 20:30	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/28/18 20:30	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/28/18 20:30	1
o-Xylene	ND		5.0	0.60	ug/L			10/28/18 20:30	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/28/18 20:30	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/28/18 20:30	1

Client Sample ID: P74-ROX-101618

Date Collected: 10/16/18 09:45
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160707-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/28/18 20:30	1
Styrene	ND		1.0	1.0	ug/L			10/28/18 20:30	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/28/18 20:30	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/28/18 20:30	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/28/18 20:30	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/28/18 20:30	1
Toluene	2.3		1.0	0.70	ug/L			10/28/18 20:30	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/28/18 20:30	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/28/18 20:30	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/28/18 20:30	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/28/18 20:30	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/28/18 20:30	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/28/18 20:30	1
Trichloroethene	ND		1.0	0.50	ug/L			10/28/18 20:30	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/28/18 20:30	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/28/18 20:30	1
1,2,4-Trimethylbenzene	5.3		1.0	0.82	ug/L			10/28/18 20:30	1
1,3,5-Trimethylbenzene	1.4		1.0	0.56	ug/L			10/28/18 20:30	1
Vinyl acetate	ND		25	2.0	ug/L			10/28/18 20:30	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/28/18 20:30	1
Xylenes, Total	3.0	J	10	1.6	ug/L			10/28/18 20:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*78 - 118*		*10/28/18 20:30*	*1*
Dibromofluoromethane	*96*		*81 - 121*		*10/28/18 20:30*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*10/28/18 20:30*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:26	1
Acenaphthylene	ND		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:26	1
Anthracene	ND		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:26	1
Benzo[a]anthracene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:26	1
Benzo[a]pyrene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:26	1
Benzo[b]fluoranthene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:26	1
Benzo[g,h,i]perylene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:26	1
Benzo[k]fluoranthene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:26	1
Chrysene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:26	1
Dibenz(a,h)anthracene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:26	1
Fluoranthene	ND		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:26	1
Fluorene	0.071	J	0.19	0.020	ug/L		10/23/18 14:09	10/25/18 19:26	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:26	1
Phenanthrene	0.040	J	0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:26	1
Pyrene	0.020	J	0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:26	1
1-Methylnaphthalene	1.3		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:26	1
2-Methylnaphthalene	1.4		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*70*		*33 - 138*	*10/23/18 14:09*	*10/25/18 19:26*	*1*
2-Fluorobiphenyl	*82*		*15 - 122*	*10/23/18 14:09*	*10/25/18 19:26*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160707-1
SDG: 60527968

Client Sample ID: P74-ROX-101618
Date Collected: 10/16/18 09:45
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160707-3
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	71		19 - 130	10/23/18 14:09	10/25/18 19:26	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.7	3.7	ug/L		10/23/18 14:09	10/25/18 19:21	1
Benzenethiol	ND	* UJ	9.7	1.7	ug/L		10/23/18 14:09	10/25/18 19:21	1
Benzoic acid	ND		29	7.1	ug/L		10/23/18 14:09	10/25/18 19:21	1
Benzyl alcohol	ND		9.7	1.9	ug/L		10/23/18 14:09	10/25/18 19:21	1
Bis(2-chloroethoxy)methane	ND		9.7	0.67	ug/L		10/23/18 14:09	10/25/18 19:21	1
Bis(2-chloroethyl)ether	ND		9.7	0.72	ug/L		10/23/18 14:09	10/25/18 19:21	1
bis (2-chloroisopropyl) ether	ND		9.7	0.79	ug/L		10/23/18 14:09	10/25/18 19:21	1
Bis(2-ethylhexyl) phthalate	ND		9.7	4.9	ug/L		10/23/18 14:09	10/25/18 19:21	1
4-Bromophenyl phenyl ether	ND		9.7	0.31	ug/L		10/23/18 14:09	10/25/18 19:21	1
Butyl benzyl phthalate	ND		9.7	0.67	ug/L		10/23/18 14:09	10/25/18 19:21	1
4-Chloroaniline	ND		9.7	3.3	ug/L		10/23/18 14:09	10/25/18 19:21	1
4-Chloro-3-methylphenol	ND		9.7	3.7	ug/L		10/23/18 14:09	10/25/18 19:21	1
2-Chloronaphthalene	ND		9.7	0.50	ug/L		10/23/18 14:09	10/25/18 19:21	1
2-Chlorophenol	ND		9.7	2.1	ug/L		10/23/18 14:09	10/25/18 19:21	1
4-Chlorophenyl phenyl ether	ND		9.7	1.9	ug/L		10/23/18 14:09	10/25/18 19:21	1
Dibenz[a,h]acridine	ND		9.7	2.9	ug/L		10/23/18 14:09	10/25/18 19:21	1
Dibenzofuran	ND		9.7	0.50	ug/L		10/23/18 14:09	10/25/18 19:21	1
3,3'-Dichlorobenzidine	ND	*	9.7	2.5	ug/L		10/23/18 14:09	10/25/18 19:21	1
2,4-Dichlorophenol	ND		9.7	2.9	ug/L		10/23/18 14:09	10/25/18 19:21	1
Diethyl phthalate	ND		9.7	0.68	ug/L		10/23/18 14:09	10/25/18 19:21	1
2,4-Dimethylphenol	ND		9.7	3.4	ug/L		10/23/18 14:09	10/25/18 19:21	1
Dimethyl phthalate	ND		9.7	0.58	ug/L		10/23/18 14:09	10/25/18 19:21	1
Di-n-butyl phthalate	ND		9.7	2.6	ug/L		10/23/18 14:09	10/25/18 19:21	1
4,6-Dinitro-ortho-cresol	ND	UJ	9.7	1.9	ug/L		10/23/18 14:09	10/25/18 19:21	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		10/23/18 14:09	10/25/18 19:21	1
2,4-Dinitrotoluene	ND		9.7	1.8	ug/L		10/23/18 14:09	10/25/18 19:21	1
2,6-Dinitrotoluene	ND		9.7	1.8	ug/L		10/23/18 14:09	10/25/18 19:21	1
Di-n-octyl phthalate	ND		9.7	0.43	ug/L		10/23/18 14:09	10/25/18 19:21	1
1,4-Dioxane	ND		9.7	0.97	ug/L		10/23/18 14:09	10/25/18 19:21	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.7	0.97	ug/L		10/23/18 14:09	10/25/18 19:21	1
Hexachlorobenzene	ND		9.7	0.24	ug/L		10/23/18 14:09	10/25/18 19:21	1
Hexachlorocyclopentadiene	ND	UJ	19	2.5	ug/L		10/23/18 14:09	10/25/18 19:21	1
Hexachloroethane	ND		9.7	4.1	ug/L		10/23/18 14:09	10/25/18 19:21	1
Indene	ND		9.7	0.97	ug/L		10/23/18 14:09	10/25/18 19:21	1
Isophorone	ND		9.7	0.55	ug/L		10/23/18 14:09	10/25/18 19:21	1
2-Methylphenol	ND		9.7	1.7	ug/L		10/23/18 14:09	10/25/18 19:21	1
3 & 4 Methylphenol	ND		19	1.0	ug/L		10/23/18 14:09	10/25/18 19:21	1
2-Nitroaniline	ND		9.7	2.1	ug/L		10/23/18 14:09	10/25/18 19:21	1
3-Nitroaniline	ND		9.7	1.7	ug/L		10/23/18 14:09	10/25/18 19:21	1
4-Nitroaniline	ND	UJ	9.7	2.4	ug/L		10/23/18 14:09	10/25/18 19:21	1
Nitrobenzene	ND		9.7	0.53	ug/L		10/23/18 14:09	10/25/18 19:21	1
2-Nitrophenol	ND		9.7	0.63	ug/L		10/23/18 14:09	10/25/18 19:21	1
4-Nitrophenol	ND	UJ	9.7	2.0	ug/L		10/23/18 14:09	10/25/18 19:21	1
N-Nitrosodimethylamine	ND		9.7	3.4	ug/L		10/23/18 14:09	10/25/18 19:21	1

Client Sample ID: P74-ROX-101618

Date Collected: 10/16/18 09:45
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160707-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.7	3.2	ug/L		10/23/18 14:09	10/25/18 19:21	1
N-Nitrosodiphenylamine	ND		9.7	0.46	ug/L		10/23/18 14:09	10/25/18 19:21	1
Pentachlorophenol	ND		19	1.8	ug/L		10/23/18 14:09	10/25/18 19:21	1
Phenol	3.5	J	9.7	2.5	ug/L		10/23/18 14:09	10/25/18 19:21	1
Pyridine	ND		9.7	3.1	ug/L		10/23/18 14:09	10/25/18 19:21	1
Quinoline	ND		9.7	5.8	ug/L		10/23/18 14:09	10/25/18 19:21	1
2,4,5-Trichlorophenol	ND		9.7	3.6	ug/L		10/23/18 14:09	10/25/18 19:21	1
2,4,6-Trichlorophenol	ND		9.7	3.4	ug/L		10/23/18 14:09	10/25/18 19:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*49*		*34 - 120*	*10/23/18 14:09*	*10/25/18 19:21*	*1*
2-Fluorophenol	*43*		*10 - 120*	*10/23/18 14:09*	*10/25/18 19:21*	*1*
Nitrobenzene-d5	*57*		*27 - 120*	*10/23/18 14:09*	*10/25/18 19:21*	*1*
Phenol-d5	*51*		*10 - 120*	*10/23/18 14:09*	*10/25/18 19:21*	*1*
Terphenyl-d14	*46*	*X*	*53 - 125*	*10/23/18 14:09*	*10/25/18 19:21*	*1*
2,4,6-Tribromophenol	*56*		*15 - 135*	*10/23/18 14:09*	*10/25/18 19:21*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.029	0.0053	ug/L		10/29/18 16:11	11/01/18 21:32	1
1,2-Dibromoethane	ND		0.019	0.0048	ug/L		10/29/18 16:11	11/01/18 21:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*131*	*p*	*51 - 149*	*10/29/18 16:11*	*11/01/18 21:32*	*1*

Client Sample ID: P57-ROX-101618
Date Collected: 10/16/18 10:50
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160707-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5000	2000	ug/L			10/28/18 21:23	200
Acrolein	ND		4000	2000	ug/L			10/28/18 21:23	200
Acrylonitrile	ND		2000	560	ug/L			10/28/18 21:23	200
Benzene	34000		200	76	ug/L			10/28/18 21:23	200
Bromobenzene	ND		200	110	ug/L			10/28/18 21:23	200
Bromochloromethane	ND		200	100	ug/L			10/28/18 21:23	200
Bromodichloromethane	ND		200	100	ug/L			10/28/18 21:23	200
Bromoform	ND		1000	140	ug/L			10/28/18 21:23	200
Bromomethane	ND		200	200	ug/L			10/28/18 21:23	200
2-Butanone (MEK)	ND		5000	520	ug/L			10/28/18 21:23	200
Carbon disulfide	100	J	200	100	ug/L			10/28/18 21:23	200
Carbon tetrachloride	ND		200	100	ug/L			10/28/18 21:23	200
Chlorobenzene	ND		200	100	ug/L			10/28/18 21:23	200
Dibromochloromethane	ND		200	100	ug/L			10/28/18 21:23	200
Chloroethane	ND		200	150	ug/L			10/28/18 21:23	200
2-Chloroethyl vinyl ether	ND		1000	400	ug/L			10/28/18 21:23	200
Chloroform	ND		200	120	ug/L			10/28/18 21:23	200
1-Chlorohexane	ND		200	140	ug/L			10/28/18 21:23	200
Chloromethane	ND		200	170	ug/L			10/28/18 21:23	200
cis-1,2-Dichloroethene	ND		200	100	ug/L			10/28/18 21:23	200
cis-1,3-Dichloropropene	ND		1000	100	ug/L			10/28/18 21:23	200
1,2-Dichlorobenzene	ND		200	100	ug/L			10/28/18 21:23	200
1,3-Dichlorobenzene	ND		200	110	ug/L			10/28/18 21:23	200
1,4-Dichlorobenzene	ND		200	130	ug/L			10/28/18 21:23	200
Dichlorodifluoromethane	ND		200	170	ug/L			10/28/18 21:23	200
1,1-Dichloroethane	ND		200	100	ug/L			10/28/18 21:23	200
1,2-Dichloroethane	ND		200	100	ug/L			10/28/18 21:23	200
1,1-Dichloroethene	ND		200	100	ug/L			10/28/18 21:23	200
1,2-Dichloropropane	ND		200	100	ug/L			10/28/18 21:23	200
1,3-Dichloropropane	ND		200	100	ug/L			10/28/18 21:23	200
2,2-Dichloropropane	ND		200	100	ug/L			10/28/18 21:23	200
1,1-Dichloropropene	ND		200	100	ug/L			10/28/18 21:23	200
Ethylbenzene	150	J	200	100	ug/L			10/28/18 21:23	200
Ethyl methacrylate	ND		200	120	ug/L			10/28/18 21:23	200
Hexachlorobutadiene	ND		1000	180	ug/L			10/28/18 21:23	200
2-Hexanone	ND		5000	620	ug/L			10/28/18 21:23	200
Isopropylbenzene	ND		200	110	ug/L			10/28/18 21:23	200
Methylene bromide	ND		1000	120	ug/L			10/28/18 21:23	200
Methylene Chloride	ND		1000	600	ug/L			10/28/18 21:23	200
4-Methyl-2-pentanone (MIBK)	ND		5000	360	ug/L			10/28/18 21:23	200
Methyl tert-butyl ether	ND		200	150	ug/L			10/28/18 21:23	200
m-Xylene & p-Xylene	ND		1000	320	ug/L			10/28/18 21:23	200
Naphthalene	ND		200	200	ug/L			10/28/18 21:23	200
n-Butylbenzene	ND		200	150	ug/L			10/28/18 21:23	200
N-Propylbenzene	ND		200	140	ug/L			10/28/18 21:23	200
o-Chlorotoluene	ND		200	110	ug/L			10/28/18 21:23	200
o-Xylene	ND		1000	120	ug/L			10/28/18 21:23	200
p-Chlorotoluene	ND		200	110	ug/L			10/28/18 21:23	200
p-Isopropyltoluene	ND		200	140	ug/L			10/28/18 21:23	200

Client Sample ID: P57-ROX-101618
Date Collected: 10/16/18 10:50
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160707-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		200	140	ug/L			10/28/18 21:23	200
Styrene	ND		200	200	ug/L			10/28/18 21:23	200
tert-Butylbenzene	ND		200	130	ug/L			10/28/18 21:23	200
1,1,1,2-Tetrachloroethane	ND		200	100	ug/L			10/28/18 21:23	200
1,1,2,2-Tetrachloroethane	ND		200	100	ug/L			10/28/18 21:23	200
Tetrachloroethene	ND		200	120	ug/L			10/28/18 21:23	200
Toluene	ND		200	140	ug/L			10/28/18 21:23	200
trans-1,2-Dichloroethene	ND		200	100	ug/L			10/28/18 21:23	200
trans-1,3-Dichloropropene	ND		1000	100	ug/L			10/28/18 21:23	200
1,2,3-Trichlorobenzene	ND		200	140	ug/L			10/28/18 21:23	200
1,2,4-Trichlorobenzene	ND		200	160	ug/L			10/28/18 21:23	200
1,1,1-Trichloroethane	ND		200	100	ug/L			10/28/18 21:23	200
1,1,2-Trichloroethane	ND		1000	100	ug/L			10/28/18 21:23	200
Trichloroethene	ND		200	100	ug/L			10/28/18 21:23	200
Trichlorofluoromethane	ND		200	100	ug/L			10/28/18 21:23	200
1,2,3-Trichloropropane	ND		1000	170	ug/L			10/28/18 21:23	200
1,2,4-Trimethylbenzene	ND		200	160	ug/L			10/28/18 21:23	200
1,3,5-Trimethylbenzene	ND		200	110	ug/L			10/28/18 21:23	200
Vinyl acetate	ND		5000	400	ug/L			10/28/18 21:23	200
Vinyl chloride	ND		200	100	ug/L			10/28/18 21:23	200
Xylenes, Total	ND		2000	320	ug/L			10/28/18 21:23	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*78 - 118*		*10/28/18 21:23*	*200*
Dibromofluoromethane	*94*		*81 - 121*		*10/28/18 21:23*	*200*
Toluene-d8 (Surr)	*102*		*80 - 120*		*10/28/18 21:23*	*200*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.23		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:42	1
Acenaphthylene	ND		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:42	1
Anthracene	ND		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:42	1
Benzo[a]anthracene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:42	1
Benzo[a]pyrene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:42	1
Benzo[b]fluoranthene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:42	1
Benzo[g,h,i]perylene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:42	1
Benzo[k]fluoranthene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:42	1
Chrysene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:42	1
Dibenz(a,h)anthracene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:42	1
Fluoranthene	ND		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:42	1
Fluorene	0.33		0.19	0.020	ug/L		10/23/18 14:09	10/25/18 19:42	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:42	1
Phenanthrene	0.36		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:42	1
Pyrene	ND		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:42	1
1-Methylnaphthalene	21	J	0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:42	1
2-Methylnaphthalene	27		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*47*		*33 - 138*	*10/23/18 14:09*	*10/25/18 19:42*	*1*
2-Fluorobiphenyl	*41*		*15 - 122*	*10/23/18 14:09*	*10/25/18 19:42*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160707-1
SDG: 60527968

Client Sample ID: P57-ROX-101618
Date Collected: 10/16/18 10:50
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160707-4
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	61		19 - 130	10/23/18 14:09	10/25/18 19:42	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.7	3.7	ug/L		10/23/18 14:09	10/25/18 19:42	1
Benzenethiol	ND	* UJ	9.7	1.7	ug/L		10/23/18 14:09	10/25/18 19:42	1
Benzoic acid	ND		29	7.1	ug/L		10/23/18 14:09	10/25/18 19:42	1
Benzyl alcohol	ND		9.7	1.9	ug/L		10/23/18 14:09	10/25/18 19:42	1
Bis(2-chloroethoxy)methane	ND		9.7	0.67	ug/L		10/23/18 14:09	10/25/18 19:42	1
Bis(2-chloroethyl)ether	ND		9.7	0.72	ug/L		10/23/18 14:09	10/25/18 19:42	1
bis (2-chloroisopropyl) ether	ND		9.7	0.79	ug/L		10/23/18 14:09	10/25/18 19:42	1
Bis(2-ethylhexyl) phthalate	ND		9.7	4.9	ug/L		10/23/18 14:09	10/25/18 19:42	1
4-Bromophenyl phenyl ether	ND		9.7	0.31	ug/L		10/23/18 14:09	10/25/18 19:42	1
Butyl benzyl phthalate	ND		9.7	0.67	ug/L		10/23/18 14:09	10/25/18 19:42	1
4-Chloroaniline	ND		9.7	3.3	ug/L		10/23/18 14:09	10/25/18 19:42	1
4-Chloro-3-methylphenol	ND		9.7	3.7	ug/L		10/23/18 14:09	10/25/18 19:42	1
2-Chloronaphthalene	ND		9.7	0.50	ug/L		10/23/18 14:09	10/25/18 19:42	1
2-Chlorophenol	ND		9.7	2.1	ug/L		10/23/18 14:09	10/25/18 19:42	1
4-Chlorophenyl phenyl ether	ND		9.7	1.9	ug/L		10/23/18 14:09	10/25/18 19:42	1
Dibenz[a,h]acridine	ND		9.7	2.9	ug/L		10/23/18 14:09	10/25/18 19:42	1
Dibenzofuran	ND		9.7	0.50	ug/L		10/23/18 14:09	10/25/18 19:42	1
3,3'-Dichlorobenzidine	ND	*	9.7	2.5	ug/L		10/23/18 14:09	10/25/18 19:42	1
2,4-Dichlorophenol	ND		9.7	2.9	ug/L		10/23/18 14:09	10/25/18 19:42	1
Diethyl phthalate	ND		9.7	0.68	ug/L		10/23/18 14:09	10/25/18 19:42	1
2,4-Dimethylphenol	ND		9.7	3.4	ug/L		10/23/18 14:09	10/25/18 19:42	1
Dimethyl phthalate	ND		9.7	0.58	ug/L		10/23/18 14:09	10/25/18 19:42	1
Di-n-butyl phthalate	ND		9.7	2.6	ug/L		10/23/18 14:09	10/25/18 19:42	1
4,6-Dinitro-ortho-cresol	ND	UJ	9.7	1.9	ug/L		10/23/18 14:09	10/25/18 19:42	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		10/23/18 14:09	10/25/18 19:42	1
2,4-Dinitrotoluene	ND		9.7	1.8	ug/L		10/23/18 14:09	10/25/18 19:42	1
2,6-Dinitrotoluene	ND		9.7	1.8	ug/L		10/23/18 14:09	10/25/18 19:42	1
Di-n-octyl phthalate	ND		9.7	0.43	ug/L		10/23/18 14:09	10/25/18 19:42	1
1,4-Dioxane	ND		9.7	0.97	ug/L		10/23/18 14:09	10/25/18 19:42	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.7	0.97	ug/L		10/23/18 14:09	10/25/18 19:42	1
Hexachlorobenzene	ND		9.7	0.24	ug/L		10/23/18 14:09	10/25/18 19:42	1
Hexachlorocyclopentadiene	ND	UJ	19	2.5	ug/L		10/23/18 14:09	10/25/18 19:42	1
Hexachloroethane	ND		9.7	4.1	ug/L		10/23/18 14:09	10/25/18 19:42	1
Indene	ND		9.7	0.97	ug/L		10/23/18 14:09	10/25/18 19:42	1
Isophorone	ND		9.7	0.55	ug/L		10/23/18 14:09	10/25/18 19:42	1
2-Methylphenol	ND		9.7	1.7	ug/L		10/23/18 14:09	10/25/18 19:42	1
3 & 4 Methylphenol	ND		19	1.0	ug/L		10/23/18 14:09	10/25/18 19:42	1
2-Nitroaniline	ND		9.7	2.1	ug/L		10/23/18 14:09	10/25/18 19:42	1
3-Nitroaniline	ND		9.7	1.7	ug/L		10/23/18 14:09	10/25/18 19:42	1
4-Nitroaniline	ND	UJ	9.7	2.4	ug/L		10/23/18 14:09	10/25/18 19:42	1
Nitrobenzene	ND		9.7	0.53	ug/L		10/23/18 14:09	10/25/18 19:42	1
2-Nitrophenol	ND		9.7	0.63	ug/L		10/23/18 14:09	10/25/18 19:42	1
4-Nitrophenol	ND	UJ	9.7	2.0	ug/L		10/23/18 14:09	10/25/18 19:42	1
N-Nitrosodimethylamine	ND		9.7	3.4	ug/L		10/23/18 14:09	10/25/18 19:42	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160707-1
SDG: 60527968

Client Sample ID: P57-ROX-101618
Date Collected: 10/16/18 10:50
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160707-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.7	3.2	ug/L		10/23/18 14:09	10/25/18 19:42	1
N-Nitrosodiphenylamine	ND		9.7	0.46	ug/L		10/23/18 14:09	10/25/18 19:42	1
Pentachlorophenol	ND		19	1.8	ug/L		10/23/18 14:09	10/25/18 19:42	1
Phenol	23		9.7	2.5	ug/L		10/23/18 14:09	10/25/18 19:42	1
Pyridine	ND		9.7	3.1	ug/L		10/23/18 14:09	10/25/18 19:42	1
Quinoline	ND		9.7	5.8	ug/L		10/23/18 14:09	10/25/18 19:42	1
2,4,5-Trichlorophenol	ND		9.7	3.6	ug/L		10/23/18 14:09	10/25/18 19:42	1
2,4,6-Trichlorophenol	ND		9.7	3.4	ug/L		10/23/18 14:09	10/25/18 19:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*49*		*34 - 120*	*10/23/18 14:09*	*10/25/18 19:42*	*1*
2-Fluorophenol	*38*		*10 - 120*	*10/23/18 14:09*	*10/25/18 19:42*	*1*
Nitrobenzene-d5	*52*		*27 - 120*	*10/23/18 14:09*	*10/25/18 19:42*	*1*
Phenol-d5	*54*		*10 - 120*	*10/23/18 14:09*	*10/25/18 19:42*	*1*
Terphenyl-d14	*37*	*X*	*53 - 125*	*10/23/18 14:09*	*10/25/18 19:42*	*1*
2,4,6-Tribromophenol	*72*		*15 - 135*	*10/23/18 14:09*	*10/25/18 19:42*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.029	0.0053	ug/L		10/29/18 16:11	11/01/18 22:04	1
1,2-Dibromoethane	ND		0.019	0.0048	ug/L		10/29/18 16:11	11/01/18 22:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*150*	*p X*	*51 - 149*	*10/29/18 16:11*	*11/01/18 22:04*	*1*

Client Sample ID: P57-ROX-101618-DUP

Date Collected: 10/16/18 10:50
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160707-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5000	2000	ug/L			10/28/18 21:49	200
Acrolein	ND		4000	2000	ug/L			10/28/18 21:49	200
Acrylonitrile	ND		2000	560	ug/L			10/28/18 21:49	200
Benzene	34000		200	76	ug/L			10/28/18 21:49	200
Bromobenzene	ND		200	110	ug/L			10/28/18 21:49	200
Bromochloromethane	ND		200	100	ug/L			10/28/18 21:49	200
Bromodichloromethane	ND		200	100	ug/L			10/28/18 21:49	200
Bromoform	ND		1000	140	ug/L			10/28/18 21:49	200
Bromomethane	ND		200	200	ug/L			10/28/18 21:49	200
2-Butanone (MEK)	ND		5000	520	ug/L			10/28/18 21:49	200
Carbon disulfide	ND		200	100	ug/L			10/28/18 21:49	200
Carbon tetrachloride	ND		200	100	ug/L			10/28/18 21:49	200
Chlorobenzene	ND		200	100	ug/L			10/28/18 21:49	200
Dibromochloromethane	ND		200	100	ug/L			10/28/18 21:49	200
Chloroethane	ND		200	150	ug/L			10/28/18 21:49	200
2-Chloroethyl vinyl ether	ND		1000	400	ug/L			10/28/18 21:49	200
Chloroform	ND		200	120	ug/L			10/28/18 21:49	200
1-Chlorohexane	ND		200	140	ug/L			10/28/18 21:49	200
Chloromethane	ND		200	170	ug/L			10/28/18 21:49	200
cis-1,2-Dichloroethene	ND		200	100	ug/L			10/28/18 21:49	200
cis-1,3-Dichloropropene	ND		1000	100	ug/L			10/28/18 21:49	200
1,2-Dichlorobenzene	ND		200	100	ug/L			10/28/18 21:49	200
1,3-Dichlorobenzene	ND		200	110	ug/L			10/28/18 21:49	200
1,4-Dichlorobenzene	ND		200	130	ug/L			10/28/18 21:49	200
Dichlorodifluoromethane	ND		200	170	ug/L			10/28/18 21:49	200
1,1-Dichloroethane	ND		200	100	ug/L			10/28/18 21:49	200
1,2-Dichloroethane	ND		200	100	ug/L			10/28/18 21:49	200
1,1-Dichloroethene	ND		200	100	ug/L			10/28/18 21:49	200
1,2-Dichloropropane	ND		200	100	ug/L			10/28/18 21:49	200
1,3-Dichloropropane	ND		200	100	ug/L			10/28/18 21:49	200
2,2-Dichloropropane	ND		200	100	ug/L			10/28/18 21:49	200
1,1-Dichloropropene	ND		200	100	ug/L			10/28/18 21:49	200
Ethylbenzene	140	J	200	100	ug/L			10/28/18 21:49	200
Ethyl methacrylate	ND		200	120	ug/L			10/28/18 21:49	200
Hexachlorobutadiene	ND		1000	180	ug/L			10/28/18 21:49	200
2-Hexanone	ND		5000	620	ug/L			10/28/18 21:49	200
Isopropylbenzene	ND		200	110	ug/L			10/28/18 21:49	200
Methylene bromide	ND		1000	120	ug/L			10/28/18 21:49	200
Methylene Chloride	ND		1000	600	ug/L			10/28/18 21:49	200
4-Methyl-2-pentanone (MIBK)	ND		5000	360	ug/L			10/28/18 21:49	200
Methyl tert-butyl ether	ND		200	150	ug/L			10/28/18 21:49	200
m-Xylene & p-Xylene	ND		1000	320	ug/L			10/28/18 21:49	200
Naphthalene	ND		200	200	ug/L			10/28/18 21:49	200
n-Butylbenzene	ND		200	150	ug/L			10/28/18 21:49	200
N-Propylbenzene	ND		200	140	ug/L			10/28/18 21:49	200
o-Chlorotoluene	ND		200	110	ug/L			10/28/18 21:49	200
o-Xylene	ND		1000	120	ug/L			10/28/18 21:49	200
p-Chlorotoluene	ND		200	110	ug/L			10/28/18 21:49	200
p-Isopropyltoluene	ND		200	140	ug/L			10/28/18 21:49	200

Client Sample ID: P57-ROX-101618-DUP

Date Collected: 10/16/18 10:50
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160707-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		200	140	ug/L			10/28/18 21:49	200
Styrene	ND		200	200	ug/L			10/28/18 21:49	200
tert-Butylbenzene	ND		200	130	ug/L			10/28/18 21:49	200
1,1,1,2-Tetrachloroethane	ND		200	100	ug/L			10/28/18 21:49	200
1,1,2,2-Tetrachloroethane	ND		200	100	ug/L			10/28/18 21:49	200
Tetrachloroethene	ND		200	120	ug/L			10/28/18 21:49	200
Toluene	ND		200	140	ug/L			10/28/18 21:49	200
trans-1,2-Dichloroethene	ND		200	100	ug/L			10/28/18 21:49	200
trans-1,3-Dichloropropene	ND		1000	100	ug/L			10/28/18 21:49	200
1,2,3-Trichlorobenzene	ND		200	140	ug/L			10/28/18 21:49	200
1,2,4-Trichlorobenzene	ND		200	160	ug/L			10/28/18 21:49	200
1,1,1-Trichloroethane	ND		200	100	ug/L			10/28/18 21:49	200
1,1,2-Trichloroethane	ND		1000	100	ug/L			10/28/18 21:49	200
Trichloroethene	ND		200	100	ug/L			10/28/18 21:49	200
Trichlorofluoromethane	ND		200	100	ug/L			10/28/18 21:49	200
1,2,3-Trichloropropane	ND		1000	170	ug/L			10/28/18 21:49	200
1,2,4-Trimethylbenzene	ND		200	160	ug/L			10/28/18 21:49	200
1,3,5-Trimethylbenzene	ND		200	110	ug/L			10/28/18 21:49	200
Vinyl acetate	ND		5000	400	ug/L			10/28/18 21:49	200
Vinyl chloride	ND		200	100	ug/L			10/28/18 21:49	200
Xylenes, Total	ND		2000	320	ug/L			10/28/18 21:49	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*78 - 118*		*10/28/18 21:49*	*200*
Dibromofluoromethane	*96*		*81 - 121*		*10/28/18 21:49*	*200*
Toluene-d8 (Surr)	*100*		*80 - 120*		*10/28/18 21:49*	*200*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.21		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:58	1
Acenaphthylene	ND		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:58	1
Anthracene	ND		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:58	1
Benzo[a]anthracene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:58	1
Benzo[a]pyrene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:58	1
Benzo[b]fluoranthene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:58	1
Benzo[g,h,i]perylene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:58	1
Benzo[k]fluoranthene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:58	1
Chrysene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:58	1
Dibenz(a,h)anthracene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:58	1
Fluoranthene	ND		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:58	1
Fluorene	0.43		0.19	0.020	ug/L		10/23/18 14:09	10/25/18 19:58	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 19:58	1
Phenanthrene	0.59		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:58	1
Pyrene	ND		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:58	1
1-Methylnaphthalene	27	J	0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:58	1
2-Methylnaphthalene	34		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 19:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*70*		*33 - 138*	*10/23/18 14:09*	*10/25/18 19:58*	*1*
2-Fluorobiphenyl	*50*		*15 - 122*	*10/23/18 14:09*	*10/25/18 19:58*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160707-1
SDG: 60527968

Client Sample ID: P57-ROX-101618-DUP
Date Collected: 10/16/18 10:50
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160707-5
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	72		19 - 130	10/23/18 14:09	10/25/18 19:58	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.7	3.7	ug/L		10/23/18 14:09	10/25/18 20:03	1
Benzenethiol	ND	* UJ	9.7	1.6	ug/L		10/23/18 14:09	10/25/18 20:03	1
Benzoic acid	ND		29	7.1	ug/L		10/23/18 14:09	10/25/18 20:03	1
Benzyl alcohol	ND		9.7	1.9	ug/L		10/23/18 14:09	10/25/18 20:03	1
Bis(2-chloroethoxy)methane	ND		9.7	0.67	ug/L		10/23/18 14:09	10/25/18 20:03	1
Bis(2-chloroethyl)ether	ND		9.7	0.72	ug/L		10/23/18 14:09	10/25/18 20:03	1
bis (2-chloroisopropyl) ether	ND		9.7	0.79	ug/L		10/23/18 14:09	10/25/18 20:03	1
Bis(2-ethylhexyl) phthalate	ND		9.7	4.9	ug/L		10/23/18 14:09	10/25/18 20:03	1
4-Bromophenyl phenyl ether	ND		9.7	0.31	ug/L		10/23/18 14:09	10/25/18 20:03	1
Butyl benzyl phthalate	ND		9.7	0.67	ug/L		10/23/18 14:09	10/25/18 20:03	1
4-Chloroaniline	ND		9.7	3.3	ug/L		10/23/18 14:09	10/25/18 20:03	1
4-Chloro-3-methylphenol	ND		9.7	3.7	ug/L		10/23/18 14:09	10/25/18 20:03	1
2-Chloronaphthalene	ND		9.7	0.50	ug/L		10/23/18 14:09	10/25/18 20:03	1
2-Chlorophenol	ND		9.7	2.1	ug/L		10/23/18 14:09	10/25/18 20:03	1
4-Chlorophenyl phenyl ether	ND		9.7	1.9	ug/L		10/23/18 14:09	10/25/18 20:03	1
Dibenz[a,h]acridine	ND		9.7	2.9	ug/L		10/23/18 14:09	10/25/18 20:03	1
Dibenzofuran	ND		9.7	0.50	ug/L		10/23/18 14:09	10/25/18 20:03	1
3,3'-Dichlorobenzidine	ND	*	9.7	2.5	ug/L		10/23/18 14:09	10/25/18 20:03	1
2,4-Dichlorophenol	ND		9.7	2.9	ug/L		10/23/18 14:09	10/25/18 20:03	1
Diethyl phthalate	ND		9.7	0.68	ug/L		10/23/18 14:09	10/25/18 20:03	1
2,4-Dimethylphenol	ND		9.7	3.4	ug/L		10/23/18 14:09	10/25/18 20:03	1
Dimethyl phthalate	ND		9.7	0.58	ug/L		10/23/18 14:09	10/25/18 20:03	1
Di-n-butyl phthalate	ND		9.7	2.6	ug/L		10/23/18 14:09	10/25/18 20:03	1
4,6-Dinitro-ortho-cresol	ND	UJ	9.7	1.9	ug/L		10/23/18 14:09	10/25/18 20:03	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		10/23/18 14:09	10/25/18 20:03	1
2,4-Dinitrotoluene	ND		9.7	1.8	ug/L		10/23/18 14:09	10/25/18 20:03	1
2,6-Dinitrotoluene	ND		9.7	1.8	ug/L		10/23/18 14:09	10/25/18 20:03	1
Di-n-octyl phthalate	ND		9.7	0.43	ug/L		10/23/18 14:09	10/25/18 20:03	1
1,4-Dioxane	ND		9.7	0.97	ug/L		10/23/18 14:09	10/25/18 20:03	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.7	0.97	ug/L		10/23/18 14:09	10/25/18 20:03	1
Hexachlorobenzene	ND		9.7	0.24	ug/L		10/23/18 14:09	10/25/18 20:03	1
Hexachlorocyclopentadiene	ND	UJ	19	2.5	ug/L		10/23/18 14:09	10/25/18 20:03	1
Hexachloroethane	ND		9.7	4.1	ug/L		10/23/18 14:09	10/25/18 20:03	1
Indene	ND		9.7	0.97	ug/L		10/23/18 14:09	10/25/18 20:03	1
Isophorone	ND		9.7	0.55	ug/L		10/23/18 14:09	10/25/18 20:03	1
2-Methylphenol	ND		9.7	1.7	ug/L		10/23/18 14:09	10/25/18 20:03	1
3 & 4 Methylphenol	ND		19	1.0	ug/L		10/23/18 14:09	10/25/18 20:03	1
2-Nitroaniline	ND		9.7	2.1	ug/L		10/23/18 14:09	10/25/18 20:03	1
3-Nitroaniline	ND		9.7	1.7	ug/L		10/23/18 14:09	10/25/18 20:03	1
4-Nitroaniline	ND	UJ	9.7	2.4	ug/L		10/23/18 14:09	10/25/18 20:03	1
Nitrobenzene	ND		9.7	0.53	ug/L		10/23/18 14:09	10/25/18 20:03	1
2-Nitrophenol	ND		9.7	0.63	ug/L		10/23/18 14:09	10/25/18 20:03	1
4-Nitrophenol	ND	UJ	9.7	2.0	ug/L		10/23/18 14:09	10/25/18 20:03	1
N-Nitrosodimethylamine	ND		9.7	3.4	ug/L		10/23/18 14:09	10/25/18 20:03	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160707-1
SDG: 60527968

Client Sample ID: P57-ROX-101618-DUP
Date Collected: 10/16/18 10:50
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160707-5
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.7	3.2	ug/L		10/23/18 14:09	10/25/18 20:03	1
N-Nitrosodiphenylamine	ND		9.7	0.46	ug/L		10/23/18 14:09	10/25/18 20:03	1
Pentachlorophenol	ND		19	1.8	ug/L		10/23/18 14:09	10/25/18 20:03	1
Phenol	35		9.7	2.5	ug/L		10/23/18 14:09	10/25/18 20:03	1
Pyridine	ND		9.7	3.1	ug/L		10/23/18 14:09	10/25/18 20:03	1
Quinoline	ND		9.7	5.8	ug/L		10/23/18 14:09	10/25/18 20:03	1
2,4,5-Trichlorophenol	ND		9.7	3.6	ug/L		10/23/18 14:09	10/25/18 20:03	1
2,4,6-Trichlorophenol	ND		9.7	3.4	ug/L		10/23/18 14:09	10/25/18 20:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*54*		*34 - 120*	*10/23/18 14:09*	*10/25/18 20:03*	*1*
2-Fluorophenol	*37*		*10 - 120*	*10/23/18 14:09*	*10/25/18 20:03*	*1*
Nitrobenzene-d5	*55*		*27 - 120*	*10/23/18 14:09*	*10/25/18 20:03*	*1*
Phenol-d5	*54*		*10 - 120*	*10/23/18 14:09*	*10/25/18 20:03*	*1*
Terphenyl-d14	*44*	*X*	*53 - 125*	*10/23/18 14:09*	*10/25/18 20:03*	*1*
2,4,6-Tribromophenol	*73*		*15 - 135*	*10/23/18 14:09*	*10/25/18 20:03*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.029	0.0053	ug/L		10/29/18 16:11	11/01/18 22:36	1
1,2-Dibromoethane	ND		0.019	0.0048	ug/L		10/29/18 16:11	11/01/18 22:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*172*	*p X*	*51 - 149*	*10/29/18 16:11*	*11/01/18 22:36*	*1*

Client Sample ID: P58-ROX-101618
Date Collected: 10/16/18 12:30
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160707-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25000	10000	ug/L			10/28/18 22:16	1000
Acrolein	ND		20000	10000	ug/L			10/28/18 22:16	1000
Acrylonitrile	ND		10000	2800	ug/L			10/28/18 22:16	1000
Benzene	190000		1000	380	ug/L			10/28/18 22:16	1000
Bromobenzene	ND		1000	540	ug/L			10/28/18 22:16	1000
Bromochloromethane	ND		1000	520	ug/L			10/28/18 22:16	1000
Bromodichloromethane	ND		1000	500	ug/L			10/28/18 22:16	1000
Bromoform	ND		5000	710	ug/L			10/28/18 22:16	1000
Bromomethane	ND		1000	980	ug/L			10/28/18 22:16	1000
2-Butanone (MEK)	ND		25000	2600	ug/L			10/28/18 22:16	1000
Carbon disulfide	ND		1000	500	ug/L			10/28/18 22:16	1000
Carbon tetrachloride	ND		1000	500	ug/L			10/28/18 22:16	1000
Chlorobenzene	ND		1000	500	ug/L			10/28/18 22:16	1000
Dibromochloromethane	ND		1000	500	ug/L			10/28/18 22:16	1000
Chloroethane	ND		1000	760	ug/L			10/28/18 22:16	1000
2-Chloroethyl vinyl ether	ND		5000	2000	ug/L			10/28/18 22:16	1000
Chloroform	ND		1000	600	ug/L			10/28/18 22:16	1000
1-Chlorohexane	ND		1000	700	ug/L			10/28/18 22:16	1000
Chloromethane	ND		1000	830	ug/L			10/28/18 22:16	1000
cis-1,2-Dichloroethene	ND		1000	500	ug/L			10/28/18 22:16	1000
cis-1,3-Dichloropropene	ND		5000	500	ug/L			10/28/18 22:16	1000
1,2-Dichlorobenzene	ND		1000	500	ug/L			10/28/18 22:16	1000
1,3-Dichlorobenzene	ND		1000	540	ug/L			10/28/18 22:16	1000
1,4-Dichlorobenzene	ND		1000	640	ug/L			10/28/18 22:16	1000
Dichlorodifluoromethane	ND		1000	850	ug/L			10/28/18 22:16	1000
1,1-Dichloroethane	ND		1000	500	ug/L			10/28/18 22:16	1000
1,2-Dichloroethane	ND		1000	500	ug/L			10/28/18 22:16	1000
1,1-Dichloroethene	ND		1000	500	ug/L			10/28/18 22:16	1000
1,2-Dichloropropane	ND		1000	500	ug/L			10/28/18 22:16	1000
1,3-Dichloropropane	ND		1000	500	ug/L			10/28/18 22:16	1000
2,2-Dichloropropane	ND		1000	500	ug/L			10/28/18 22:16	1000
1,1-Dichloropropene	ND		1000	500	ug/L			10/28/18 22:16	1000
Ethylbenzene	ND		1000	500	ug/L			10/28/18 22:16	1000
Ethyl methacrylate	ND		1000	600	ug/L			10/28/18 22:16	1000
Hexachlorobutadiene	ND		5000	900	ug/L			10/28/18 22:16	1000
2-Hexanone	ND		25000	3100	ug/L			10/28/18 22:16	1000
Isopropylbenzene	ND		1000	530	ug/L			10/28/18 22:16	1000
Methylene bromide	ND		5000	590	ug/L			10/28/18 22:16	1000
Methylene Chloride	ND		5000	3000	ug/L			10/28/18 22:16	1000
4-Methyl-2-pentanone (MIBK)	ND		25000	1800	ug/L			10/28/18 22:16	1000
Methyl tert-butyl ether	ND		1000	740	ug/L			10/28/18 22:16	1000
m-Xylene & p-Xylene	ND		5000	1600	ug/L			10/28/18 22:16	1000
Naphthalene	ND		1000	1000	ug/L			10/28/18 22:16	1000
n-Butylbenzene	ND		1000	760	ug/L			10/28/18 22:16	1000
N-Propylbenzene	ND		1000	690	ug/L			10/28/18 22:16	1000
o-Chlorotoluene	ND		1000	570	ug/L			10/28/18 22:16	1000
o-Xylene	ND		5000	600	ug/L			10/28/18 22:16	1000
p-Chlorotoluene	ND		1000	560	ug/L			10/28/18 22:16	1000
p-Isopropyltoluene	ND		1000	710	ug/L			10/28/18 22:16	1000

Client Sample ID: P58-ROX-101618

Date Collected: 10/16/18 12:30
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160707-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1000	700	ug/L			10/28/18 22:16	1000
Styrene	ND		1000	1000	ug/L			10/28/18 22:16	1000
tert-Butylbenzene	ND		1000	630	ug/L			10/28/18 22:16	1000
1,1,1,2-Tetrachloroethane	ND		1000	520	ug/L			10/28/18 22:16	1000
1,1,2,2-Tetrachloroethane	ND		1000	500	ug/L			10/28/18 22:16	1000
Tetrachloroethene	ND		1000	580	ug/L			10/28/18 22:16	1000
Toluene	ND		1000	700	ug/L			10/28/18 22:16	1000
trans-1,2-Dichloroethene	ND		1000	500	ug/L			10/28/18 22:16	1000
trans-1,3-Dichloropropene	ND		5000	500	ug/L			10/28/18 22:16	1000
1,2,3-Trichlorobenzene	ND		1000	700	ug/L			10/28/18 22:16	1000
1,2,4-Trichlorobenzene	ND		1000	820	ug/L			10/28/18 22:16	1000
1,1,1-Trichloroethane	ND		1000	500	ug/L			10/28/18 22:16	1000
1,1,2-Trichloroethane	ND		5000	500	ug/L			10/28/18 22:16	1000
Trichloroethene	ND		1000	500	ug/L			10/28/18 22:16	1000
Trichlorofluoromethane	ND		1000	520	ug/L			10/28/18 22:16	1000
1,2,3-Trichloropropane	ND		5000	840	ug/L			10/28/18 22:16	1000
1,2,4-Trimethylbenzene	ND		1000	820	ug/L			10/28/18 22:16	1000
1,3,5-Trimethylbenzene	ND		1000	560	ug/L			10/28/18 22:16	1000
Vinyl acetate	ND		25000	2000	ug/L			10/28/18 22:16	1000
Vinyl chloride	ND		1000	500	ug/L			10/28/18 22:16	1000
Xylenes, Total	ND		10000	1600	ug/L			10/28/18 22:16	1000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*78 - 118*		*10/28/18 22:16*	*1000*
Dibromofluoromethane	*95*		*81 - 121*		*10/28/18 22:16*	*1000*
Toluene-d8 (Surr)	*100*		*80 - 120*		*10/28/18 22:16*	*1000*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.60		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 20:14	1
Acenaphthylene	ND		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 20:14	1
Anthracene	ND		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 20:14	1
Benzo[a]anthracene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 20:14	1
Benzo[a]pyrene	0.18	J	0.19	0.039	ug/L		10/23/18 14:09	10/25/18 20:14	1
Benzo[b]fluoranthene	0.10	J	0.19	0.039	ug/L		10/23/18 14:09	10/25/18 20:14	1
Benzo[g,h,i]perylene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 20:14	1
Benzo[k]fluoranthene	0.057	J	0.19	0.039	ug/L		10/23/18 14:09	10/25/18 20:14	1
Chrysene	0.32		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 20:14	1
Dibenz(a,h)anthracene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 20:14	1
Fluoranthene	ND		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 20:14	1
Fluorene	1.1		0.19	0.020	ug/L		10/23/18 14:09	10/25/18 20:14	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.039	ug/L		10/23/18 14:09	10/25/18 20:14	1
Phenanthrene	1.1		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 20:14	1
Pyrene	0.69		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 20:14	1
1-Methylnaphthalene	29		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 20:14	1
2-Methylnaphthalene	21		0.19	0.019	ug/L		10/23/18 14:09	10/25/18 20:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*30*	*X*	*33 - 138*	*10/23/18 14:09*	*10/25/18 20:14*	*1*
2-Fluorobiphenyl	*32*		*15 - 122*	*10/23/18 14:09*	*10/25/18 20:14*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160707-1
SDG: 60527968

Client Sample ID: P58-ROX-101618
Date Collected: 10/16/18 12:30
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160707-6
Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	52		19 - 130	10/23/18 14:09	10/25/18 20:14	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.7	3.7	ug/L		10/23/18 14:09	10/25/18 20:24	1
Benzenethiol	ND	* UJ	9.7	1.7	ug/L		10/23/18 14:09	10/25/18 20:24	1
Benzoic acid	ND		29	7.1	ug/L		10/23/18 14:09	10/25/18 20:24	1
Benzyl alcohol	ND		9.7	1.9	ug/L		10/23/18 14:09	10/25/18 20:24	1
Bis(2-chloroethoxy)methane	ND		9.7	0.67	ug/L		10/23/18 14:09	10/25/18 20:24	1
Bis(2-chloroethyl)ether	ND		9.7	0.72	ug/L		10/23/18 14:09	10/25/18 20:24	1
bis (2-chloroisopropyl) ether	ND		9.7	0.79	ug/L		10/23/18 14:09	10/25/18 20:24	1
Bis(2-ethylhexyl) phthalate	ND		9.7	4.9	ug/L		10/23/18 14:09	10/25/18 20:24	1
4-Bromophenyl phenyl ether	ND		9.7	0.31	ug/L		10/23/18 14:09	10/25/18 20:24	1
Butyl benzyl phthalate	ND		9.7	0.67	ug/L		10/23/18 14:09	10/25/18 20:24	1
4-Chloroaniline	ND		9.7	3.3	ug/L		10/23/18 14:09	10/25/18 20:24	1
4-Chloro-3-methylphenol	ND		9.7	3.7	ug/L		10/23/18 14:09	10/25/18 20:24	1
2-Chloronaphthalene	ND		9.7	0.50	ug/L		10/23/18 14:09	10/25/18 20:24	1
2-Chlorophenol	ND		9.7	2.1	ug/L		10/23/18 14:09	10/25/18 20:24	1
4-Chlorophenyl phenyl ether	ND		9.7	1.9	ug/L		10/23/18 14:09	10/25/18 20:24	1
Dibenz[a,h]acridine	ND		9.7	2.9	ug/L		10/23/18 14:09	10/25/18 20:24	1
Dibenzofuran	1.4	J	9.7	0.50	ug/L		10/23/18 14:09	10/25/18 20:24	1
3,3'-Dichlorobenzidine	ND	*	9.7	2.5	ug/L		10/23/18 14:09	10/25/18 20:24	1
2,4-Dichlorophenol	ND		9.7	2.9	ug/L		10/23/18 14:09	10/25/18 20:24	1
Diethyl phthalate	ND		9.7	0.68	ug/L		10/23/18 14:09	10/25/18 20:24	1
2,4-Dimethylphenol	ND		9.7	3.4	ug/L		10/23/18 14:09	10/25/18 20:24	1
Dimethyl phthalate	ND		9.7	0.58	ug/L		10/23/18 14:09	10/25/18 20:24	1
Di-n-butyl phthalate	ND		9.7	2.6	ug/L		10/23/18 14:09	10/25/18 20:24	1
4,6-Dinitro-ortho-cresol	ND	UJ	9.7	1.9	ug/L		10/23/18 14:09	10/25/18 20:24	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		10/23/18 14:09	10/25/18 20:24	1
2,4-Dinitrotoluene	ND		9.7	1.8	ug/L		10/23/18 14:09	10/25/18 20:24	1
2,6-Dinitrotoluene	ND		9.7	1.8	ug/L		10/23/18 14:09	10/25/18 20:24	1
Di-n-octyl phthalate	ND		9.7	0.43	ug/L		10/23/18 14:09	10/25/18 20:24	1
1,4-Dioxane	ND		9.7	0.97	ug/L		10/23/18 14:09	10/25/18 20:24	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.7	0.97	ug/L		10/23/18 14:09	10/25/18 20:24	1
Hexachlorobenzene	ND		9.7	0.24	ug/L		10/23/18 14:09	10/25/18 20:24	1
Hexachlorocyclopentadiene	ND	UJ	19	2.5	ug/L		10/23/18 14:09	10/25/18 20:24	1
Hexachloroethane	ND		9.7	4.1	ug/L		10/23/18 14:09	10/25/18 20:24	1
Indene	ND		9.7	0.97	ug/L		10/23/18 14:09	10/25/18 20:24	1
Isophorone	ND		9.7	0.55	ug/L		10/23/18 14:09	10/25/18 20:24	1
2-Methylphenol	ND		9.7	1.7	ug/L		10/23/18 14:09	10/25/18 20:24	1
3 & 4 Methylphenol	1.0	J	19	1.0	ug/L		10/23/18 14:09	10/25/18 20:24	1
2-Nitroaniline	ND		9.7	2.1	ug/L		10/23/18 14:09	10/25/18 20:24	1
3-Nitroaniline	ND		9.7	1.7	ug/L		10/23/18 14:09	10/25/18 20:24	1
4-Nitroaniline	ND	UJ	9.7	2.4	ug/L		10/23/18 14:09	10/25/18 20:24	1
Nitrobenzene	ND		9.7	0.53	ug/L		10/23/18 14:09	10/25/18 20:24	1
2-Nitrophenol	ND		9.7	0.63	ug/L		10/23/18 14:09	10/25/18 20:24	1
4-Nitrophenol	ND	UJ	9.7	2.0	ug/L		10/23/18 14:09	10/25/18 20:24	1
N-Nitrosodimethylamine	ND		9.7	3.4	ug/L		10/23/18 14:09	10/25/18 20:24	1

Client Sample ID: P58-ROX-101618

Date Collected: 10/16/18 12:30
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160707-6
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.7	3.2	ug/L		10/23/18 14:09	10/25/18 20:24	1
N-Nitrosodiphenylamine	ND		9.7	0.46	ug/L		10/23/18 14:09	10/25/18 20:24	1
Pentachlorophenol	ND		19	1.8	ug/L		10/23/18 14:09	10/25/18 20:24	1
Phenol	93		9.7	2.5	ug/L		10/23/18 14:09	10/25/18 20:24	1
Pyridine	ND		9.7	3.1	ug/L		10/23/18 14:09	10/25/18 20:24	1
Quinoline	ND		9.7	5.8	ug/L		10/23/18 14:09	10/25/18 20:24	1
2,4,5-Trichlorophenol	ND		9.7	3.6	ug/L		10/23/18 14:09	10/25/18 20:24	1
2,4,6-Trichlorophenol	ND		9.7	3.4	ug/L		10/23/18 14:09	10/25/18 20:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*38*		*34 - 120*	*10/23/18 14:09*	*10/25/18 20:24*	*1*
2-Fluorophenol	*38*		*10 - 120*	*10/23/18 14:09*	*10/25/18 20:24*	*1*
Nitrobenzene-d5	*51*		*27 - 120*	*10/23/18 14:09*	*10/25/18 20:24*	*1*
Phenol-d5	*47*		*10 - 120*	*10/23/18 14:09*	*10/25/18 20:24*	*1*
Terphenyl-d14	*23*	*X*	*53 - 125*	*10/23/18 14:09*	*10/25/18 20:24*	*1*
2,4,6-Tribromophenol	*73*		*15 - 135*	*10/23/18 14:09*	*10/25/18 20:24*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.029	0.0053	ug/L		10/29/18 16:14	11/01/18 23:40	1
1,2-Dibromoethane	ND		0.019	0.0048	ug/L		10/29/18 16:14	11/01/18 23:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*133*	*p*	*51 - 149*	*10/29/18 16:14*	*11/01/18 23:40*	*1*

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
X	Surrogate is outside control limits
E	Result exceeded calibration range.

GC Semi VOA

Qualifier	Qualifier Description
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160707-1
SDG: 60527968

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(78-118)	(81-121)	(80-120)
400-160707-2	TB-ROX-101618-8260	95	95	100
400-160707-3	P74-ROX-101618	93	96	102
400-160707-4	P57-ROX-101618	96	94	102
400-160707-5	P57-ROX-101618-DUP	93	96	100
400-160707-6	P58-ROX-101618	93	95	100
LCS 400-417272/1002	Lab Control Sample	93	97	97
MB 400-417272/4	Method Blank	94	97	101

Surrogate Legend

BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPHL	TBP
Lab Sample ID	Client Sample ID	(34-120)	(10-120)	(27-120)	(10-120)	(53-125)	(15-135)
400-160707-3	P74-ROX-101618	49	43	57	51	46 X	56
400-160707-4	P57-ROX-101618	49	38	52	54	37 X	72
400-160707-5	P57-ROX-101618-DUP	54	37	55	54	44 X	73
400-160707-6	P58-ROX-101618	38	38	51	47	23 X	73
LCS 400-416612/2-A	Lab Control Sample	85	33	88	71	94	110
LCS 400-416612/4-A	Lab Control Sample	43	15	51	32	59	34
LCSD 400-416612/3-A	Lab Control Sample Dup	88	39	89	75	94	112
LCSD 400-416612/5-A	Lab Control Sample Dup	47	17	54	38	63	37
MB 400-416612/1-A	Method Blank	77	35	77	68	83	77

Surrogate Legend

FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPHL = Terphenyl-d14
TBP = 2,4,6-Tribromophenol

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		TPHL	FBP	NBZ
Lab Sample ID	Client Sample ID	(33-138)	(15-122)	(19-130)
400-160707-3	P74-ROX-101618	70	82	71
400-160707-4	P57-ROX-101618	47	41	61
400-160707-5	P57-ROX-101618-DUP	70	50	72
400-160707-6	P58-ROX-101618	30 X	32	52
LCS 400-416612/2-A	Lab Control Sample	79	81	80
LCSD 400-416612/3-A	Lab Control Sample Dup	78	81	82
MB 400-416612/1-A	Method Blank	96	79	73

Surrogate Legend

TPHL = Terphenyl-d14
FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5

Method: 8011 - EDB and DBCP in Water by Microextraction

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	BFB2 (51-149)
400-160707-1	TB-ROX-101618-8011	117 p
400-160707-3	P74-ROX-101618	131 p
400-160707-4	P57-ROX-101618	150 p X
400-160707-5	P57-ROX-101618-DUP	172 p X
400-160707-6	P58-ROX-101618	133 p
LCS 400-417470/2-A	Lab Control Sample	125 p
LCSD 400-417470/3-A	Lab Control Sample Dup	117 p
MB 400-417470/1-A	Method Blank	108 p

Surrogate Legend

BFB = 4-Bromofluorobenzene

Method Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160707-1
SDG: 60527968

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL PEN
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	TAL PEN
8011	EDB and DBCP in Water by Microextraction	EPA	TAL PEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL PEN
5030B	Purge and Trap	SW846	TAL PEN
8011	Microextraction	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Client Sample ID: TB-ROX-101618-8011

Date Collected: 10/16/18 00:00
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160707-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			34.3 mL	35 mL	417470	10/29/18 16:11	SAB	TAL PEN
Total/NA	Analysis	8011		1			417869	11/01/18 21:00	DS	TAL PEN

Client Sample ID: TB-ROX-101618-8260

Date Collected: 10/16/18 00:00
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160707-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417272	10/28/18 14:20	RS	TAL PEN

Client Sample ID: P74-ROX-101618

Date Collected: 10/16/18 09:45
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160707-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417272	10/28/18 20:30	RS	TAL PEN
Total/NA	Prep	3520C			1030 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416965	10/25/18 19:21	VC1	TAL PEN
Total/NA	Prep	3520C			1030 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416937	10/25/18 19:26	RM	TAL PEN
Total/NA	Prep	8011			36.3 mL	35 mL	417470	10/29/18 16:11	SAB	TAL PEN
Total/NA	Analysis	8011		1			417869	11/01/18 21:32	DS	TAL PEN

Client Sample ID: P57-ROX-101618

Date Collected: 10/16/18 10:50
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160707-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		200	5 mL	5 mL	417272	10/28/18 21:23	RS	TAL PEN
Total/NA	Prep	3520C			1030.2 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416965	10/25/18 19:42	VC1	TAL PEN
Total/NA	Prep	3520C			1030.2 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416937	10/25/18 19:42	RM	TAL PEN
Total/NA	Prep	8011			36.2 mL	35 mL	417470	10/29/18 16:11	SAB	TAL PEN
Total/NA	Analysis	8011		1			417869	11/01/18 22:04	DS	TAL PEN

Client Sample ID: P57-ROX-101618-DUP

Date Collected: 10/16/18 10:50
Date Received: 10/17/18 08:57

Lab Sample ID: 400-160707-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		200	5 mL	5 mL	417272	10/28/18 21:49	RS	TAL PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160707-1
SDG: 60527968

Client Sample ID: P57-ROX-101618-DUP

Lab Sample ID: 400-160707-5
Matrix: Water

Date Collected: 10/16/18 10:50
Date Received: 10/17/18 08:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1030.8 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416965	10/25/18 20:03	VC1	TAL PEN
Total/NA	Prep	3520C			1030.8 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416937	10/25/18 19:58	RM	TAL PEN
Total/NA	Prep	8011			36.3 mL	35 mL	417470	10/29/18 16:11	SAB	TAL PEN
Total/NA	Analysis	8011		1			417869	11/01/18 22:36	DS	TAL PEN

Client Sample ID: P58-ROX-101618

Lab Sample ID: 400-160707-6
Matrix: Water

Date Collected: 10/16/18 12:30
Date Received: 10/17/18 08:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1000	5 mL	5 mL	417272	10/28/18 22:16	RS	TAL PEN
Total/NA	Prep	3520C			1030.2 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416965	10/25/18 20:24	VC1	TAL PEN
Total/NA	Prep	3520C			1030.2 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416937	10/25/18 20:14	RM	TAL PEN
Total/NA	Prep	8011			36.5 mL	35 mL	417470	10/29/18 16:14	SAB	TAL PEN
Total/NA	Analysis	8011		1			417869	11/01/18 23:40	DS	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-416612/1-A
Matrix: Water

Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D		1			417121	10/26/18 17:06	KJA	TAL PEN
Total/NA	Prep	3520C			1000 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D LL		1			416937	10/25/18 17:51	RM	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-417272/4
Matrix: Water

Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417272	10/28/18 12:08	RS	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-417470/1-A
Matrix: Water

Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	417470	10/29/18 16:11	SAB	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-417470/1-A
Matrix: Water

Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8011		1			417869	11/01/18 00:26	DS	TAL PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-416612/2-A
Matrix: Water

Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D		1			417121	10/26/18 17:43	KJA	TAL PEN
Total/NA	Prep	3520C			1000 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D LL		5			416937	10/25/18 18:07	RM	TAL PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-416612/4-A
Matrix: Water

Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416965	10/25/18 17:35	VC1	TAL PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-417272/1002
Matrix: Water

Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	417272	10/28/18 11:06	RS	TAL PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-417470/2-A
Matrix: Water

Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	417470	10/29/18 16:11	SAB	TAL PEN
Total/NA	Analysis	8011		1			417869	11/01/18 00:59	DS	TAL PEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 400-416612/3-A
Matrix: Water

Date Collected: N/A
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D		1			417121	10/26/18 18:08	KJA	TAL PEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 400-416612/3-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D LL		5			416937	10/25/18 18:23	RM	TAL PEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 400-416612/5-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1.0 mL	416612	10/23/18 14:09	JJA	TAL PEN
Total/NA	Analysis	8270D		1			416965	10/25/18 17:56	VC1	TAL PEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 400-417470/3-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35 mL	35 mL	417470	10/29/18 16:11	SAB	TAL PEN
Total/NA	Analysis	8011		1			417869	11/01/18 01:30	DS	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

GC/MS VOA

Analysis Batch: 417272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160707-2	TB-ROX-101618-8260	Total/NA	Water	8260B	
400-160707-3	P74-ROX-101618	Total/NA	Water	8260B	
400-160707-4	P57-ROX-101618	Total/NA	Water	8260B	
400-160707-5	P57-ROX-101618-DUP	Total/NA	Water	8260B	
400-160707-6	P58-ROX-101618	Total/NA	Water	8260B	
MB 400-417272/4	Method Blank	Total/NA	Water	8260B	
LCS 400-417272/1002	Lab Control Sample	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 416612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160707-3	P74-ROX-101618	Total/NA	Water	3520C	
400-160707-4	P57-ROX-101618	Total/NA	Water	3520C	
400-160707-5	P57-ROX-101618-DUP	Total/NA	Water	3520C	
400-160707-6	P58-ROX-101618	Total/NA	Water	3520C	
MB 400-416612/1-A	Method Blank	Total/NA	Water	3520C	
LCS 400-416612/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 400-416612/4-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-416612/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
LCSD 400-416612/5-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 416937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160707-3	P74-ROX-101618	Total/NA	Water	8270D LL	416612
400-160707-4	P57-ROX-101618	Total/NA	Water	8270D LL	416612
400-160707-5	P57-ROX-101618-DUP	Total/NA	Water	8270D LL	416612
400-160707-6	P58-ROX-101618	Total/NA	Water	8270D LL	416612
MB 400-416612/1-A	Method Blank	Total/NA	Water	8270D LL	416612
LCS 400-416612/2-A	Lab Control Sample	Total/NA	Water	8270D LL	416612
LCSD 400-416612/3-A	Lab Control Sample Dup	Total/NA	Water	8270D LL	416612

Analysis Batch: 416965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160707-3	P74-ROX-101618	Total/NA	Water	8270D	416612
400-160707-4	P57-ROX-101618	Total/NA	Water	8270D	416612
400-160707-5	P57-ROX-101618-DUP	Total/NA	Water	8270D	416612
400-160707-6	P58-ROX-101618	Total/NA	Water	8270D	416612
LCS 400-416612/4-A	Lab Control Sample	Total/NA	Water	8270D	416612
LCSD 400-416612/5-A	Lab Control Sample Dup	Total/NA	Water	8270D	416612

Analysis Batch: 417121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-416612/1-A	Method Blank	Total/NA	Water	8270D	416612
LCS 400-416612/2-A	Lab Control Sample	Total/NA	Water	8270D	416612
LCSD 400-416612/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	416612

QC Association Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160707-1
SDG: 60527968

GC Semi VOA

Prep Batch: 417470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160707-1	TB-ROX-101618-8011	Total/NA	Water	8011	
400-160707-3	P74-ROX-101618	Total/NA	Water	8011	
400-160707-4	P57-ROX-101618	Total/NA	Water	8011	
400-160707-5	P57-ROX-101618-DUP	Total/NA	Water	8011	
400-160707-6	P58-ROX-101618	Total/NA	Water	8011	
MB 400-417470/1-A	Method Blank	Total/NA	Water	8011	
LCS 400-417470/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 400-417470/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 417869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160707-1	TB-ROX-101618-8011	Total/NA	Water	8011	417470
400-160707-3	P74-ROX-101618	Total/NA	Water	8011	417470
400-160707-4	P57-ROX-101618	Total/NA	Water	8011	417470
400-160707-5	P57-ROX-101618-DUP	Total/NA	Water	8011	417470
400-160707-6	P58-ROX-101618	Total/NA	Water	8011	417470
MB 400-417470/1-A	Method Blank	Total/NA	Water	8011	417470
LCS 400-417470/2-A	Lab Control Sample	Total/NA	Water	8011	417470
LCSD 400-417470/3-A	Lab Control Sample Dup	Total/NA	Water	8011	417470

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-417272/4
Matrix: Water
Analysis Batch: 417272

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			10/28/18 12:08	1
Acrolein	ND		20	10	ug/L			10/28/18 12:08	1
Acrylonitrile	ND		10	2.8	ug/L			10/28/18 12:08	1
Benzene	ND		1.0	0.38	ug/L			10/28/18 12:08	1
Bromobenzene	ND		1.0	0.54	ug/L			10/28/18 12:08	1
Bromochloromethane	ND		1.0	0.52	ug/L			10/28/18 12:08	1
Bromodichloromethane	ND		1.0	0.50	ug/L			10/28/18 12:08	1
Bromoform	ND		5.0	0.71	ug/L			10/28/18 12:08	1
Bromomethane	ND		1.0	0.98	ug/L			10/28/18 12:08	1
2-Butanone (MEK)	ND		25	2.6	ug/L			10/28/18 12:08	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/28/18 12:08	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			10/28/18 12:08	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/28/18 12:08	1
Dibromochloromethane	ND		1.0	0.50	ug/L			10/28/18 12:08	1
Chloroethane	ND		1.0	0.76	ug/L			10/28/18 12:08	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			10/28/18 12:08	1
Chloroform	ND		1.0	0.60	ug/L			10/28/18 12:08	1
1-Chlorohexane	ND		1.0	0.70	ug/L			10/28/18 12:08	1
Chloromethane	ND		1.0	0.83	ug/L			10/28/18 12:08	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/28/18 12:08	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/28/18 12:08	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			10/28/18 12:08	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			10/28/18 12:08	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			10/28/18 12:08	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			10/28/18 12:08	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			10/28/18 12:08	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			10/28/18 12:08	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			10/28/18 12:08	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			10/28/18 12:08	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			10/28/18 12:08	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			10/28/18 12:08	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			10/28/18 12:08	1
Ethylbenzene	ND		1.0	0.50	ug/L			10/28/18 12:08	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			10/28/18 12:08	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			10/28/18 12:08	1
2-Hexanone	ND		25	3.1	ug/L			10/28/18 12:08	1
Isopropylbenzene	ND		1.0	0.53	ug/L			10/28/18 12:08	1
Methylene bromide	ND		5.0	0.59	ug/L			10/28/18 12:08	1
Methylene Chloride	ND		5.0	3.0	ug/L			10/28/18 12:08	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			10/28/18 12:08	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			10/28/18 12:08	1
m-Xylene & p-Xylene	ND		5.0	1.6	ug/L			10/28/18 12:08	1
Naphthalene	ND		1.0	1.0	ug/L			10/28/18 12:08	1
n-Butylbenzene	ND		1.0	0.76	ug/L			10/28/18 12:08	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/28/18 12:08	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			10/28/18 12:08	1
o-Xylene	ND		5.0	0.60	ug/L			10/28/18 12:08	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			10/28/18 12:08	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-417272/4
Matrix: Water
Analysis Batch: 417272

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	ND		1.0	0.71	ug/L			10/28/18 12:08	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			10/28/18 12:08	1
Styrene	ND		1.0	1.0	ug/L			10/28/18 12:08	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			10/28/18 12:08	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			10/28/18 12:08	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			10/28/18 12:08	1
Tetrachloroethene	ND		1.0	0.58	ug/L			10/28/18 12:08	1
Toluene	ND		1.0	0.70	ug/L			10/28/18 12:08	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			10/28/18 12:08	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			10/28/18 12:08	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			10/28/18 12:08	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			10/28/18 12:08	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			10/28/18 12:08	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			10/28/18 12:08	1
Trichloroethene	ND		1.0	0.50	ug/L			10/28/18 12:08	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			10/28/18 12:08	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			10/28/18 12:08	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			10/28/18 12:08	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			10/28/18 12:08	1
Vinyl acetate	ND		25	2.0	ug/L			10/28/18 12:08	1
Vinyl chloride	ND		1.0	0.50	ug/L			10/28/18 12:08	1
Xylenes, Total	ND		10	1.6	ug/L			10/28/18 12:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*78 - 118*		*10/28/18 12:08*	*1*
Dibromofluoromethane	*97*		*81 - 121*		*10/28/18 12:08*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*10/28/18 12:08*	*1*

Lab Sample ID: LCS 400-417272/1002
Matrix: Water
Analysis Batch: 417272

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	200	247		ug/L		124	43 - 160
Acrolein	500	512		ug/L		102	38 - 160
Acrylonitrile	500	634		ug/L		127	64 - 142
Benzene	50.0	44.2		ug/L		88	70 - 130
Bromobenzene	50.0	51.1		ug/L		102	70 - 132
Bromochloromethane	50.0	48.4		ug/L		97	70 - 130
Bromodichloromethane	50.0	41.9		ug/L		84	67 - 133
Bromoform	50.0	51.3		ug/L		103	57 - 140
Bromomethane	50.0	47.9		ug/L		96	10 - 160
2-Butanone (MEK)	200	194		ug/L		97	61 - 145
Carbon disulfide	50.0	40.3		ug/L		81	61 - 137
Carbon tetrachloride	50.0	40.6		ug/L		81	61 - 137
Chlorobenzene	50.0	49.5		ug/L		99	70 - 130
Dibromochloromethane	50.0	48.9		ug/L		98	67 - 135
Chloroethane	50.0	53.4		ug/L		107	55 - 141

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-417272/1002
Matrix: Water
Analysis Batch: 417272

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloroethyl vinyl ether	50.0	31.6		ug/L		63	10 - 160
Chloroform	50.0	41.5		ug/L		83	69 - 130
1-Chlorohexane	50.0	53.0		ug/L		106	69 - 130
Chloromethane	50.0	65.5		ug/L		131	58 - 137
cis-1,2-Dichloroethene	50.0	47.6		ug/L		95	68 - 130
cis-1,3-Dichloropropene	50.0	40.2		ug/L		80	69 - 132
1,2-Dichlorobenzene	50.0	51.9		ug/L		104	67 - 130
1,3-Dichlorobenzene	50.0	52.4		ug/L		105	70 - 130
1,4-Dichlorobenzene	50.0	52.9		ug/L		106	70 - 130
Dichlorodifluoromethane	50.0	51.0		ug/L		102	41 - 146
1,1-Dichloroethane	50.0	46.0		ug/L		92	70 - 130
1,2-Dichloroethane	50.0	42.9		ug/L		86	69 - 130
1,1-Dichloroethene	50.0	45.4		ug/L		91	63 - 134
1,2-Dichloropropane	50.0	45.3		ug/L		91	70 - 130
1,3-Dichloropropane	50.0	44.9		ug/L		90	70 - 130
2,2-Dichloropropane	50.0	32.1		ug/L		64	52 - 135
1,1-Dichloropropene	50.0	43.7		ug/L		87	70 - 130
Ethylbenzene	50.0	47.2		ug/L		94	70 - 130
Ethyl methacrylate	50.0	40.7		ug/L		81	68 - 130
Hexachlorobutadiene	50.0	48.8		ug/L		98	53 - 140
2-Hexanone	200	236		ug/L		118	65 - 137
Isopropylbenzene	50.0	49.1		ug/L		98	70 - 130
Methylene bromide	50.0	45.3		ug/L		91	70 - 130
Methylene Chloride	50.0	45.4		ug/L		91	66 - 135
4-Methyl-2-pentanone (MIBK)	200	227		ug/L		114	69 - 138
Methyl tert-butyl ether	50.0	38.6		ug/L		77	66 - 130
m-Xylene & p-Xylene	50.0	47.2		ug/L		94	70 - 130
Naphthalene	50.0	51.8		ug/L		104	47 - 149
n-Butylbenzene	50.0	52.2		ug/L		104	67 - 130
N-Propylbenzene	50.0	50.4		ug/L		101	70 - 130
o-Chlorotoluene	50.0	51.1		ug/L		102	70 - 130
o-Xylene	50.0	46.9		ug/L		94	70 - 130
p-Chlorotoluene	50.0	49.8		ug/L		100	70 - 130
p-Isopropyltoluene	50.0	53.3		ug/L		107	65 - 130
sec-Butylbenzene	50.0	52.2		ug/L		104	66 - 130
Styrene	50.0	48.3		ug/L		97	70 - 130
tert-Butylbenzene	50.0	48.0		ug/L		96	64 - 139
1,1,1,2-Tetrachloroethane	50.0	46.8		ug/L		94	67 - 131
1,1,2,2-Tetrachloroethane	50.0	49.6		ug/L		99	70 - 131
Tetrachloroethene	50.0	49.5		ug/L		99	65 - 130
Toluene	50.0	47.8		ug/L		96	70 - 130
trans-1,2-Dichloroethene	50.0	45.4		ug/L		91	70 - 130
trans-1,3-Dichloropropene	50.0	39.4		ug/L		79	63 - 130
1,2,3-Trichlorobenzene	50.0	49.6		ug/L		99	60 - 138
1,2,4-Trichlorobenzene	50.0	49.5		ug/L		99	60 - 140
1,1,1-Trichloroethane	50.0	40.9		ug/L		82	68 - 130
1,1,2-Trichloroethane	50.0	45.6		ug/L		91	70 - 130
Trichloroethene	50.0	47.4		ug/L		95	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-417272/1002
Matrix: Water
Analysis Batch: 417272

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	50.0	50.7		ug/L		101	65 - 138
1,2,3-Trichloropropane	50.0	52.1		ug/L		104	70 - 130
1,2,4-Trimethylbenzene	50.0	50.6		ug/L		101	70 - 130
1,3,5-Trimethylbenzene	50.0	52.2		ug/L		104	69 - 130
Vinyl acetate	100	88.2		ug/L		88	26 - 160
Vinyl chloride	50.0	55.3		ug/L		111	59 - 136
Xylenes, Total	100	94.1		ug/L		94	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*93*		*78 - 118*
Dibromofluoromethane	*97*		*81 - 121*
Toluene-d8 (Surr)	*97*		*80 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-416612/1-A
Matrix: Water
Analysis Batch: 417121

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416612

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.8	ug/L		10/23/18 14:09	10/26/18 17:06	1
Benzenethiol	ND		10	1.7	ug/L		10/23/18 14:09	10/26/18 17:06	1
Benzoic acid	ND		30	7.3	ug/L		10/23/18 14:09	10/26/18 17:06	1
Benzyl alcohol	ND		10	2.0	ug/L		10/23/18 14:09	10/26/18 17:06	1
Bis(2-chloroethoxy)methane	ND		10	0.69	ug/L		10/23/18 14:09	10/26/18 17:06	1
Bis(2-chloroethyl)ether	ND		10	0.74	ug/L		10/23/18 14:09	10/26/18 17:06	1
bis (2-chloroisopropyl) ether	ND		10	0.81	ug/L		10/23/18 14:09	10/26/18 17:06	1
Bis(2-ethylhexyl) phthalate	ND		10	5.0	ug/L		10/23/18 14:09	10/26/18 17:06	1
4-Bromophenyl phenyl ether	ND		10	0.32	ug/L		10/23/18 14:09	10/26/18 17:06	1
Butyl benzyl phthalate	ND		10	0.69	ug/L		10/23/18 14:09	10/26/18 17:06	1
4-Chloroaniline	ND		10	3.4	ug/L		10/23/18 14:09	10/26/18 17:06	1
4-Chloro-3-methylphenol	ND		10	3.8	ug/L		10/23/18 14:09	10/26/18 17:06	1
2-Chloronaphthalene	ND		10	0.52	ug/L		10/23/18 14:09	10/26/18 17:06	1
2-Chlorophenol	ND		10	2.2	ug/L		10/23/18 14:09	10/26/18 17:06	1
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		10/23/18 14:09	10/26/18 17:06	1
Dibenz[a,h]acridine	ND		10	3.0	ug/L		10/23/18 14:09	10/26/18 17:06	1
Dibenzofuran	ND		10	0.52	ug/L		10/23/18 14:09	10/26/18 17:06	1
3,3'-Dichlorobenzidine	ND		10	2.6	ug/L		10/23/18 14:09	10/26/18 17:06	1
2,4-Dichlorophenol	ND		10	3.0	ug/L		10/23/18 14:09	10/26/18 17:06	1
Diethyl phthalate	ND		10	0.70	ug/L		10/23/18 14:09	10/26/18 17:06	1
2,4-Dimethylphenol	ND		10	3.5	ug/L		10/23/18 14:09	10/26/18 17:06	1
Dimethyl phthalate	ND		10	0.60	ug/L		10/23/18 14:09	10/26/18 17:06	1
Di-n-butyl phthalate	ND		10	2.7	ug/L		10/23/18 14:09	10/26/18 17:06	1
4,6-Dinitro-ortho-cresol	ND		10	2.0	ug/L		10/23/18 14:09	10/26/18 17:06	1
2,4-Dinitrophenol	ND		30	3.4	ug/L		10/23/18 14:09	10/26/18 17:06	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		10/23/18 14:09	10/26/18 17:06	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		10/23/18 14:09	10/26/18 17:06	1
Di-n-octyl phthalate	ND		10	0.44	ug/L		10/23/18 14:09	10/26/18 17:06	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-416612/1-A
Matrix: Water
Analysis Batch: 417121

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416612

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		10	1.0	ug/L		10/23/18 14:09	10/26/18 17:06	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		10/23/18 14:09	10/26/18 17:06	1
Hexachlorobenzene	ND		10	0.25	ug/L		10/23/18 14:09	10/26/18 17:06	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		10/23/18 14:09	10/26/18 17:06	1
Hexachloroethane	ND		10	4.2	ug/L		10/23/18 14:09	10/26/18 17:06	1
Indene	ND		10	1.0	ug/L		10/23/18 14:09	10/26/18 17:06	1
Isophorone	ND		10	0.57	ug/L		10/23/18 14:09	10/26/18 17:06	1
2-Methylphenol	ND		10	1.8	ug/L		10/23/18 14:09	10/26/18 17:06	1
3 & 4 Methylphenol	ND		20	1.0	ug/L		10/23/18 14:09	10/26/18 17:06	1
2-Nitroaniline	ND		10	2.2	ug/L		10/23/18 14:09	10/26/18 17:06	1
3-Nitroaniline	ND		10	1.8	ug/L		10/23/18 14:09	10/26/18 17:06	1
4-Nitroaniline	ND		10	2.5	ug/L		10/23/18 14:09	10/26/18 17:06	1
Nitrobenzene	ND		10	0.55	ug/L		10/23/18 14:09	10/26/18 17:06	1
2-Nitrophenol	ND		10	0.65	ug/L		10/23/18 14:09	10/26/18 17:06	1
4-Nitrophenol	ND		10	2.1	ug/L		10/23/18 14:09	10/26/18 17:06	1
N-Nitrosodimethylamine	ND		10	3.5	ug/L		10/23/18 14:09	10/26/18 17:06	1
N-Nitrosodi-n-propylamine	ND		10	3.3	ug/L		10/23/18 14:09	10/26/18 17:06	1
N-Nitrosodiphenylamine	ND		10	0.47	ug/L		10/23/18 14:09	10/26/18 17:06	1
Pentachlorophenol	ND		20	1.8	ug/L		10/23/18 14:09	10/26/18 17:06	1
Phenol	ND		10	2.6	ug/L		10/23/18 14:09	10/26/18 17:06	1
Pyridine	ND		10	3.2	ug/L		10/23/18 14:09	10/26/18 17:06	1
Quinoline	ND		10	6.0	ug/L		10/23/18 14:09	10/26/18 17:06	1
2,4,5-Trichlorophenol	ND		10	3.7	ug/L		10/23/18 14:09	10/26/18 17:06	1
2,4,6-Trichlorophenol	ND		10	3.5	ug/L		10/23/18 14:09	10/26/18 17:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*77*		*34 - 120*	*10/23/18 14:09*	*10/26/18 17:06*	*1*
2-Fluorophenol	*35*		*10 - 120*	*10/23/18 14:09*	*10/26/18 17:06*	*1*
Nitrobenzene-d5	*77*		*27 - 120*	*10/23/18 14:09*	*10/26/18 17:06*	*1*
Phenol-d5	*68*		*10 - 120*	*10/23/18 14:09*	*10/26/18 17:06*	*1*
Terphenyl-d14	*83*		*53 - 125*	*10/23/18 14:09*	*10/26/18 17:06*	*1*
2,4,6-Tribromophenol	*77*		*15 - 135*	*10/23/18 14:09*	*10/26/18 17:06*	*1*

Lab Sample ID: LCS 400-416612/2-A
Matrix: Water
Analysis Batch: 417121

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416612

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aniline	30.0	32.0		ug/L		107	29 - 120
Benzoic acid	118	97.9		ug/L		83	10 - 150
Benzyl alcohol	30.0	27.6		ug/L		92	19 - 125
Bis(2-chloroethoxy)methane	30.0	28.2		ug/L		94	45 - 120
Bis(2-chloroethyl)ether	30.0	24.2		ug/L		81	48 - 120
bis (2-chloroisopropyl) ether	30.0	22.5		ug/L		75	30 - 125
Bis(2-ethylhexyl) phthalate	30.0	26.9		ug/L		90	48 - 150
4-Bromophenyl phenyl ether	30.0	29.4		ug/L		98	55 - 122
Butyl benzyl phthalate	30.0	27.2		ug/L		91	46 - 145

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-416612/2-A
Matrix: Water
Analysis Batch: 417121

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416612

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Chloroaniline	30.0	25.5		ug/L		85	30 - 120
4-Chloro-3-methylphenol	30.0	32.0		ug/L		107	39 - 140
2-Chloronaphthalene	30.0	23.7		ug/L		79	52 - 120
2-Chlorophenol	30.0	20.9		ug/L		70	34 - 120
4-Chlorophenyl phenyl ether	30.0	28.0		ug/L		93	58 - 124
Dibenz[a,h]acridine	30.0	26.0		ug/L		87	46 - 149
Dibenzofuran	30.0	27.4		ug/L		91	58 - 123
3,3'-Dichlorobenzidine	40.0	68.0	E *	ug/L		170	39 - 135
2,4-Dichlorophenol	30.0	27.7		ug/L		92	39 - 128
Diethyl phthalate	30.0	29.6		ug/L		99	44 - 146
2,4-Dimethylphenol	30.0	28.9		ug/L		96	44 - 120
Dimethyl phthalate	30.0	29.0		ug/L		97	50 - 131
Di-n-butyl phthalate	30.0	30.3		ug/L		101	55 - 131
4,6-Dinitro-ortho-cresol	60.0	68.4		ug/L		114	10 - 150
2,4-Dinitrophenol	60.0	65.9		ug/L		110	10 - 150
2,4-Dinitrotoluene	30.0	33.5		ug/L		112	58 - 140
2,6-Dinitrotoluene	30.0	29.9		ug/L		100	57 - 130
Di-n-octyl phthalate	30.0	28.2		ug/L		94	50 - 150
1,4-Dioxane	30.0	14.2		ug/L		47	25 - 120
1,2-Diphenylhydrazine (as Azobenzene)	30.0	26.7		ug/L		89	47 - 123
Hexachlorobenzene	30.0	31.5		ug/L		105	52 - 131
Hexachlorocyclopentadiene	30.0	11.9	J	ug/L		40	10 - 129
Hexachloroethane	30.0	17.7		ug/L		59	41 - 120
Indene	30.0	26.1		ug/L		87	47 - 120
Isophorone	30.0	27.5		ug/L		92	49 - 120
2-Methylphenol	30.0	26.8		ug/L		89	39 - 123
3 & 4 Methylphenol	30.0	25.4		ug/L		85	38 - 121
2-Nitroaniline	30.0	28.9		ug/L		96	47 - 150
3-Nitroaniline	30.0	29.2		ug/L		97	34 - 132
4-Nitroaniline	30.0	31.5		ug/L		105	41 - 135
Nitrobenzene	30.0	26.8		ug/L		89	47 - 120
2-Nitrophenol	30.0	27.3		ug/L		91	28 - 136
4-Nitrophenol	60.0	59.4		ug/L		99	10 - 150
N-Nitrosodimethylamine	30.0	26.9		ug/L		90	22 - 148
N-Nitrosodi-n-propylamine	30.0	27.1		ug/L		90	44 - 120
N-Nitrosodiphenylamine	29.8	28.5		ug/L		96	56 - 120
Pentachlorophenol	60.0	68.3		ug/L		114	15 - 141
Phenol	30.0	21.7		ug/L		72	33 - 120
Pyridine	60.0	37.2		ug/L		62	26 - 120
Quinoline	30.0	34.3		ug/L		114	51 - 129
2,4,5-Trichlorophenol	30.0	29.9		ug/L		100	38 - 147
2,4,6-Trichlorophenol	30.0	27.9		ug/L		93	36 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*85*		*34 - 120*
2-Fluorophenol	*33*		*10 - 120*
Nitrobenzene-d5	*88*		*27 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-416612/2-A
Matrix: Water
Analysis Batch: 417121

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416612

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Phenol-d5	*71*		*10 - 120*
Terphenyl-d14	*94*		*53 - 125*
2,4,6-Tribromophenol	*110*		*15 - 135*

Lab Sample ID: LCS 400-416612/4-A
Matrix: Water
Analysis Batch: 416965

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416612

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzenethiol	30.0	2.12	J *	ug/L		7	10 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl	*43*		*34 - 120*
2-Fluorophenol	*15*		*10 - 120*
Nitrobenzene-d5	*51*		*27 - 120*
Phenol-d5	*32*		*10 - 120*
Terphenyl-d14	*59*		*53 - 125*
2,4,6-Tribromophenol	*34*		*15 - 135*

Lab Sample ID: LCSD 400-416612/3-A
Matrix: Water
Analysis Batch: 417121

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416612

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aniline	30.0	34.5		ug/L		115	29 - 120	8	30
Benzoic acid	118	93.8		ug/L		80	10 - 150	4	30
Benzyl alcohol	30.0	30.5		ug/L		102	19 - 125	10	30
Bis(2-chloroethoxy)methane	30.0	29.4		ug/L		98	45 - 120	4	30
Bis(2-chloroethyl)ether	30.0	25.4		ug/L		85	48 - 120	5	30
bis (2-chloroisopropyl) ether	30.0	24.4		ug/L		81	30 - 125	8	30
Bis(2-ethylhexyl) phthalate	30.0	26.6		ug/L		89	48 - 150	1	30
4-Bromophenyl phenyl ether	30.0	30.0		ug/L		100	55 - 122	2	30
Butyl benzyl phthalate	30.0	27.4		ug/L		91	46 - 145	1	30
4-Chloroaniline	30.0	26.9		ug/L		90	30 - 120	5	30
4-Chloro-3-methylphenol	30.0	33.7		ug/L		112	39 - 140	5	30
2-Chloronaphthalene	30.0	27.0		ug/L		90	52 - 120	13	30
2-Chlorophenol	30.0	23.5		ug/L		78	34 - 120	12	30
4-Chlorophenyl phenyl ether	30.0	29.2		ug/L		97	58 - 124	4	30
Dibenz[a,h]acridine	30.0	23.6		ug/L		79	46 - 149	10	30
Dibenzofuran	30.0	28.8		ug/L		96	58 - 123	5	30
3,3'-Dichlorobenzidine	40.0	71.0	E *	ug/L		177	39 - 135	4	30
2,4-Dichlorophenol	30.0	29.4		ug/L		98	39 - 128	6	30
Diethyl phthalate	30.0	31.5		ug/L		105	44 - 146	6	30
2,4-Dimethylphenol	30.0	31.2		ug/L		104	44 - 120	8	30
Dimethyl phthalate	30.0	31.0		ug/L		103	50 - 131	7	30
Di-n-butyl phthalate	30.0	30.1		ug/L		100	55 - 131	1	30
4,6-Dinitro-ortho-cresol	60.0	73.1		ug/L		122	10 - 150	7	30
2,4-Dinitrophenol	60.0	67.3		ug/L		112	10 - 150	2	30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-416612/3-A
Matrix: Water
Analysis Batch: 417121

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416612

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4-Dinitrotoluene	30.0	35.8		ug/L		119	58 - 140	6	30
2,6-Dinitrotoluene	30.0	32.8		ug/L		109	57 - 130	9	30
Di-n-octyl phthalate	30.0	26.7		ug/L		89	50 - 150	5	30
1,4-Dioxane	30.0	17.2		ug/L		57	25 - 120	19	30
1,2-Diphenylhydrazine (as Azobenzene)	30.0	27.9		ug/L		93	47 - 123	4	30
Hexachlorobenzene	30.0	32.6		ug/L		109	52 - 131	3	30
Hexachlorocyclopentadiene	30.0	10.7	J	ug/L		36	10 - 129	10	30
Hexachloroethane	30.0	18.6		ug/L		62	41 - 120	5	30
Indene	30.0	28.2		ug/L		94	47 - 120	7	30
Isophorone	30.0	29.2		ug/L		97	49 - 120	6	30
2-Methylphenol	30.0	29.2		ug/L		97	39 - 123	9	30
3 & 4 Methylphenol	30.0	28.2		ug/L		94	38 - 121	10	30
2-Nitroaniline	30.0	29.4		ug/L		98	47 - 150	2	30
3-Nitroaniline	30.0	29.8		ug/L		99	34 - 132	2	30
4-Nitroaniline	30.0	32.7		ug/L		109	41 - 135	4	30
Nitrobenzene	30.0	28.2		ug/L		94	47 - 120	5	30
2-Nitrophenol	30.0	29.4		ug/L		98	28 - 136	8	30
4-Nitrophenol	60.0	61.8		ug/L		103	10 - 150	4	30
N-Nitrosodimethylamine	30.0	28.7		ug/L		96	22 - 148	7	30
N-Nitrosodi-n-propylamine	30.0	29.6		ug/L		99	44 - 120	9	30
N-Nitrosodiphenylamine	29.8	30.6		ug/L		103	56 - 120	7	30
Pentachlorophenol	60.0	69.6		ug/L		116	15 - 141	2	30
Phenol	30.0	24.3		ug/L		81	33 - 120	12	30
Pyridine	60.0	41.4		ug/L		69	26 - 120	11	30
Quinoline	30.0	35.5		ug/L		118	51 - 129	4	30
2,4,5-Trichlorophenol	30.0	32.2		ug/L		107	38 - 147	7	30
2,4,6-Trichlorophenol	30.0	30.7		ug/L		102	36 - 139	9	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*88*		*34 - 120*
2-Fluorophenol	*39*		*10 - 120*
Nitrobenzene-d5	*89*		*27 - 120*
Phenol-d5	*75*		*10 - 120*
Terphenyl-d14	*94*		*53 - 125*
2,4,6-Tribromophenol	*112*		*15 - 135*

Lab Sample ID: LCSD 400-416612/5-A
Matrix: Water
Analysis Batch: 416965

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416612

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzenethiol	30.0	ND	*	ug/L		2	10 - 120	122	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*47*		*34 - 120*
2-Fluorophenol	*17*		*10 - 120*
Nitrobenzene-d5	*54*		*27 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-416612/5-A
Matrix: Water
Analysis Batch: 416965

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416612

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Phenol-d5	*38*		*10 - 120*
Terphenyl-d14	*63*		*53 - 125*
2,4,6-Tribromophenol	*37*		*15 - 135*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 400-416612/1-A
Matrix: Water
Analysis Batch: 416937

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416612

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.020	ug/L		10/23/18 14:09	10/25/18 17:51	1
Acenaphthylene	ND		0.20	0.020	ug/L		10/23/18 14:09	10/25/18 17:51	1
Anthracene	ND		0.20	0.020	ug/L		10/23/18 14:09	10/25/18 17:51	1
Benzo[a]anthracene	ND		0.20	0.040	ug/L		10/23/18 14:09	10/25/18 17:51	1
Benzo[a]pyrene	ND		0.20	0.040	ug/L		10/23/18 14:09	10/25/18 17:51	1
Benzo[b]fluoranthene	ND		0.20	0.040	ug/L		10/23/18 14:09	10/25/18 17:51	1
Benzo[g,h,i]perylene	ND		0.20	0.040	ug/L		10/23/18 14:09	10/25/18 17:51	1
Benzo[k]fluoranthene	ND		0.20	0.040	ug/L		10/23/18 14:09	10/25/18 17:51	1
Chrysene	ND		0.20	0.040	ug/L		10/23/18 14:09	10/25/18 17:51	1
Dibenz(a,h)anthracene	ND		0.20	0.040	ug/L		10/23/18 14:09	10/25/18 17:51	1
Fluoranthene	ND		0.20	0.020	ug/L		10/23/18 14:09	10/25/18 17:51	1
Fluorene	ND		0.20	0.021	ug/L		10/23/18 14:09	10/25/18 17:51	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.040	ug/L		10/23/18 14:09	10/25/18 17:51	1
Phenanthrene	ND		0.20	0.020	ug/L		10/23/18 14:09	10/25/18 17:51	1
Pyrene	ND		0.20	0.020	ug/L		10/23/18 14:09	10/25/18 17:51	1
1-Methylnaphthalene	ND		0.20	0.020	ug/L		10/23/18 14:09	10/25/18 17:51	1
2-Methylnaphthalene	ND		0.20	0.020	ug/L		10/23/18 14:09	10/25/18 17:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*96*		*33 - 138*	*10/23/18 14:09*	*10/25/18 17:51*	*1*
2-Fluorobiphenyl	*79*		*15 - 122*	*10/23/18 14:09*	*10/25/18 17:51*	*1*
Nitrobenzene-d5	*73*		*19 - 130*	*10/23/18 14:09*	*10/25/18 17:51*	*1*

Lab Sample ID: LCS 400-416612/2-A
Matrix: Water
Analysis Batch: 416937

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416612

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	30.0	27.4		ug/L		91	41 - 120
Acenaphthylene	30.0	26.9		ug/L		90	44 - 120
Anthracene	30.0	25.7		ug/L		86	49 - 120
Benzo[a]anthracene	30.0	24.1		ug/L		80	61 - 135
Benzo[a]pyrene	30.0	26.4		ug/L		88	52 - 120
Benzo[b]fluoranthene	30.0	28.2		ug/L		94	53 - 134
Benzo[g,h,i]perylene	30.0	23.0		ug/L		77	47 - 133
Benzo[k]fluoranthene	30.0	26.8		ug/L		89	57 - 134

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCS 400-416612/2-A
Matrix: Water
Analysis Batch: 416937

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416612

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chrysene	30.0	25.3		ug/L		84	55 - 122
Dibenz(a,h)anthracene	30.0	22.5		ug/L		75	48 - 146
Fluoranthene	30.0	25.8		ug/L		86	54 - 128
Fluorene	30.0	29.1		ug/L		97	45 - 125
Indeno[1,2,3-cd]pyrene	30.0	21.5		ug/L		72	43 - 142
Phenanthrene	30.0	26.1		ug/L		87	48 - 120
Pyrene	30.0	25.3		ug/L		84	48 - 132
1-Methylnaphthalene	30.0	21.2		ug/L		71	41 - 120
2-Methylnaphthalene	30.0	20.9		ug/L		70	32 - 124

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14	*79*		*33 - 138*
2-Fluorobiphenyl	*81*		*15 - 122*
Nitrobenzene-d5	*80*		*19 - 130*

Lab Sample ID: LCSD 400-416612/3-A
Matrix: Water
Analysis Batch: 416937

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416612

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	30.0	27.7		ug/L		92	41 - 120	1	56
Acenaphthylene	30.0	27.7		ug/L		92	44 - 120	3	56
Anthracene	30.0	25.0		ug/L		83	49 - 120	2	51
Benzo[a]anthracene	30.0	23.8		ug/L		79	61 - 135	2	49
Benzo[a]pyrene	30.0	25.5		ug/L		85	52 - 120	4	50
Benzo[b]fluoranthene	30.0	26.2		ug/L		87	53 - 134	7	54
Benzo[g,h,i]perylene	30.0	23.1		ug/L		77	47 - 133	0	50
Benzo[k]fluoranthene	30.0	27.2		ug/L		91	57 - 134	1	52
Chrysene	30.0	24.9		ug/L		83	55 - 122	1	50
Dibenz(a,h)anthracene	30.0	22.0		ug/L		73	48 - 146	2	50
Fluoranthene	30.0	24.5		ug/L		82	54 - 128	5	52
Fluorene	30.0	29.1		ug/L		97	45 - 125	0	56
Indeno[1,2,3-cd]pyrene	30.0	21.4		ug/L		71	43 - 142	1	51
Phenanthrene	30.0	25.5		ug/L		85	48 - 120	2	56
Pyrene	30.0	24.8		ug/L		83	48 - 132	2	52
1-Methylnaphthalene	30.0	22.1		ug/L		74	41 - 120	4	55
2-Methylnaphthalene	30.0	21.7		ug/L		72	32 - 124	4	57

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Terphenyl-d14	*78*		*33 - 138*
2-Fluorobiphenyl	*81*		*15 - 122*
Nitrobenzene-d5	*82*		*19 - 130*

Method: 8011 - EDB and DBCP in Water by Microextraction

Lab Sample ID: MB 400-417470/1-A
Matrix: Water
Analysis Batch: 417869

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 417470

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.030	0.0055	ug/L		10/29/18 16:11	11/01/18 00:26	1
1,2-Dibromoethane	ND		0.020	0.0050	ug/L		10/29/18 16:11	11/01/18 00:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*108*	*p*	*51 - 149*	*10/29/18 16:11*	*11/01/18 00:26*	*1*

Lab Sample ID: LCS 400-417470/2-A
Matrix: Water
Analysis Batch: 417869

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 417470

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	0.100	0.115		ug/L		115	60 - 140
1,2-Dibromoethane	0.100	0.0689	p	ug/L		69	60 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*125*	*p*	*51 - 149*

Lab Sample ID: LCSD 400-417470/3-A
Matrix: Water
Analysis Batch: 417869

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 417470

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane	0.100	0.102		ug/L		102	60 - 140	12	30
1,2-Dibromoethane	0.100	0.0863		ug/L		86	60 - 140	22	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*117*	*p*	*51 - 149*

LAB (LOCATION)

☐ ACCUTEST (_____)

☐ CALSCIENCE (_____)

☑ TESTAMERICA (TestAmerica Pensacola; 3355 McLemore Dr Pensacola, FL 32514 (850-474-1001))

☐ Other Lab Vendor # 1364589 (TestAmerica)

Shell Oil Products US Chain Of Custody Record

AECOM

Please Check Appropriate Box:

☐ SGW FDG ☐ PIPELINE ☐ RETAIL

☐ CHEMICALS ☐ CONSULTANT ☐ LUBES

☐ TRANSPORTATION ☑ OTHER _ENV. SERVICES_____

Print Bill To Contact Name:	PlaNet Site or Project ID	☐ CHECK IF NO INCIDENT # APPLIES DATE: 10 16 18
Bob Billman	25278	PAGE: 1 of 1
PO #	**GSAP Project ID**	
60527968 - 01.03.004 / 60527968 - 01 03.0044	USPC/00114/R/02	

SAMPLING COMPANY: AECOM

LOG CODE:

SITE ADDRESS: Street and City: 900 South Central Ave; ROXANA — State: IL

AECOM Project / Task Number: Roxana Quarterly GW — 60527968 - 01.03.004 / 60527968 - 01.03.0044

ADDRESS: 100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA

LDF DELIVERABLE TO (Name, Company, Office Location):

PHONE NO:

E-MAIL:

AECOM Other ID:

PROJECT CONTACT (Hardcopy or PDF Report to): Elizabeth Kunkel, Bob Billman, Melissa Reniger

SAMPLER NAME(S) (Print): B. Howell M. Karnes

LAB USE ONLY

TELEPHONE: 314-429-0100 — FAX: 314-429-0462 — Bill To Contact E-MAIL: bob.billman@aecom.com; elizabeth.kunkel@aecom.com; melissa.reniger@aecom.com

TURNAROUND TIME (CALENDAR DAYS)

☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAY ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT

DELIVERABLES: ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) _EDD_____

TEMPERATURE ON RECEIPT C° Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
- Please include "J" values on Reports
- Please provide sample receipt upon login

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE EDD DISK

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	NON-UNIT COST 60527968 - 01.03.004: VOC 8260	SVOC 8270	UNIT COST 60527968 - 01.03.0044: VOC 8011	PAH 8270LL
	TB-ROX-101618-8011	10/16/18	0000	Water	2					2			✓	
	TB-ROX-101618-8260	"	0000	"	2					2	✓			
	P74-ROX-101618	"	0945	"	4			2		6	✓	✓	✓	✓
	P57-ROX-101618	"	1050	"	4			2		6	✓	✓	✓	✓
	P57-ROX-101618-DUP	"	1050	"	4			2		6	✓	✓	✓	✓
	P58-ROX-101618	"	1230	"	4			2		6	✓	✓	✓	✓

400-160707 COC

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

Container PID Readings or Laboratory Notes

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Megan Karnes	Fedex: 4535 0239 0648; 4535 0239 0637; 4535 0239 0626	10 16 18	1500
Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Received by: (Signature)	Date	Time
		10-17-18	8:57

Version 14Dec15

Custody Seals: 572022, 572023, 572024, 572025, 572026, 572027

Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 400-160707-1
SDG Number: 60527968

Login Number: 160707
List Number: 1
Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.4°C, 3.8°C, 1.1°C IR-8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 400-160707-1
SDG: 60527968

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-18 *
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-16	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Roxana Groundwater Quarterly – 4th Quarter 2018 Data Review

Laboratory SDG: 490-160858-1-Rev.1

Data Reviewer: Melissa Remiger

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 10/30/2018

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2017

Sample Identification	Sample Identification
TB-ROX-100918-8011	TB-ROX-100918-8260
ROST3MW-ROX-100918-EB	ROST3MW-ROX-100918
MW27-ROX-100918	MW26-ROX-100918

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, although not indicated in the laboratory case narrative, PAHs were detected in the equipment blank. Several SVOC LCS/LCSD recoveries were outside evaluation criteria. The VOC MS/MSD recovery for 2-chloroethyl vinyl ether was outside evaluation criteria in sample MW6A-ROX-100418. The continuing calibration verifications for benzoic acid and pentachlorophenol were outside evaluation criteria, biased low. These issues are addressed further in the appropriate sections of this data review. Additionally, the laboratory report was revised on October 26, 2018 to include the Detection and Surrogate Summaries, which had previously been omitted.

Three of 69 (2-chloroethyl vinyl ether, acrolein, and acrylonitrile) 8260 VOCs are acid-reactive compounds; results may be biased low due to the presence of HCl in the preservative.

The cooler receipt form did not indicate any problems.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

Yes

Blank ID	Parameter	Analyte	Concentration/ Amount
ROST3MW-ROX-100918-EB	PAHs	Acenaphthene	0.12 µg/L
ROST3MW-ROX-100918-EB	PAHs	Fluorene	0.060 µg/L
ROST3MW-ROX-100918-EB	PAHs	1-Methylnaphthalene	0.029 µg/L

Blank ID	Parameter	Analyte	Concentration/ Amount
ROST3MW-ROX-100918-EB	PAHs	2-Methylnaphthalene	0.061 µg/L
ROST3MW-ROX-100918-EB	PAHs	Phenanthrene	0.17 µg/L

Analytical data that were reported non-detect or at concentrations greater than five times (5X) the associated blank concentration did not require qualification. Please see section 12.0 of this review for additional qualifications regarding data associated with equipment blank ROST3MW-ROX-100918-EB.

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS/LCSD ID	Parameter	Analyte	LCS/ LCSD Recovery	RPD	LCS/LCSD/ RPD Criteria
LCS/LCSD 490-548892/2-A/3-A	SVOCs	Benzoic acid	**6/7**	15	10-110/50
LCS/LCSD 490-548892/2-A/3-A	SVOCs	3,3'-Dichlorobenzidine	**41/39**	3	46-143/50
LCS/LCSD 490-548892/2-A/3-A	SVOCs	Di-n-butyl phthalate	42/**41**	4	42-140/50
LCS/LCSD 490-548892/2-A/3-A	SVOCs	Di-n-octyl phthalate	43/**39**	8	42-142/49
LCS/LCSD 490-548892/2-A/3-A	SVOCs	Isophorone	**35/35**	0	39-120/50

Analytical data that required qualification based on LCS/LCSD data are included in the table below. Professional judgment was used to qualify, however not reject, data associated with benzoic acid in LCS/LCSD 490-548892/2-A/3-A; benzoic acid has been identified as a poor performing analyte under Method 8270.

Sample ID	Parameter	Analyte	Qualification
ROST3MW-ROX-100918	SVOCs	Benzoic acid	**UJ**
ROST3MW-ROX-100918	SVOCs	3,3'-Dichlorobenzidine	**UJ**
ROST3MW-ROX-100918	SVOCs	Di-n-butyl phthalate	**UJ**
ROST3MW-ROX-100918	SVOCs	Di-n-octyl phthalate	**UJ**
ROST3MW-ROX-100918	SVOCs	Isophorone	**UJ**
MW27-ROX-100918	SVOCs	Benzoic acid	**UJ**
MW27-ROX-100918	SVOCs	3,3'-Dichlorobenzidine	**UJ**
MW27-ROX-100918	SVOCs	Di-n-butyl phthalate	**UJ**
MW27-ROX-100918	SVOCs	Di-n-octyl phthalate	**UJ**
MW27-ROX-100918	SVOCs	Isophorone	**UJ**
MW26-ROX-100918	SVOCs	Benzoic acid	**UJ**
MW26-ROX-100918	SVOCs	3,3'-Dichlorobenzidine	**UJ**
MW26-ROX-100918	SVOCs	Di-n-butyl phthalate	**UJ**
MW26-ROX-100918	SVOCs	Di-n-octyl phthalate	**UJ**
MW26-ROX-100918	SVOCs	Isophorone	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

Yes, sample MW26-ROX-100918 was spiked and duplicated for Method 8260 VOCs, Method 8011 VOCs, and Method 8270 SVOCs/PAHs.

Were MS/MSD recoveries within evaluation criteria?

No

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
MW26-ROX-100918	VOCs	2-Chloroethyl vinyl ether	**0/0**	**NC**	10-139/50
MW26-ROX-100918	SVOCs	Benzoic acid	**0/0**	**NC**	10-150/50
MW26-ROX-100918	SVOCs	1,4-Dioxane	17/24	**35**	10-110/33

Analytical data that required qualification based on MS/MSD data are included in the table below. Analytical data associated with RPD alone outside evaluation criteria did not require qualification. Benzoic acid was previously qualified in Section 5.0 of this review due to LCS/LCSD recoveries outside evaluation criteria; no further qualification of benzoic acid was required.

Sample ID	Parameter	Analyte	Qualification
MW26-ROX-100918	VOCs	2-Chloroethyl vinyl ether	**UJ**

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; samples analyzed did not require dilution.

12.0 Additional Qualifications

Were additional qualifications applied?

Yes, the continuing calibration verifications for benzoic acid and pentachlorophenol were below acceptance criteria and are qualified as summarized in the following table. Benzoic acid was previously qualified in Section 5.0 of this review due to LCS/LCSD recoveries outside evaluation criteria; no further qualification of benzoic acid was required.

Sample ID	Parameter	Analyte	Qualification
ROST3MW-ROX-100918	SVOCs	Pentachlorophenol	**UJ**
MW27-ROX-100918	SVOCs	Pentachlorophenol	**UJ**
MW26-ROX-100918	SVOCs	Pentachlorophenol	**UJ**

Additionally, professional judgment was used to qualify, however not reject, data that was associated with equipment blank ROST3MW-ROX-100918-EB, due to historical detections.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
ROST3MW-ROX-100918	PAHs	Acenaphthene	-	**J**
ROST3MW-ROX-100918	PAHs	Fluorene	-	**J**
ROST3MW-ROX-100918	PAHs	2-Methylnaphthalene	-	**J**
ROST3MW-ROX-100918	PAHs	Phenanthrene	-	**J**

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-160858-1
Client Project/Site: ROXANA QUARTERLY
Revision: 1

For:
AECOM Technical Services Inc.
100 N. Broadway
20th Floor
St. Louis, Missouri 63102

Attn: Elizabeth Kunkel

Authorized for release by:
10/26/2018 1:51:54 PM

Leah Klingensmith, Senior Project Manager
(615)301-5038
leah.klingensmith@testamericainc.com

LINKS

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Reviewed 10/30/18 LR

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 490-160858-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-160858-1

Comments
Revised Report
Report revised to include Detection and Surrogate Summary pages.
Supersedes report dated 10-25-18.

Receipt
The samples were received on 10/10/2018 10:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 1.2° C, 1.9° C, 3.0° C and 3.5° C.

GC/MS VOA
Method(s) 8260B: The preservative used in the sample containers provided is not compatible with one of the Method 8260 analytes requested. The following samples were received preserved with hydrochloric acid: TB-ROX-100918-8260 (490-160858-2), ROST3MW-ROX-100918-EB (490-160858-3), ROST3MW-ROX-100918 (490-160858-4), MW27-ROX-100918 (490-160858-5) and MW26-ROX-100918 (490-160858-6). The requested target analyte list includes 2-Chloroethyl vinyl ether, Acrolein and Acrylonitrile, an acid-labile compound that degrades in an acidic medium.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270D: The continuing calibration verification (CCV) analyzed in batch 490-550692 was outside the method criteria for the following analyte(s): Benzoic acid and Pentachlorophenol. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method(s) 8270D: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 490-548892 and analytical batch 490-550858 recovered outside control limits for the following analyte(s): Benzoic Acid. Benzoic Acid has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method(s) 8270D: The following analyte(s) recovered outside control limits for the LCS/LCSD associated with preparation batch 490-548892 and analytical batch 490-550858: 3,3'-Dichlorobenzidine, Isophorone, Di-n-butyl phthalate and Di-n-octyl phthalate. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Method(s) 8270D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 490-548892 and analytical batch 490-550692 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method(s) 8011: The %RPD between the primary and confirmation column exceeded 40% for 1,3-Dichlorobenzene for the following samples: ROST3MW-ROX-100918-EB (490-160858-3) and MW26-ROX-100918 (490-160858-6[MS]). The lower value(s) has been reported and qualified in accordance with the laboratory's SOP.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160858-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-160858-1	TB-ROX-100918-8011	Water	10/09/18 00:01	10/10/18 10:15
490-160858-2	TB-ROX-100918-8260	Water	10/09/18 00:01	10/10/18 10:15
490-160858-3	ROST3MW-ROX-100918-EB	Water	10/09/18 09:00	10/10/18 10:15
490-160858-4	ROST3MW-ROX-100918	Water	10/09/18 09:40	10/10/18 10:15
490-160858-5	MW27-ROX-100918	Water	10/09/18 13:05	10/10/18 10:15
490-160858-6	MW26-ROX-100918	Water	10/09/18 13:50	10/10/18 10:15

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160858-1

Client Sample ID: TB-ROX-100918-8011

Lab Sample ID: 490-160858-1

No Detections.

Client Sample ID: TB-ROX-100918-8260

Lab Sample ID: 490-160858-2

No Detections.

Client Sample ID: ROST3MW-ROX-100918-EB

Lab Sample ID: 490-160858-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.12		0.095	0.019	ug/L	1		8270D SIM	Total/NA
Fluorene	0.060	J	0.095	0.019	ug/L	1		8270D SIM	Total/NA
1-Methylnaphthalene	0.029	J	0.095	0.019	ug/L	1		8270D SIM	Total/NA
2-Methylnaphthalene	0.061	J	0.095	0.029	ug/L	1		8270D SIM	Total/NA
Phenanthrene	0.17		0.095	0.029	ug/L	1		8270D SIM	Total/NA

Client Sample ID: ROST3MW-ROX-100918

Lab Sample ID: 490-160858-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.93	J	5.0	0.21	ug/L	1		8260B	Total/NA
sec-Butylbenzene	0.47	J	1.0	0.17	ug/L	1		8260B	Total/NA
1,2,4-Trimethylbenzene	0.36	J	1.0	0.17	ug/L	1		8260B	Total/NA
Acenaphthene	0.41	J	0.095	0.019	ug/L	1		8270D SIM	Total/NA
Acenaphthylene	0.076	J	0.095	0.028	ug/L	1		8270D SIM	Total/NA
Fluorene	0.16	J	0.095	0.019	ug/L	1		8270D SIM	Total/NA
1-Methylnaphthalene	0.32		0.095	0.019	ug/L	1		8270D SIM	Total/NA
2-Methylnaphthalene	0.091	J	0.095	0.028	ug/L	1		8270D SIM	Total/NA
Phenanthrene	0.26		0.095	0.028	ug/L	1		8270D SIM	Total/NA
Pyrene	0.020	J	0.095	0.019	ug/L	1		8270D SIM	Total/NA

Client Sample ID: MW27-ROX-100918

Lab Sample ID: 490-160858-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.52	J	5.0	0.21	ug/L	1		8260B	Total/NA
Acenaphthene	0.028	J	0.096	0.019	ug/L	1		8270D SIM	Total/NA
Fluorene	0.027	J	0.096	0.019	ug/L	1		8270D SIM	Total/NA
1-Methylnaphthalene	0.025	J	0.096	0.019	ug/L	1		8270D SIM	Total/NA
2-Methylnaphthalene	0.043	J	0.096	0.029	ug/L	1		8270D SIM	Total/NA
Phenanthrene	0.058	J	0.096	0.029	ug/L	1		8270D SIM	Total/NA

Client Sample ID: MW26-ROX-100918

Lab Sample ID: 490-160858-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.023	J	0.096	0.019	ug/L	1		8270D SIM	Total/NA
1-Methylnaphthalene	0.030	J	0.096	0.019	ug/L	1		8270D SIM	Total/NA
2-Methylnaphthalene	0.044	J	0.096	0.029	ug/L	1		8270D SIM	Total/NA
Phenanthrene	0.048	J	0.096	0.029	ug/L	1		8270D SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160858-1

Client Sample ID: TB-ROX-100918-8011
Date Collected: 10/09/18 00:01
Date Received: 10/10/18 10:15

Lab Sample ID: 490-160858-1
Matrix: Water

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.11	0.030	ug/L		10/11/18 09:51	10/11/18 16:23	1
1,2-Dibromoethane	ND		0.021	0.0064	ug/L		10/11/18 09:51	10/11/18 16:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*93*		*50 - 150*	*10/11/18 09:51*	*10/11/18 16:23*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160858-1

Client Sample ID: TB-ROX-100918-8260
Date Collected: 10/09/18 00:01
Date Received: 10/10/18 10:15

Lab Sample ID: 490-160858-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	2.7	ug/L			10/11/18 14:48	1
Acrolein	ND		50	4.1	ug/L			10/11/18 14:48	1
Acrylonitrile	ND		10	0.50	ug/L			10/11/18 14:48	1
Benzene	ND		1.0	0.20	ug/L			10/11/18 14:48	1
Bromobenzene	ND		1.0	0.21	ug/L			10/11/18 14:48	1
Bromochloromethane	ND		1.0	0.15	ug/L			10/11/18 14:48	1
Bromodichloromethane	ND		1.0	0.17	ug/L			10/11/18 14:48	1
Bromoform	ND		1.0	0.29	ug/L			10/11/18 14:48	1
Bromomethane	ND		1.0	0.35	ug/L			10/11/18 14:48	1
2-Butanone (MEK)	ND		50	2.6	ug/L			10/11/18 14:48	1
Carbon disulfide	ND		1.0	0.22	ug/L			10/11/18 14:48	1
Carbon tetrachloride	ND		1.0	0.18	ug/L			10/11/18 14:48	1
Chlorobenzene	ND		1.0	0.18	ug/L			10/11/18 14:48	1
Chloroethane	ND		1.0	0.36	ug/L			10/11/18 14:48	1
2-Chloroethyl vinyl ether	ND		10	0.67	ug/L			10/11/18 14:48	1
Chloroform	ND		1.0	0.23	ug/L			10/11/18 14:48	1
1-Chlorohexane	ND		2.0	0.30	ug/L			10/11/18 14:48	1
Chloromethane	ND		1.0	0.36	ug/L			10/11/18 14:48	1
cis-1,2-Dichloroethene	ND		1.0	0.21	ug/L			10/11/18 14:48	1
cis-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/11/18 14:48	1
Dibromochloromethane	ND		1.0	0.25	ug/L			10/11/18 14:48	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			10/11/18 14:48	1
1,3-Dichlorobenzene	ND		1.0	0.18	ug/L			10/11/18 14:48	1
1,4-Dichlorobenzene	ND		1.0	0.17	ug/L			10/11/18 14:48	1
Dichlorodifluoromethane	ND		1.0	0.17	ug/L			10/11/18 14:48	1
1,1-Dichloroethane	ND		1.0	0.24	ug/L			10/11/18 14:48	1
1,2-Dichloroethane	ND		1.0	0.20	ug/L			10/11/18 14:48	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			10/11/18 14:48	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			10/11/18 14:48	1
1,3-Dichloropropane	ND		1.0	0.19	ug/L			10/11/18 14:48	1
2,2-Dichloropropane	ND		1.0	0.16	ug/L			10/11/18 14:48	1
1,1-Dichloropropene	ND		1.0	0.20	ug/L			10/11/18 14:48	1
Ethylbenzene	ND		1.0	0.19	ug/L			10/11/18 14:48	1
Ethyl methacrylate	ND		10	0.68	ug/L			10/11/18 14:48	1
Hexachlorobutadiene	ND		2.0	0.38	ug/L			10/11/18 14:48	1
2-Hexanone	ND		10	1.3	ug/L			10/11/18 14:48	1
Isopropylbenzene	ND		1.0	0.33	ug/L			10/11/18 14:48	1
Methylene bromide	ND		1.0	0.45	ug/L			10/11/18 14:48	1
Methylene Chloride	ND		5.0	1.0	ug/L			10/11/18 14:48	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.81	ug/L			10/11/18 14:48	1
Methyl tert-butyl ether	ND		1.0	0.17	ug/L			10/11/18 14:48	1
m-Xylene & p-Xylene	ND		2.0	0.38	ug/L			10/11/18 14:48	1
Naphthalene	ND		5.0	0.21	ug/L			10/11/18 14:48	1
n-Butylbenzene	ND		1.0	0.24	ug/L			10/11/18 14:48	1
N-Propylbenzene	ND		1.0	0.17	ug/L			10/11/18 14:48	1
o-Chlorotoluene	ND		1.0	0.18	ug/L			10/11/18 14:48	1
o-Xylene	ND		1.0	0.20	ug/L			10/11/18 14:48	1
p-Chlorotoluene	ND		1.0	0.17	ug/L			10/11/18 14:48	1
p-Isopropyltoluene	ND		1.0	0.17	ug/L			10/11/18 14:48	1

Client Sample ID: TB-ROX-100918-8260
Date Collected: 10/09/18 00:01
Date Received: 10/10/18 10:15

Lab Sample ID: 490-160858-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.17	ug/L			10/11/18 14:48	1
Styrene	ND		1.0	0.28	ug/L			10/11/18 14:48	1
tert-Butylbenzene	ND		1.0	0.17	ug/L			10/11/18 14:48	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.15	ug/L			10/11/18 14:48	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.19	ug/L			10/11/18 14:48	1
Tetrachloroethene	ND		1.0	0.14	ug/L			10/11/18 14:48	1
Toluene	ND		1.0	0.17	ug/L			10/11/18 14:48	1
trans-1,2-Dichloroethene	ND		1.0	0.23	ug/L			10/11/18 14:48	1
trans-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/11/18 14:48	1
1,2,3-Trichlorobenzene	ND		1.0	0.23	ug/L			10/11/18 14:48	1
1,2,4-Trichlorobenzene	ND		1.0	0.20	ug/L			10/11/18 14:48	1
1,1,1-Trichloroethane	ND		1.0	0.19	ug/L			10/11/18 14:48	1
1,1,2-Trichloroethane	ND		1.0	0.19	ug/L			10/11/18 14:48	1
Trichloroethene	ND		1.0	0.20	ug/L			10/11/18 14:48	1
Trichlorofluoromethane	ND		1.0	0.21	ug/L			10/11/18 14:48	1
1,2,3-Trichloropropane	ND		1.0	0.23	ug/L			10/11/18 14:48	1
1,2,4-Trimethylbenzene	ND		1.0	0.17	ug/L			10/11/18 14:48	1
1,3,5-Trimethylbenzene	ND		1.0	0.17	ug/L			10/11/18 14:48	1
Vinyl acetate	ND		10	1.7	ug/L			10/11/18 14:48	1
Vinyl chloride	ND		1.0	0.18	ug/L			10/11/18 14:48	1
Xylenes, Total	ND		3.0	0.58	ug/L			10/11/18 14:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*93*		*70 - 130*		*10/11/18 14:48*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 130*		*10/11/18 14:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 130*		*10/11/18 14:48*	*1*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*		*10/11/18 14:48*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160858-1

Client Sample ID: ROST3MW-ROX-100918-EB
Date Collected: 10/09/18 09:00
Date Received: 10/10/18 10:15

Lab Sample ID: 490-160858-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	2.7	ug/L			10/11/18 15:39	1
Acrolein	ND		50	4.1	ug/L			10/11/18 15:39	1
Acrylonitrile	ND		10	0.50	ug/L			10/11/18 15:39	1
Benzene	ND		1.0	0.20	ug/L			10/11/18 15:39	1
Bromobenzene	ND		1.0	0.21	ug/L			10/11/18 15:39	1
Bromochloromethane	ND		1.0	0.15	ug/L			10/11/18 15:39	1
Bromodichloromethane	ND		1.0	0.17	ug/L			10/11/18 15:39	1
Bromoform	ND		1.0	0.29	ug/L			10/11/18 15:39	1
Bromomethane	ND		1.0	0.35	ug/L			10/11/18 15:39	1
2-Butanone (MEK)	ND		50	2.6	ug/L			10/11/18 15:39	1
Carbon disulfide	ND		1.0	0.22	ug/L			10/11/18 15:39	1
Carbon tetrachloride	ND		1.0	0.18	ug/L			10/11/18 15:39	1
Chlorobenzene	ND		1.0	0.18	ug/L			10/11/18 15:39	1
Chloroethane	ND		1.0	0.36	ug/L			10/11/18 15:39	1
2-Chloroethyl vinyl ether	ND		10	0.67	ug/L			10/11/18 15:39	1
Chloroform	ND		1.0	0.23	ug/L			10/11/18 15:39	1
1-Chlorohexane	ND		2.0	0.30	ug/L			10/11/18 15:39	1
Chloromethane	ND		1.0	0.36	ug/L			10/11/18 15:39	1
cis-1,2-Dichloroethene	ND		1.0	0.21	ug/L			10/11/18 15:39	1
cis-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/11/18 15:39	1
Dibromochloromethane	ND		1.0	0.25	ug/L			10/11/18 15:39	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			10/11/18 15:39	1
1,3-Dichlorobenzene	ND		1.0	0.18	ug/L			10/11/18 15:39	1
1,4-Dichlorobenzene	ND		1.0	0.17	ug/L			10/11/18 15:39	1
Dichlorodifluoromethane	ND		1.0	0.17	ug/L			10/11/18 15:39	1
1,1-Dichloroethane	ND		1.0	0.24	ug/L			10/11/18 15:39	1
1,2-Dichloroethane	ND		1.0	0.20	ug/L			10/11/18 15:39	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			10/11/18 15:39	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			10/11/18 15:39	1
1,3-Dichloropropane	ND		1.0	0.19	ug/L			10/11/18 15:39	1
2,2-Dichloropropane	ND		1.0	0.16	ug/L			10/11/18 15:39	1
1,1-Dichloropropene	ND		1.0	0.20	ug/L			10/11/18 15:39	1
Ethylbenzene	ND		1.0	0.19	ug/L			10/11/18 15:39	1
Ethyl methacrylate	ND		10	0.68	ug/L			10/11/18 15:39	1
Hexachlorobutadiene	ND		2.0	0.38	ug/L			10/11/18 15:39	1
2-Hexanone	ND		10	1.3	ug/L			10/11/18 15:39	1
Isopropylbenzene	ND		1.0	0.33	ug/L			10/11/18 15:39	1
Methylene bromide	ND		1.0	0.45	ug/L			10/11/18 15:39	1
Methylene Chloride	ND		5.0	1.0	ug/L			10/11/18 15:39	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.81	ug/L			10/11/18 15:39	1
Methyl tert-butyl ether	ND		1.0	0.17	ug/L			10/11/18 15:39	1
m-Xylene & p-Xylene	ND		2.0	0.38	ug/L			10/11/18 15:39	1
Naphthalene	ND		5.0	0.21	ug/L			10/11/18 15:39	1
n-Butylbenzene	ND		1.0	0.24	ug/L			10/11/18 15:39	1
N-Propylbenzene	ND		1.0	0.17	ug/L			10/11/18 15:39	1
o-Chlorotoluene	ND		1.0	0.18	ug/L			10/11/18 15:39	1
o-Xylene	ND		1.0	0.20	ug/L			10/11/18 15:39	1
p-Chlorotoluene	ND		1.0	0.17	ug/L			10/11/18 15:39	1
p-Isopropyltoluene	ND		1.0	0.17	ug/L			10/11/18 15:39	1

Client Sample ID: ROST3MW-ROX-100918-EB
Date Collected: 10/09/18 09:00
Date Received: 10/10/18 10:15

Lab Sample ID: 490-160858-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.17	ug/L			10/11/18 15:39	1
Styrene	ND		1.0	0.28	ug/L			10/11/18 15:39	1
tert-Butylbenzene	ND		1.0	0.17	ug/L			10/11/18 15:39	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.15	ug/L			10/11/18 15:39	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.19	ug/L			10/11/18 15:39	1
Tetrachloroethene	ND		1.0	0.14	ug/L			10/11/18 15:39	1
Toluene	ND		1.0	0.17	ug/L			10/11/18 15:39	1
trans-1,2-Dichloroethene	ND		1.0	0.23	ug/L			10/11/18 15:39	1
trans-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/11/18 15:39	1
1,2,3-Trichlorobenzene	ND		1.0	0.23	ug/L			10/11/18 15:39	1
1,2,4-Trichlorobenzene	ND		1.0	0.20	ug/L			10/11/18 15:39	1
1,1,1-Trichloroethane	ND		1.0	0.19	ug/L			10/11/18 15:39	1
1,1,2-Trichloroethane	ND		1.0	0.19	ug/L			10/11/18 15:39	1
Trichloroethene	ND		1.0	0.20	ug/L			10/11/18 15:39	1
Trichlorofluoromethane	ND		1.0	0.21	ug/L			10/11/18 15:39	1
1,2,3-Trichloropropane	ND		1.0	0.23	ug/L			10/11/18 15:39	1
1,2,4-Trimethylbenzene	ND		1.0	0.17	ug/L			10/11/18 15:39	1
1,3,5-Trimethylbenzene	ND		1.0	0.17	ug/L			10/11/18 15:39	1
Vinyl acetate	ND		10	1.7	ug/L			10/11/18 15:39	1
Vinyl chloride	ND		1.0	0.18	ug/L			10/11/18 15:39	1
Xylenes, Total	ND		3.0	0.58	ug/L			10/11/18 15:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*93*		*70 - 130*		*10/11/18 15:39*	*1*
Dibromofluoromethane (Surr)	*108*		*70 - 130*		*10/11/18 15:39*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 130*		*10/11/18 15:39*	*1*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*		*10/11/18 15:39*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.12		0.095	0.019	ug/L		10/11/18 07:21	10/19/18 21:53	1
Acenaphthylene	ND		0.095	0.029	ug/L		10/11/18 07:21	10/19/18 21:53	1
Anthracene	ND		0.095	0.029	ug/L		10/11/18 07:21	10/19/18 21:53	1
Benzo[a]anthracene	ND		0.095	0.019	ug/L		10/11/18 07:21	10/19/18 21:53	1
Benzo[a]pyrene	ND		0.095	0.019	ug/L		10/11/18 07:21	10/19/18 21:53	1
Benzo[b]fluoranthene	ND		0.095	0.019	ug/L		10/11/18 07:21	10/19/18 21:53	1
Benzo[g,h,i]perylene	ND		0.095	0.019	ug/L		10/11/18 07:21	10/19/18 21:53	1
Benzo[k]fluoranthene	ND		0.095	0.019	ug/L		10/11/18 07:21	10/19/18 21:53	1
Chrysene	ND		0.095	0.019	ug/L		10/11/18 07:21	10/19/18 21:53	1
Dibenz(a,h)anthracene	ND		0.095	0.019	ug/L		10/11/18 07:21	10/19/18 21:53	1
Fluoranthene	ND		0.095	0.029	ug/L		10/11/18 07:21	10/19/18 21:53	1
Fluorene	0.060	J	0.095	0.019	ug/L		10/11/18 07:21	10/19/18 21:53	1
Indeno[1,2,3-cd]pyrene	ND		0.095	0.019	ug/L		10/11/18 07:21	10/19/18 21:53	1
1-Methylnaphthalene	0.029	J	0.095	0.019	ug/L		10/11/18 07:21	10/19/18 21:53	1
2-Methylnaphthalene	0.061	J	0.095	0.029	ug/L		10/11/18 07:21	10/19/18 21:53	1
Phenanthrene	0.17		0.095	0.029	ug/L		10/11/18 07:21	10/19/18 21:53	1
Pyrene	ND		0.095	0.019	ug/L		10/11/18 07:21	10/19/18 21:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*87*		*27 - 120*	*10/11/18 07:21*	*10/19/18 21:53*	*1*

Client Sample ID: ROST3MW-ROX-100918-EB

Lab Sample ID: 490-160858-3
Matrix: Water

Date Collected: 10/09/18 09:00
Date Received: 10/10/18 10:15

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	85		13 - 120	10/11/18 07:21	10/19/18 21:53	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		24	2.0	ug/L		10/11/18 09:19	10/17/18 22:00	1
Benzenethiol	ND		95	24	ug/L		10/11/18 09:19	10/23/18 15:28	1
Benzoic acid	ND	*	48	16	ug/L		10/11/18 09:19	10/17/18 22:00	1
Benzyl alcohol	ND		48	1.4	ug/L		10/11/18 09:19	10/17/18 22:00	1
Bis(2-chloroethoxy)methane	ND		9.5	2.0	ug/L		10/11/18 09:19	10/17/18 22:00	1
Bis(2-chloroethyl)ether	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:00	1
bis (2-chloroisopropyl) ether	ND		9.5	1.7	ug/L		10/11/18 09:19	10/17/18 22:00	1
Bis(2-ethylhexyl) phthalate	ND		9.5	2.4	ug/L		10/11/18 09:19	10/17/18 22:00	1
4-Bromophenyl phenyl ether	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:00	1
Butyl benzyl phthalate	ND		9.5	2.0	ug/L		10/11/18 09:19	10/17/18 22:00	1
4-Chloroaniline	ND		9.5	2.6	ug/L		10/11/18 09:19	10/17/18 22:00	1
4-Chloro-3-methylphenol	ND		9.5	1.6	ug/L		10/11/18 09:19	10/17/18 22:00	1
2-Chloronaphthalene	ND		9.5	2.2	ug/L		10/11/18 09:19	10/17/18 22:00	1
2-Chlorophenol	ND		9.5	1.5	ug/L		10/11/18 09:19	10/17/18 22:00	1
4-Chlorophenyl phenyl ether	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:00	1
Dibenz[a,h]acridine	ND		9.5	1.3	ug/L		10/11/18 09:19	10/17/18 22:00	1
Dibenzofuran	ND		9.5	1.9	ug/L		10/11/18 09:19	10/17/18 22:00	1
3,3'-Dichlorobenzidine	ND	*	9.5	1.6	ug/L		10/11/18 09:19	10/17/18 22:00	1
2,4-Dichlorophenol	ND		9.5	1.9	ug/L		10/11/18 09:19	10/17/18 22:00	1
Diethyl phthalate	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:00	1
2,4-Dimethylphenol	ND		9.5	1.7	ug/L		10/11/18 09:19	10/17/18 22:00	1
Dimethyl phthalate	ND		9.5	1.6	ug/L		10/11/18 09:19	10/17/18 22:00	1
Di-n-butyl phthalate	ND	*	9.5	1.9	ug/L		10/11/18 09:19	10/17/18 22:00	1
4,6-Dinitro-ortho-cresol	ND		24	2.5	ug/L		10/11/18 09:19	10/17/18 22:00	1
2,4-Dinitrophenol	ND		24	6.6	ug/L		10/11/18 09:19	10/17/18 22:00	1
2,4-Dinitrotoluene	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:00	1
2,6-Dinitrotoluene	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:00	1
Di-n-octyl phthalate	ND	*	9.5	1.9	ug/L		10/11/18 09:19	10/17/18 22:00	1
1,4-Dioxane	ND		9.5	1.2	ug/L		10/11/18 09:19	10/17/18 22:00	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.5	1.7	ug/L		10/11/18 09:19	10/17/18 22:00	1
Hexachlorobenzene	ND		9.5	1.7	ug/L		10/11/18 09:19	10/17/18 22:00	1
Hexachlorocyclopentadiene	ND		9.5	2.5	ug/L		10/11/18 09:19	10/17/18 22:00	1
Hexachloroethane	ND		9.5	3.0	ug/L		10/11/18 09:19	10/17/18 22:00	1
Indene	ND		9.5	2.3	ug/L		10/11/18 09:19	10/17/18 22:00	1
Isophorone	ND	*	9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:00	1
2-Methylphenol	ND		9.5	1.5	ug/L		10/11/18 09:19	10/17/18 22:00	1
3 & 4 Methylphenol	ND		9.5	1.1	ug/L		10/11/18 09:19	10/17/18 22:00	1
2-Nitroaniline	ND		24	1.4	ug/L		10/11/18 09:19	10/17/18 22:00	1
3-Nitroaniline	ND		24	1.5	ug/L		10/11/18 09:19	10/17/18 22:00	1
4-Nitroaniline	ND		24	1.6	ug/L		10/11/18 09:19	10/17/18 22:00	1
Nitrobenzene	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:00	1
2-Nitrophenol	ND		9.5	1.9	ug/L		10/11/18 09:19	10/17/18 22:00	1
4-Nitrophenol	ND		24	2.3	ug/L		10/11/18 09:19	10/17/18 22:00	1
N-Nitrosodimethylamine	ND		9.5	3.2	ug/L		10/11/18 09:19	10/17/18 22:00	1

Client Sample ID: ROST3MW-ROX-100918-EB
Date Collected: 10/09/18 09:00
Date Received: 10/10/18 10:15

Lab Sample ID: 490-160858-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.5	1.9	ug/L		10/11/18 09:19	10/17/18 22:00	1
N-Nitrosodiphenylamine	ND		9.5	1.4	ug/L		10/11/18 09:19	10/17/18 22:00	1
Pentachlorophenol	ND		24	3.3	ug/L		10/11/18 09:19	10/17/18 22:00	1
Phenol	ND		9.5	3.2	ug/L		10/11/18 09:19	10/17/18 22:00	1
Pyridine	ND		9.5	1.7	ug/L		10/11/18 09:19	10/17/18 22:00	1
Quinoline	ND		9.5	2.7	ug/L		10/11/18 09:19	10/17/18 22:00	1
2,4,5-Trichlorophenol	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:00	1
2,4,6-Trichlorophenol	ND		9.5	1.5	ug/L		10/11/18 09:19	10/17/18 22:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*61*		*10 - 120*	*10/11/18 09:19*	*10/17/18 22:00*	*1*
Nitrobenzene-d5	*71*		*27 - 120*	*10/11/18 09:19*	*10/17/18 22:00*	*1*
Phenol-d5	*43*		*10 - 120*	*10/11/18 09:19*	*10/17/18 22:00*	*1*
Terphenyl-d14	*102*		*13 - 120*	*10/11/18 09:19*	*10/17/18 22:00*	*1*
2,4,6-Tribromophenol	*73*		*10 - 120*	*10/11/18 09:19*	*10/17/18 22:00*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.099	0.028	ug/L		10/11/18 09:51	10/11/18 16:38	1
1,2-Dibromoethane	ND		0.020	0.0060	ug/L		10/11/18 09:51	10/11/18 16:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*54*	*p*	*50 - 150*	*10/11/18 09:51*	*10/11/18 16:38*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160858-1

Client Sample ID: ROST3MW-ROX-100918
Date Collected: 10/09/18 09:40
Date Received: 10/10/18 10:15

Lab Sample ID: 490-160858-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	2.7	ug/L			10/11/18 18:38	1
Acrolein	ND		50	4.1	ug/L			10/11/18 18:38	1
Acrylonitrile	ND		10	0.50	ug/L			10/11/18 18:38	1
Benzene	ND		1.0	0.20	ug/L			10/11/18 18:38	1
Bromobenzene	ND		1.0	0.21	ug/L			10/11/18 18:38	1
Bromochloromethane	ND		1.0	0.15	ug/L			10/11/18 18:38	1
Bromodichloromethane	ND		1.0	0.17	ug/L			10/11/18 18:38	1
Bromoform	ND		1.0	0.29	ug/L			10/11/18 18:38	1
Bromomethane	ND		1.0	0.35	ug/L			10/11/18 18:38	1
2-Butanone (MEK)	ND		50	2.6	ug/L			10/11/18 18:38	1
Carbon disulfide	ND		1.0	0.22	ug/L			10/11/18 18:38	1
Carbon tetrachloride	ND		1.0	0.18	ug/L			10/11/18 18:38	1
Chlorobenzene	ND		1.0	0.18	ug/L			10/11/18 18:38	1
Chloroethane	ND		1.0	0.36	ug/L			10/11/18 18:38	1
2-Chloroethyl vinyl ether	ND		10	0.67	ug/L			10/11/18 18:38	1
Chloroform	ND		1.0	0.23	ug/L			10/11/18 18:38	1
1-Chlorohexane	ND		2.0	0.30	ug/L			10/11/18 18:38	1
Chloromethane	ND		1.0	0.36	ug/L			10/11/18 18:38	1
cis-1,2-Dichloroethene	ND		1.0	0.21	ug/L			10/11/18 18:38	1
cis-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/11/18 18:38	1
Dibromochloromethane	ND		1.0	0.25	ug/L			10/11/18 18:38	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			10/11/18 18:38	1
1,3-Dichlorobenzene	ND		1.0	0.18	ug/L			10/11/18 18:38	1
1,4-Dichlorobenzene	ND		1.0	0.17	ug/L			10/11/18 18:38	1
Dichlorodifluoromethane	ND		1.0	0.17	ug/L			10/11/18 18:38	1
1,1-Dichloroethane	ND		1.0	0.24	ug/L			10/11/18 18:38	1
1,2-Dichloroethane	ND		1.0	0.20	ug/L			10/11/18 18:38	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			10/11/18 18:38	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			10/11/18 18:38	1
1,3-Dichloropropane	ND		1.0	0.19	ug/L			10/11/18 18:38	1
2,2-Dichloropropane	ND		1.0	0.16	ug/L			10/11/18 18:38	1
1,1-Dichloropropene	ND		1.0	0.20	ug/L			10/11/18 18:38	1
Ethylbenzene	ND		1.0	0.19	ug/L			10/11/18 18:38	1
Ethyl methacrylate	ND		10	0.68	ug/L			10/11/18 18:38	1
Hexachlorobutadiene	ND		2.0	0.38	ug/L			10/11/18 18:38	1
2-Hexanone	ND		10	1.3	ug/L			10/11/18 18:38	1
Isopropylbenzene	ND		1.0	0.33	ug/L			10/11/18 18:38	1
Methylene bromide	ND		1.0	0.45	ug/L			10/11/18 18:38	1
Methylene Chloride	ND		5.0	1.0	ug/L			10/11/18 18:38	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.81	ug/L			10/11/18 18:38	1
Methyl tert-butyl ether	ND		1.0	0.17	ug/L			10/11/18 18:38	1
m-Xylene & p-Xylene	ND		2.0	0.38	ug/L			10/11/18 18:38	1
Naphthalene	0.93	J	5.0	0.21	ug/L			10/11/18 18:38	1
n-Butylbenzene	ND		1.0	0.24	ug/L			10/11/18 18:38	1
N-Propylbenzene	ND		1.0	0.17	ug/L			10/11/18 18:38	1
o-Chlorotoluene	ND		1.0	0.18	ug/L			10/11/18 18:38	1
o-Xylene	ND		1.0	0.20	ug/L			10/11/18 18:38	1
p-Chlorotoluene	ND		1.0	0.17	ug/L			10/11/18 18:38	1
p-Isopropyltoluene	ND		1.0	0.17	ug/L			10/11/18 18:38	1

Client Sample ID: ROST3MW-ROX-100918
Date Collected: 10/09/18 09:40
Date Received: 10/10/18 10:15

Lab Sample ID: 490-160858-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	0.47	J	1.0	0.17	ug/L			10/11/18 18:38	1
Styrene	ND		1.0	0.28	ug/L			10/11/18 18:38	1
tert-Butylbenzene	ND		1.0	0.17	ug/L			10/11/18 18:38	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.15	ug/L			10/11/18 18:38	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.19	ug/L			10/11/18 18:38	1
Tetrachloroethene	ND		1.0	0.14	ug/L			10/11/18 18:38	1
Toluene	ND		1.0	0.17	ug/L			10/11/18 18:38	1
trans-1,2-Dichloroethene	ND		1.0	0.23	ug/L			10/11/18 18:38	1
trans-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/11/18 18:38	1
1,2,3-Trichlorobenzene	ND		1.0	0.23	ug/L			10/11/18 18:38	1
1,2,4-Trichlorobenzene	ND		1.0	0.20	ug/L			10/11/18 18:38	1
1,1,1-Trichloroethane	ND		1.0	0.19	ug/L			10/11/18 18:38	1
1,1,2-Trichloroethane	ND		1.0	0.19	ug/L			10/11/18 18:38	1
Trichloroethene	ND		1.0	0.20	ug/L			10/11/18 18:38	1
Trichlorofluoromethane	ND		1.0	0.21	ug/L			10/11/18 18:38	1
1,2,3-Trichloropropane	ND		1.0	0.23	ug/L			10/11/18 18:38	1
1,2,4-Trimethylbenzene	0.36	J	1.0	0.17	ug/L			10/11/18 18:38	1
1,3,5-Trimethylbenzene	ND		1.0	0.17	ug/L			10/11/18 18:38	1
Vinyl acetate	ND		10	1.7	ug/L			10/11/18 18:38	1
Vinyl chloride	ND		1.0	0.18	ug/L			10/11/18 18:38	1
Xylenes, Total	ND		3.0	0.58	ug/L			10/11/18 18:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*92*		*70 - 130*		*10/11/18 18:38*	*1*
Dibromofluoromethane (Surr)	*99*		*70 - 130*		*10/11/18 18:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 130*		*10/11/18 18:38*	*1*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*		*10/11/18 18:38*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.41	J	0.095	0.019	ug/L		10/11/18 07:21	10/19/18 22:14	1
Acenaphthylene	0.076	J	0.095	0.028	ug/L		10/11/18 07:21	10/19/18 22:14	1
Anthracene	ND		0.095	0.028	ug/L		10/11/18 07:21	10/19/18 22:14	1
Benzo[a]anthracene	ND		0.095	0.019	ug/L		10/11/18 07:21	10/19/18 22:14	1
Benzo[a]pyrene	ND		0.095	0.019	ug/L		10/11/18 07:21	10/19/18 22:14	1
Benzo[b]fluoranthene	ND		0.095	0.019	ug/L		10/11/18 07:21	10/19/18 22:14	1
Benzo[g,h,i]perylene	ND		0.095	0.019	ug/L		10/11/18 07:21	10/19/18 22:14	1
Benzo[k]fluoranthene	ND		0.095	0.019	ug/L		10/11/18 07:21	10/19/18 22:14	1
Chrysene	ND		0.095	0.019	ug/L		10/11/18 07:21	10/19/18 22:14	1
Dibenz(a,h)anthracene	ND		0.095	0.019	ug/L		10/11/18 07:21	10/19/18 22:14	1
Fluoranthene	ND		0.095	0.028	ug/L		10/11/18 07:21	10/19/18 22:14	1
Fluorene	0.16	J	0.095	0.019	ug/L		10/11/18 07:21	10/19/18 22:14	1
Indeno[1,2,3-cd]pyrene	ND		0.095	0.019	ug/L		10/11/18 07:21	10/19/18 22:14	1
1-Methylnaphthalene	0.32		0.095	0.019	ug/L		10/11/18 07:21	10/19/18 22:14	1
2-Methylnaphthalene	0.091	J	0.095	0.028	ug/L		10/11/18 07:21	10/19/18 22:14	1
Phenanthrene	0.26	J	0.095	0.028	ug/L		10/11/18 07:21	10/19/18 22:14	1
Pyrene	0.020	J	0.095	0.019	ug/L		10/11/18 07:21	10/19/18 22:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*75*		*27 - 120*	*10/11/18 07:21*	*10/19/18 22:14*	*1*

Client Sample ID: ROST3MW-ROX-100918

Date Collected: 10/09/18 09:40
Date Received: 10/10/18 10:15

Lab Sample ID: 490-160858-4
Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	86		13 - 120	10/11/18 07:21	10/19/18 22:14	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		24	2.0	ug/L		10/11/18 09:19	10/17/18 22:20	1
Benzenethiol	ND		95	24	ug/L		10/11/18 09:19	10/23/18 15:48	1
Benzoic acid	ND	* UJ	48	16	ug/L		10/11/18 09:19	10/17/18 22:20	1
Benzyl alcohol	ND		48	1.4	ug/L		10/11/18 09:19	10/17/18 22:20	1
Bis(2-chloroethoxy)methane	ND		9.5	2.0	ug/L		10/11/18 09:19	10/17/18 22:20	1
Bis(2-chloroethyl)ether	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:20	1
bis (2-chloroisopropyl) ether	ND		9.5	1.7	ug/L		10/11/18 09:19	10/17/18 22:20	1
Bis(2-ethylhexyl) phthalate	ND		9.5	2.4	ug/L		10/11/18 09:19	10/17/18 22:20	1
4-Bromophenyl phenyl ether	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:20	1
Butyl benzyl phthalate	ND		9.5	2.0	ug/L		10/11/18 09:19	10/17/18 22:20	1
4-Chloroaniline	ND		9.5	2.6	ug/L		10/11/18 09:19	10/17/18 22:20	1
4-Chloro-3-methylphenol	ND		9.5	1.6	ug/L		10/11/18 09:19	10/17/18 22:20	1
2-Chloronaphthalene	ND		9.5	2.2	ug/L		10/11/18 09:19	10/17/18 22:20	1
2-Chlorophenol	ND		9.5	1.5	ug/L		10/11/18 09:19	10/17/18 22:20	1
4-Chlorophenyl phenyl ether	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:20	1
Dibenz[a,h]acridine	ND		9.5	1.3	ug/L		10/11/18 09:19	10/17/18 22:20	1
Dibenzofuran	ND		9.5	1.9	ug/L		10/11/18 09:19	10/17/18 22:20	1
3,3'-Dichlorobenzidine	ND	* UJ	9.5	1.6	ug/L		10/11/18 09:19	10/17/18 22:20	1
2,4-Dichlorophenol	ND		9.5	1.9	ug/L		10/11/18 09:19	10/17/18 22:20	1
Diethyl phthalate	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:20	1
2,4-Dimethylphenol	ND		9.5	1.7	ug/L		10/11/18 09:19	10/17/18 22:20	1
Dimethyl phthalate	ND		9.5	1.6	ug/L		10/11/18 09:19	10/17/18 22:20	1
Di-n-butyl phthalate	ND	* UJ	9.5	1.9	ug/L		10/11/18 09:19	10/17/18 22:20	1
4,6-Dinitro-ortho-cresol	ND		24	2.5	ug/L		10/11/18 09:19	10/17/18 22:20	1
2,4-Dinitrophenol	ND		24	6.6	ug/L		10/11/18 09:19	10/17/18 22:20	1
2,4-Dinitrotoluene	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:20	1
2,6-Dinitrotoluene	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:20	1
Di-n-octyl phthalate	ND	* UJ	9.5	1.9	ug/L		10/11/18 09:19	10/17/18 22:20	1
1,4-Dioxane	ND		9.5	1.2	ug/L		10/11/18 09:19	10/17/18 22:20	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.5	1.7	ug/L		10/11/18 09:19	10/17/18 22:20	1
Hexachlorobenzene	ND		9.5	1.7	ug/L		10/11/18 09:19	10/17/18 22:20	1
Hexachlorocyclopentadiene	ND		9.5	2.5	ug/L		10/11/18 09:19	10/17/18 22:20	1
Hexachloroethane	ND		9.5	3.0	ug/L		10/11/18 09:19	10/17/18 22:20	1
Indene	ND		9.5	2.3	ug/L		10/11/18 09:19	10/17/18 22:20	1
Isophorone	ND	* UJ	9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:20	1
2-Methylphenol	ND		9.5	1.5	ug/L		10/11/18 09:19	10/17/18 22:20	1
3 & 4 Methylphenol	ND		9.5	1.1	ug/L		10/11/18 09:19	10/17/18 22:20	1
2-Nitroaniline	ND		24	1.4	ug/L		10/11/18 09:19	10/17/18 22:20	1
3-Nitroaniline	ND		24	1.5	ug/L		10/11/18 09:19	10/17/18 22:20	1
4-Nitroaniline	ND		24	1.6	ug/L		10/11/18 09:19	10/17/18 22:20	1
Nitrobenzene	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:20	1
2-Nitrophenol	ND		9.5	1.9	ug/L		10/11/18 09:19	10/17/18 22:20	1
4-Nitrophenol	ND		24	2.3	ug/L		10/11/18 09:19	10/17/18 22:20	1
N-Nitrosodimethylamine	ND		9.5	3.2	ug/L		10/11/18 09:19	10/17/18 22:20	1

Client Sample ID: ROST3MW-ROX-100918
Date Collected: 10/09/18 09:40
Date Received: 10/10/18 10:15

Lab Sample ID: 490-160858-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.5	1.9	ug/L		10/11/18 09:19	10/17/18 22:20	1
N-Nitrosodiphenylamine	ND		9.5	1.4	ug/L		10/11/18 09:19	10/17/18 22:20	1
Pentachlorophenol	ND	UJ	24	3.3	ug/L		10/11/18 09:19	10/17/18 22:20	1
Phenol	ND		9.5	3.2	ug/L		10/11/18 09:19	10/17/18 22:20	1
Pyridine	ND		9.5	1.7	ug/L		10/11/18 09:19	10/17/18 22:20	1
Quinoline	ND		9.5	2.7	ug/L		10/11/18 09:19	10/17/18 22:20	1
2,4,5-Trichlorophenol	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:20	1
2,4,6-Trichlorophenol	ND		9.5	1.5	ug/L		10/11/18 09:19	10/17/18 22:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*52*		*10 - 120*	*10/11/18 09:19*	*10/17/18 22:20*	*1*
Nitrobenzene-d5	*58*		*27 - 120*	*10/11/18 09:19*	*10/17/18 22:20*	*1*
Phenol-d5	*37*		*10 - 120*	*10/11/18 09:19*	*10/17/18 22:20*	*1*
Terphenyl-d14	*92*		*13 - 120*	*10/11/18 09:19*	*10/17/18 22:20*	*1*
2,4,6-Tribromophenol	*74*		*10 - 120*	*10/11/18 09:19*	*10/17/18 22:20*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.10	0.028	ug/L		10/11/18 09:51	10/11/18 17:09	1
1,2-Dibromoethane	ND		0.020	0.0060	ug/L		10/11/18 09:51	10/11/18 17:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*107*		*50 - 150*	*10/11/18 09:51*	*10/11/18 17:09*	*1*

Client Sample ID: MW27-ROX-100918
Date Collected: 10/09/18 13:05
Date Received: 10/10/18 10:15

Lab Sample ID: 490-160858-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	2.7	ug/L			10/11/18 19:04	1
Acrolein	ND		50	4.1	ug/L			10/11/18 19:04	1
Acrylonitrile	ND		10	0.50	ug/L			10/11/18 19:04	1
Benzene	ND		1.0	0.20	ug/L			10/11/18 19:04	1
Bromobenzene	ND		1.0	0.21	ug/L			10/11/18 19:04	1
Bromochloromethane	ND		1.0	0.15	ug/L			10/11/18 19:04	1
Bromodichloromethane	ND		1.0	0.17	ug/L			10/11/18 19:04	1
Bromoform	ND		1.0	0.29	ug/L			10/11/18 19:04	1
Bromomethane	ND		1.0	0.35	ug/L			10/11/18 19:04	1
2-Butanone (MEK)	ND		50	2.6	ug/L			10/11/18 19:04	1
Carbon disulfide	ND		1.0	0.22	ug/L			10/11/18 19:04	1
Carbon tetrachloride	ND		1.0	0.18	ug/L			10/11/18 19:04	1
Chlorobenzene	ND		1.0	0.18	ug/L			10/11/18 19:04	1
Chloroethane	ND		1.0	0.36	ug/L			10/11/18 19:04	1
2-Chloroethyl vinyl ether	ND		10	0.67	ug/L			10/11/18 19:04	1
Chloroform	ND		1.0	0.23	ug/L			10/11/18 19:04	1
1-Chlorohexane	ND		2.0	0.30	ug/L			10/11/18 19:04	1
Chloromethane	ND		1.0	0.36	ug/L			10/11/18 19:04	1
cis-1,2-Dichloroethene	ND		1.0	0.21	ug/L			10/11/18 19:04	1
cis-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/11/18 19:04	1
Dibromochloromethane	ND		1.0	0.25	ug/L			10/11/18 19:04	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			10/11/18 19:04	1
1,3-Dichlorobenzene	ND		1.0	0.18	ug/L			10/11/18 19:04	1
1,4-Dichlorobenzene	ND		1.0	0.17	ug/L			10/11/18 19:04	1
Dichlorodifluoromethane	ND		1.0	0.17	ug/L			10/11/18 19:04	1
1,1-Dichloroethane	ND		1.0	0.24	ug/L			10/11/18 19:04	1
1,2-Dichloroethane	ND		1.0	0.20	ug/L			10/11/18 19:04	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			10/11/18 19:04	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			10/11/18 19:04	1
1,3-Dichloropropane	ND		1.0	0.19	ug/L			10/11/18 19:04	1
2,2-Dichloropropane	ND		1.0	0.16	ug/L			10/11/18 19:04	1
1,1-Dichloropropene	ND		1.0	0.20	ug/L			10/11/18 19:04	1
Ethylbenzene	ND		1.0	0.19	ug/L			10/11/18 19:04	1
Ethyl methacrylate	ND		10	0.68	ug/L			10/11/18 19:04	1
Hexachlorobutadiene	ND		2.0	0.38	ug/L			10/11/18 19:04	1
2-Hexanone	ND		10	1.3	ug/L			10/11/18 19:04	1
Isopropylbenzene	ND		1.0	0.33	ug/L			10/11/18 19:04	1
Methylene bromide	ND		1.0	0.45	ug/L			10/11/18 19:04	1
Methylene Chloride	ND		5.0	1.0	ug/L			10/11/18 19:04	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.81	ug/L			10/11/18 19:04	1
Methyl tert-butyl ether	ND		1.0	0.17	ug/L			10/11/18 19:04	1
m-Xylene & p-Xylene	ND		2.0	0.38	ug/L			10/11/18 19:04	1
Naphthalene	0.52	J	5.0	0.21	ug/L			10/11/18 19:04	1
n-Butylbenzene	ND		1.0	0.24	ug/L			10/11/18 19:04	1
N-Propylbenzene	ND		1.0	0.17	ug/L			10/11/18 19:04	1
o-Chlorotoluene	ND		1.0	0.18	ug/L			10/11/18 19:04	1
o-Xylene	ND		1.0	0.20	ug/L			10/11/18 19:04	1
p-Chlorotoluene	ND		1.0	0.17	ug/L			10/11/18 19:04	1
p-Isopropyltoluene	ND		1.0	0.17	ug/L			10/11/18 19:04	1

Client Sample ID: MW27-ROX-100918

Date Collected: 10/09/18 13:05
Date Received: 10/10/18 10:15

Lab Sample ID: 490-160858-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.17	ug/L			10/11/18 19:04	1
Styrene	ND		1.0	0.28	ug/L			10/11/18 19:04	1
tert-Butylbenzene	ND		1.0	0.17	ug/L			10/11/18 19:04	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.15	ug/L			10/11/18 19:04	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.19	ug/L			10/11/18 19:04	1
Tetrachloroethene	ND		1.0	0.14	ug/L			10/11/18 19:04	1
Toluene	ND		1.0	0.17	ug/L			10/11/18 19:04	1
trans-1,2-Dichloroethene	ND		1.0	0.23	ug/L			10/11/18 19:04	1
trans-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/11/18 19:04	1
1,2,3-Trichlorobenzene	ND		1.0	0.23	ug/L			10/11/18 19:04	1
1,2,4-Trichlorobenzene	ND		1.0	0.20	ug/L			10/11/18 19:04	1
1,1,1-Trichloroethane	ND		1.0	0.19	ug/L			10/11/18 19:04	1
1,1,2-Trichloroethane	ND		1.0	0.19	ug/L			10/11/18 19:04	1
Trichloroethene	ND		1.0	0.20	ug/L			10/11/18 19:04	1
Trichlorofluoromethane	ND		1.0	0.21	ug/L			10/11/18 19:04	1
1,2,3-Trichloropropane	ND		1.0	0.23	ug/L			10/11/18 19:04	1
1,2,4-Trimethylbenzene	ND		1.0	0.17	ug/L			10/11/18 19:04	1
1,3,5-Trimethylbenzene	ND		1.0	0.17	ug/L			10/11/18 19:04	1
Vinyl acetate	ND		10	1.7	ug/L			10/11/18 19:04	1
Vinyl chloride	ND		1.0	0.18	ug/L			10/11/18 19:04	1
Xylenes, Total	ND		3.0	0.58	ug/L			10/11/18 19:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*92*		*70 - 130*		*10/11/18 19:04*	*1*
Dibromofluoromethane (Surr)	*99*		*70 - 130*		*10/11/18 19:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*10/11/18 19:04*	*1*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*		*10/11/18 19:04*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.028	J	0.096	0.019	ug/L		10/11/18 07:21	10/19/18 22:35	1
Acenaphthylene	ND		0.096	0.029	ug/L		10/11/18 07:21	10/19/18 22:35	1
Anthracene	ND		0.096	0.029	ug/L		10/11/18 07:21	10/19/18 22:35	1
Benzo[a]anthracene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 22:35	1
Benzo[a]pyrene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 22:35	1
Benzo[b]fluoranthene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 22:35	1
Benzo[g,h,i]perylene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 22:35	1
Benzo[k]fluoranthene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 22:35	1
Chrysene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 22:35	1
Dibenz(a,h)anthracene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 22:35	1
Fluoranthene	ND		0.096	0.029	ug/L		10/11/18 07:21	10/19/18 22:35	1
Fluorene	0.027	J	0.096	0.019	ug/L		10/11/18 07:21	10/19/18 22:35	1
Indeno[1,2,3-cd]pyrene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 22:35	1
1-Methylnaphthalene	0.025	J	0.096	0.019	ug/L		10/11/18 07:21	10/19/18 22:35	1
2-Methylnaphthalene	0.043	J	0.096	0.029	ug/L		10/11/18 07:21	10/19/18 22:35	1
Phenanthrene	0.058	J	0.096	0.029	ug/L		10/11/18 07:21	10/19/18 22:35	1
Pyrene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 22:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*88*		*27 - 120*	*10/11/18 07:21*	*10/19/18 22:35*	*1*

Client Sample ID: MW27-ROX-100918

Date Collected: 10/09/18 13:05
Date Received: 10/10/18 10:15

Lab Sample ID: 490-160858-5
Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	105		13 - 120	10/11/18 07:21	10/19/18 22:35	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		24	2.0	ug/L		10/11/18 09:19	10/17/18 22:39	1
Benzenethiol	ND		95	24	ug/L		10/11/18 09:19	10/23/18 16:08	1
Benzoic acid	ND	* UJ	48	16	ug/L		10/11/18 09:19	10/17/18 22:39	1
Benzyl alcohol	ND		48	1.4	ug/L		10/11/18 09:19	10/17/18 22:39	1
Bis(2-chloroethoxy)methane	ND		9.5	2.0	ug/L		10/11/18 09:19	10/17/18 22:39	1
Bis(2-chloroethyl)ether	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:39	1
bis (2-chloroisopropyl) ether	ND		9.5	1.7	ug/L		10/11/18 09:19	10/17/18 22:39	1
Bis(2-ethylhexyl) phthalate	ND		9.5	2.4	ug/L		10/11/18 09:19	10/17/18 22:39	1
4-Bromophenyl phenyl ether	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:39	1
Butyl benzyl phthalate	ND		9.5	2.0	ug/L		10/11/18 09:19	10/17/18 22:39	1
4-Chloroaniline	ND		9.5	2.6	ug/L		10/11/18 09:19	10/17/18 22:39	1
4-Chloro-3-methylphenol	ND		9.5	1.6	ug/L		10/11/18 09:19	10/17/18 22:39	1
2-Chloronaphthalene	ND		9.5	2.2	ug/L		10/11/18 09:19	10/17/18 22:39	1
2-Chlorophenol	ND		9.5	1.5	ug/L		10/11/18 09:19	10/17/18 22:39	1
4-Chlorophenyl phenyl ether	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:39	1
Dibenz[a,h]acridine	ND		9.5	1.3	ug/L		10/11/18 09:19	10/17/18 22:39	1
Dibenzofuran	ND		9.5	1.9	ug/L		10/11/18 09:19	10/17/18 22:39	1
3,3'-Dichlorobenzidine	ND	* UJ	9.5	1.6	ug/L		10/11/18 09:19	10/17/18 22:39	1
2,4-Dichlorophenol	ND		9.5	1.9	ug/L		10/11/18 09:19	10/17/18 22:39	1
Diethyl phthalate	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:39	1
2,4-Dimethylphenol	ND		9.5	1.7	ug/L		10/11/18 09:19	10/17/18 22:39	1
Dimethyl phthalate	ND		9.5	1.6	ug/L		10/11/18 09:19	10/17/18 22:39	1
Di-n-butyl phthalate	ND	* UJ	9.5	1.9	ug/L		10/11/18 09:19	10/17/18 22:39	1
4,6-Dinitro-ortho-cresol	ND		24	2.5	ug/L		10/11/18 09:19	10/17/18 22:39	1
2,4-Dinitrophenol	ND		24	6.6	ug/L		10/11/18 09:19	10/17/18 22:39	1
2,4-Dinitrotoluene	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:39	1
2,6-Dinitrotoluene	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:39	1
Di-n-octyl phthalate	ND	* UJ	9.5	1.9	ug/L		10/11/18 09:19	10/17/18 22:39	1
1,4-Dioxane	ND		9.5	1.2	ug/L		10/11/18 09:19	10/17/18 22:39	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.5	1.7	ug/L		10/11/18 09:19	10/17/18 22:39	1
Hexachlorobenzene	ND		9.5	1.7	ug/L		10/11/18 09:19	10/17/18 22:39	1
Hexachlorocyclopentadiene	ND		9.5	2.5	ug/L		10/11/18 09:19	10/17/18 22:39	1
Hexachloroethane	ND		9.5	3.0	ug/L		10/11/18 09:19	10/17/18 22:39	1
Indene	ND		9.5	2.3	ug/L		10/11/18 09:19	10/17/18 22:39	1
Isophorone	ND	* UJ	9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:39	1
2-Methylphenol	ND		9.5	1.5	ug/L		10/11/18 09:19	10/17/18 22:39	1
3 & 4 Methylphenol	ND		9.5	1.1	ug/L		10/11/18 09:19	10/17/18 22:39	1
2-Nitroaniline	ND		24	1.4	ug/L		10/11/18 09:19	10/17/18 22:39	1
3-Nitroaniline	ND		24	1.5	ug/L		10/11/18 09:19	10/17/18 22:39	1
4-Nitroaniline	ND		24	1.6	ug/L		10/11/18 09:19	10/17/18 22:39	1
Nitrobenzene	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:39	1
2-Nitrophenol	ND		9.5	1.9	ug/L		10/11/18 09:19	10/17/18 22:39	1
4-Nitrophenol	ND		24	2.3	ug/L		10/11/18 09:19	10/17/18 22:39	1
N-Nitrosodimethylamine	ND		9.5	3.2	ug/L		10/11/18 09:19	10/17/18 22:39	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160858-1

Client Sample ID: MW27-ROX-100918
Date Collected: 10/09/18 13:05
Date Received: 10/10/18 10:15

Lab Sample ID: 490-160858-5
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.5	1.9	ug/L		10/11/18 09:19	10/17/18 22:39	1
N-Nitrosodiphenylamine	ND		9.5	1.4	ug/L		10/11/18 09:19	10/17/18 22:39	1
Pentachlorophenol	ND	UJ	24	3.3	ug/L		10/11/18 09:19	10/17/18 22:39	1
Phenol	ND		9.5	3.2	ug/L		10/11/18 09:19	10/17/18 22:39	1
Pyridine	ND		9.5	1.7	ug/L		10/11/18 09:19	10/17/18 22:39	1
Quinoline	ND		9.5	2.7	ug/L		10/11/18 09:19	10/17/18 22:39	1
2,4,5-Trichlorophenol	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:39	1
2,4,6-Trichlorophenol	ND		9.5	1.5	ug/L		10/11/18 09:19	10/17/18 22:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*60*		*10 - 120*	*10/11/18 09:19*	*10/17/18 22:39*	*1*
Nitrobenzene-d5	*67*		*27 - 120*	*10/11/18 09:19*	*10/17/18 22:39*	*1*
Phenol-d5	*40*		*10 - 120*	*10/11/18 09:19*	*10/17/18 22:39*	*1*
Terphenyl-d14	*102*		*13 - 120*	*10/11/18 09:19*	*10/17/18 22:39*	*1*
2,4,6-Tribromophenol	*75*		*10 - 120*	*10/11/18 09:19*	*10/17/18 22:39*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.10	0.028	ug/L		10/11/18 09:51	10/11/18 17:55	1
1,2-Dibromoethane	ND		0.020	0.0060	ug/L		10/11/18 09:51	10/11/18 17:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*96*		*50 - 150*	*10/11/18 09:51*	*10/11/18 17:55*	*1*

Client Sample ID: MW26-ROX-100918
Date Collected: 10/09/18 13:50
Date Received: 10/10/18 10:15

Lab Sample ID: 490-160858-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	2.7	ug/L			10/11/18 19:30	1
Acrolein	ND		50	4.1	ug/L			10/11/18 19:30	1
Acrylonitrile	ND		10	0.50	ug/L			10/11/18 19:30	1
Benzene	ND		1.0	0.20	ug/L			10/11/18 19:30	1
Bromobenzene	ND		1.0	0.21	ug/L			10/11/18 19:30	1
Bromochloromethane	ND		1.0	0.15	ug/L			10/11/18 19:30	1
Bromodichloromethane	ND		1.0	0.17	ug/L			10/11/18 19:30	1
Bromoform	ND		1.0	0.29	ug/L			10/11/18 19:30	1
Bromomethane	ND		1.0	0.35	ug/L			10/11/18 19:30	1
2-Butanone (MEK)	ND		50	2.6	ug/L			10/11/18 19:30	1
Carbon disulfide	ND		1.0	0.22	ug/L			10/11/18 19:30	1
Carbon tetrachloride	ND		1.0	0.18	ug/L			10/11/18 19:30	1
Chlorobenzene	ND		1.0	0.18	ug/L			10/11/18 19:30	1
Chloroethane	ND		1.0	0.36	ug/L			10/11/18 19:30	1
2-Chloroethyl vinyl ether	ND	F1 UJ	10	0.67	ug/L			10/11/18 19:30	1
Chloroform	ND		1.0	0.23	ug/L			10/11/18 19:30	1
1-Chlorohexane	ND		2.0	0.30	ug/L			10/11/18 19:30	1
Chloromethane	ND		1.0	0.36	ug/L			10/11/18 19:30	1
cis-1,2-Dichloroethene	ND		1.0	0.21	ug/L			10/11/18 19:30	1
cis-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/11/18 19:30	1
Dibromochloromethane	ND		1.0	0.25	ug/L			10/11/18 19:30	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			10/11/18 19:30	1
1,3-Dichlorobenzene	ND		1.0	0.18	ug/L			10/11/18 19:30	1
1,4-Dichlorobenzene	ND		1.0	0.17	ug/L			10/11/18 19:30	1
Dichlorodifluoromethane	ND		1.0	0.17	ug/L			10/11/18 19:30	1
1,1-Dichloroethane	ND		1.0	0.24	ug/L			10/11/18 19:30	1
1,2-Dichloroethane	ND		1.0	0.20	ug/L			10/11/18 19:30	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			10/11/18 19:30	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			10/11/18 19:30	1
1,3-Dichloropropane	ND		1.0	0.19	ug/L			10/11/18 19:30	1
2,2-Dichloropropane	ND		1.0	0.16	ug/L			10/11/18 19:30	1
1,1-Dichloropropene	ND		1.0	0.20	ug/L			10/11/18 19:30	1
Ethylbenzene	ND		1.0	0.19	ug/L			10/11/18 19:30	1
Ethyl methacrylate	ND		10	0.68	ug/L			10/11/18 19:30	1
Hexachlorobutadiene	ND		2.0	0.38	ug/L			10/11/18 19:30	1
2-Hexanone	ND		10	1.3	ug/L			10/11/18 19:30	1
Isopropylbenzene	ND		1.0	0.33	ug/L			10/11/18 19:30	1
Methylene bromide	ND		1.0	0.45	ug/L			10/11/18 19:30	1
Methylene Chloride	ND		5.0	1.0	ug/L			10/11/18 19:30	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.81	ug/L			10/11/18 19:30	1
Methyl tert-butyl ether	ND		1.0	0.17	ug/L			10/11/18 19:30	1
m-Xylene & p-Xylene	ND		2.0	0.38	ug/L			10/11/18 19:30	1
Naphthalene	ND		5.0	0.21	ug/L			10/11/18 19:30	1
n-Butylbenzene	ND		1.0	0.24	ug/L			10/11/18 19:30	1
N-Propylbenzene	ND		1.0	0.17	ug/L			10/11/18 19:30	1
o-Chlorotoluene	ND		1.0	0.18	ug/L			10/11/18 19:30	1
o-Xylene	ND		1.0	0.20	ug/L			10/11/18 19:30	1
p-Chlorotoluene	ND		1.0	0.17	ug/L			10/11/18 19:30	1
p-Isopropyltoluene	ND		1.0	0.17	ug/L			10/11/18 19:30	1

Client Sample ID: MW26-ROX-100918
Date Collected: 10/09/18 13:50
Date Received: 10/10/18 10:15

Lab Sample ID: 490-160858-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.17	ug/L			10/11/18 19:30	1
Styrene	ND		1.0	0.28	ug/L			10/11/18 19:30	1
tert-Butylbenzene	ND		1.0	0.17	ug/L			10/11/18 19:30	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.15	ug/L			10/11/18 19:30	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.19	ug/L			10/11/18 19:30	1
Tetrachloroethene	ND		1.0	0.14	ug/L			10/11/18 19:30	1
Toluene	ND		1.0	0.17	ug/L			10/11/18 19:30	1
trans-1,2-Dichloroethene	ND		1.0	0.23	ug/L			10/11/18 19:30	1
trans-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/11/18 19:30	1
1,2,3-Trichlorobenzene	ND		1.0	0.23	ug/L			10/11/18 19:30	1
1,2,4-Trichlorobenzene	ND		1.0	0.20	ug/L			10/11/18 19:30	1
1,1,1-Trichloroethane	ND		1.0	0.19	ug/L			10/11/18 19:30	1
1,1,2-Trichloroethane	ND		1.0	0.19	ug/L			10/11/18 19:30	1
Trichloroethene	ND		1.0	0.20	ug/L			10/11/18 19:30	1
Trichlorofluoromethane	ND		1.0	0.21	ug/L			10/11/18 19:30	1
1,2,3-Trichloropropane	ND		1.0	0.23	ug/L			10/11/18 19:30	1
1,2,4-Trimethylbenzene	ND		1.0	0.17	ug/L			10/11/18 19:30	1
1,3,5-Trimethylbenzene	ND		1.0	0.17	ug/L			10/11/18 19:30	1
Vinyl acetate	ND		10	1.7	ug/L			10/11/18 19:30	1
Vinyl chloride	ND		1.0	0.18	ug/L			10/11/18 19:30	1
Xylenes, Total	ND		3.0	0.58	ug/L			10/11/18 19:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*92*		*70 - 130*		*10/11/18 19:30*	*1*
Dibromofluoromethane (Surr)	*101*		*70 - 130*		*10/11/18 19:30*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*10/11/18 19:30*	*1*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*		*10/11/18 19:30*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.023	J	0.096	0.019	ug/L		10/11/18 07:21	10/19/18 22:56	1
Acenaphthylene	ND		0.096	0.029	ug/L		10/11/18 07:21	10/19/18 22:56	1
Anthracene	ND		0.096	0.029	ug/L		10/11/18 07:21	10/19/18 22:56	1
Benzo[a]anthracene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 22:56	1
Benzo[a]pyrene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 22:56	1
Benzo[b]fluoranthene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 22:56	1
Benzo[g,h,i]perylene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 22:56	1
Benzo[k]fluoranthene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 22:56	1
Chrysene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 22:56	1
Dibenz(a,h)anthracene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 22:56	1
Fluoranthene	ND		0.096	0.029	ug/L		10/11/18 07:21	10/19/18 22:56	1
Fluorene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 22:56	1
Indeno[1,2,3-cd]pyrene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 22:56	1
1-Methylnaphthalene	0.030	J	0.096	0.019	ug/L		10/11/18 07:21	10/19/18 22:56	1
2-Methylnaphthalene	0.044	J	0.096	0.029	ug/L		10/11/18 07:21	10/19/18 22:56	1
Phenanthrene	0.048	J	0.096	0.029	ug/L		10/11/18 07:21	10/19/18 22:56	1
Pyrene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 22:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*83*		*27 - 120*	*10/11/18 07:21*	*10/19/18 22:56*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160858-1

Client Sample ID: MW26-ROX-100918
Date Collected: 10/09/18 13:50
Date Received: 10/10/18 10:15

Lab Sample ID: 490-160858-6
Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	93		13 - 120	10/11/18 07:21	10/19/18 22:56	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		24	2.0	ug/L		10/11/18 09:19	10/17/18 22:59	1
Benzenethiol	ND		95	24	ug/L		10/11/18 09:19	10/23/18 16:27	1
Benzoic acid	ND	F1 * UJ	47	16	ug/L		10/11/18 09:19	10/17/18 22:59	1
Benzyl alcohol	ND		47	1.4	ug/L		10/11/18 09:19	10/17/18 22:59	1
Bis(2-chloroethoxy)methane	ND		9.5	2.0	ug/L		10/11/18 09:19	10/17/18 22:59	1
Bis(2-chloroethyl)ether	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:59	1
bis (2-chloroisopropyl) ether	ND		9.5	1.7	ug/L		10/11/18 09:19	10/17/18 22:59	1
Bis(2-ethylhexyl) phthalate	ND		9.5	2.4	ug/L		10/11/18 09:19	10/17/18 22:59	1
4-Bromophenyl phenyl ether	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:59	1
Butyl benzyl phthalate	ND		9.5	2.0	ug/L		10/11/18 09:19	10/17/18 22:59	1
4-Chloroaniline	ND		9.5	2.6	ug/L		10/11/18 09:19	10/17/18 22:59	1
4-Chloro-3-methylphenol	ND		9.5	1.6	ug/L		10/11/18 09:19	10/17/18 22:59	1
2-Chloronaphthalene	ND		9.5	2.2	ug/L		10/11/18 09:19	10/17/18 22:59	1
2-Chlorophenol	ND		9.5	1.5	ug/L		10/11/18 09:19	10/17/18 22:59	1
4-Chlorophenyl phenyl ether	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:59	1
Dibenz[a,h]acridine	ND		9.5	1.3	ug/L		10/11/18 09:19	10/17/18 22:59	1
Dibenzofuran	ND		9.5	1.9	ug/L		10/11/18 09:19	10/17/18 22:59	1
3,3'-Dichlorobenzidine	ND	* UJ	9.5	1.6	ug/L		10/11/18 09:19	10/17/18 22:59	1
2,4-Dichlorophenol	ND		9.5	1.9	ug/L		10/11/18 09:19	10/17/18 22:59	1
Diethyl phthalate	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:59	1
2,4-Dimethylphenol	ND		9.5	1.7	ug/L		10/11/18 09:19	10/17/18 22:59	1
Dimethyl phthalate	ND		9.5	1.6	ug/L		10/11/18 09:19	10/17/18 22:59	1
Di-n-butyl phthalate	ND	* UJ	9.5	1.9	ug/L		10/11/18 09:19	10/17/18 22:59	1
4,6-Dinitro-ortho-cresol	ND		24	2.5	ug/L		10/11/18 09:19	10/17/18 22:59	1
2,4-Dinitrophenol	ND		24	6.6	ug/L		10/11/18 09:19	10/17/18 22:59	1
2,4-Dinitrotoluene	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:59	1
2,6-Dinitrotoluene	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:59	1
Di-n-octyl phthalate	ND	* UJ	9.5	1.9	ug/L		10/11/18 09:19	10/17/18 22:59	1
1,4-Dioxane	ND	F2	9.5	1.2	ug/L		10/11/18 09:19	10/17/18 22:59	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.5	1.7	ug/L		10/11/18 09:19	10/17/18 22:59	1
Hexachlorobenzene	ND		9.5	1.7	ug/L		10/11/18 09:19	10/17/18 22:59	1
Hexachlorocyclopentadiene	ND		9.5	2.5	ug/L		10/11/18 09:19	10/17/18 22:59	1
Hexachloroethane	ND		9.5	3.0	ug/L		10/11/18 09:19	10/17/18 22:59	1
Indene	ND		9.5	2.3	ug/L		10/11/18 09:19	10/17/18 22:59	1
Isophorone	ND	* UJ	9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:59	1
2-Methylphenol	ND		9.5	1.5	ug/L		10/11/18 09:19	10/17/18 22:59	1
3 & 4 Methylphenol	ND		9.5	1.1	ug/L		10/11/18 09:19	10/17/18 22:59	1
2-Nitroaniline	ND		24	1.4	ug/L		10/11/18 09:19	10/17/18 22:59	1
3-Nitroaniline	ND		24	1.5	ug/L		10/11/18 09:19	10/17/18 22:59	1
4-Nitroaniline	ND		24	1.6	ug/L		10/11/18 09:19	10/17/18 22:59	1
Nitrobenzene	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:59	1
2-Nitrophenol	ND		9.5	1.9	ug/L		10/11/18 09:19	10/17/18 22:59	1
4-Nitrophenol	ND		24	2.3	ug/L		10/11/18 09:19	10/17/18 22:59	1
N-Nitrosodimethylamine	ND		9.5	3.2	ug/L		10/11/18 09:19	10/17/18 22:59	1

Client Sample ID: MW26-ROX-100918
Date Collected: 10/09/18 13:50
Date Received: 10/10/18 10:15

Lab Sample ID: 490-160858-6
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.5	1.9	ug/L		10/11/18 09:19	10/17/18 22:59	1
N-Nitrosodiphenylamine	ND		9.5	1.4	ug/L		10/11/18 09:19	10/17/18 22:59	1
Pentachlorophenol	ND	UJ	24	3.3	ug/L		10/11/18 09:19	10/17/18 22:59	1
Phenol	ND		9.5	3.2	ug/L		10/11/18 09:19	10/17/18 22:59	1
Pyridine	ND		9.5	1.7	ug/L		10/11/18 09:19	10/17/18 22:59	1
Quinoline	ND		9.5	2.7	ug/L		10/11/18 09:19	10/17/18 22:59	1
2,4,5-Trichlorophenol	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 22:59	1
2,4,6-Trichlorophenol	ND		9.5	1.5	ug/L		10/11/18 09:19	10/17/18 22:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*59*		*10 - 120*	*10/11/18 09:19*	*10/17/18 22:59*	*1*
Nitrobenzene-d5	*71*		*27 - 120*	*10/11/18 09:19*	*10/17/18 22:59*	*1*
Phenol-d5	*41*		*10 - 120*	*10/11/18 09:19*	*10/17/18 22:59*	*1*
Terphenyl-d14	*104*		*13 - 120*	*10/11/18 09:19*	*10/17/18 22:59*	*1*
2,4,6-Tribromophenol	*79*		*10 - 120*	*10/11/18 09:19*	*10/17/18 22:59*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.10	0.028	ug/L		10/11/18 09:51	10/11/18 18:10	1
1,2-Dibromoethane	ND		0.020	0.0060	ug/L		10/11/18 09:51	10/11/18 18:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*98*		*50 - 150*	*10/11/18 09:51*	*10/11/18 18:10*	*1*

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F2	MS/MSD RPD exceeds control limits
F1	MS and/or MSD Recovery is outside acceptance limits.

GC Semi VOA

Qualifier	Qualifier Description
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160858-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	TOL (70-130)	DBFM (70-130)	DCA (70-130)	BFB (70-130)
490-160858-2	TB-ROX-100918-8260	93	102	111	92
490-160858-3	ROST3MW-ROX-100918-EB	93	108	107	88
490-160858-4	ROST3MW-ROX-100918	92	99	105	92
490-160858-5	MW27-ROX-100918	92	99	104	92
490-160858-6	MW26-ROX-100918	92	101	101	91
490-160858-6 MS	MW26-ROX-100918	92	99	99	95
490-160858-6 MSD	MW26-ROX-100918	92	105	102	93
LCS 490-549195/4	Lab Control Sample	91	103	103	92
MB 490-549195/8	Method Blank	94	109	108	91

Surrogate Legend

TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)				
Lab Sample ID	Client Sample ID	2FP (10-120)	NBZ (27-120)	PHL (10-120)	TPHL (13-120)	TBP (10-120)
490-160858-3	ROST3MW-ROX-100918-EB	61	71	43	102	73
490-160858-4	ROST3MW-ROX-100918	52	58	37	92	74
490-160858-5	MW27-ROX-100918	60	67	40	102	75
490-160858-6	MW26-ROX-100918	59	71	41	104	79
490-160858-6 MS	MW26-ROX-100918	51	60	39	87	76
490-160858-6 MSD	MW26-ROX-100918	57	65	44	86	76
LCS 490-548892/2-A	Lab Control Sample	55	62	41	77	66
LCSD 490-548892/3-A	Lab Control Sample Dup	61	66	48	77	69
MB 490-548892/1-A	Method Blank	55	63	37	85	61

Surrogate Legend

2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPHL = Terphenyl-d14
TBP = 2,4,6-Tribromophenol

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	NBZ (27-120)	TPHL (13-120)
490-160858-3	ROST3MW-ROX-100918-EB	87	85
490-160858-4	ROST3MW-ROX-100918	75	86
490-160858-5	MW27-ROX-100918	88	105
490-160858-6	MW26-ROX-100918	83	93
490-160858-6 MS	MW26-ROX-100918	79	87

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	NBZ (27-120)	TPHL (13-120)
490-160858-6 MSD	MW26-ROX-100918	86	91
LCS 490-549140/2-A	Lab Control Sample	81	80
LCSD 490-549140/3-A	Lab Control Sample Dup	76	88
MB 490-549140/1-A	Method Blank	76	93

Surrogate Legend

NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	13DCB1 (50-150)
490-160858-1	TB-ROX-100918-8011	93
490-160858-5	MW27-ROX-100918	96
490-160858-6	MW26-ROX-100918	98
490-160858-6 MSD	MW26-ROX-100918	99

Surrogate Legend

13DCB = 1,3-Dichlorobenzene

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	13DCB2 (50-150)
490-160858-3	ROST3MW-ROX-100918-EB	54 p
490-160858-4	ROST3MW-ROX-100918	107
490-160858-6 MS	MW26-ROX-100918	56 p
LCS 490-549171/4-A	Lab Control Sample	122
LCSD 490-549171/5-A	Lab Control Sample Dup	116
MB 490-549171/3-A	Method Blank	121

Surrogate Legend

13DCB = 1,3-Dichlorobenzene

Method Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160858-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NSH
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL NSH
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL NSH
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	TAL NSH
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL NSH
5030B	Purge and Trap	SW846	TAL NSH
8011	Microextraction	SW846	TAL NSH

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160858-1

Client Sample ID: TB-ROX-100918-8011

Lab Sample ID: 490-160858-1
Matrix: Water

Date Collected: 10/09/18 00:01
Date Received: 10/10/18 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			33 mL	2 mL	549171	10/11/18 09:51	ZXS	TAL NSH
Total/NA	Analysis	8011		1			549199	10/11/18 16:23	ZXS	TAL NSH

Client Sample ID: TB-ROX-100918-8260

Lab Sample ID: 490-160858-2
Matrix: Water

Date Collected: 10/09/18 00:01
Date Received: 10/10/18 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	549195	10/11/18 14:48	P1B	TAL NSH

Client Sample ID: ROST3MW-ROX-100918-EB

Lab Sample ID: 490-160858-3
Matrix: Water

Date Collected: 10/09/18 09:00
Date Received: 10/10/18 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	549195	10/11/18 15:39	P1B	TAL NSH
Total/NA	Prep	3510C			1049.9 mL	1 mL	548892	10/11/18 09:19	MCO	TAL NSH
Total/NA	Analysis	8270D		1			550692	10/17/18 22:00	T1C	TAL NSH
Total/NA	Prep	3510C			1049.9 mL	1 mL	548892	10/11/18 09:19	MCO	TAL NSH
Total/NA	Analysis	8270D		1			551996	10/23/18 15:28	T1C	TAL NSH
Total/NA	Prep	3510C			1052.3 mL	1 mL	549140	10/11/18 07:21	CC	TAL NSH
Total/NA	Analysis	8270D SIM		1			551319	10/19/18 21:53	T1C	TAL NSH
Total/NA	Prep	8011			35.2 mL	2 mL	549171	10/11/18 09:51	ZXS	TAL NSH
Total/NA	Analysis	8011		1			549199	10/11/18 16:38	ZXS	TAL NSH

Client Sample ID: ROST3MW-ROX-100918

Lab Sample ID: 490-160858-4
Matrix: Water

Date Collected: 10/09/18 09:40
Date Received: 10/10/18 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	549195	10/11/18 18:38	P1B	TAL NSH
Total/NA	Prep	3510C			1051.4 mL	1 mL	548892	10/11/18 09:19	MCO	TAL NSH
Total/NA	Analysis	8270D		1			550692	10/17/18 22:20	T1C	TAL NSH
Total/NA	Prep	3510C			1051.4 mL	1 mL	548892	10/11/18 09:19	MCO	TAL NSH
Total/NA	Analysis	8270D		1			551996	10/23/18 15:48	T1C	TAL NSH
Total/NA	Prep	3510C			1053.3 mL	1 mL	549140	10/11/18 07:21	CC	TAL NSH
Total/NA	Analysis	8270D SIM		1			551319	10/19/18 22:14	T1C	TAL NSH
Total/NA	Prep	8011			34.8 mL	2 mL	549171	10/11/18 09:51	ZXS	TAL NSH
Total/NA	Analysis	8011		1			549199	10/11/18 17:09	ZXS	TAL NSH

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160858-1

Client Sample ID: MW27-ROX-100918

Lab Sample ID: 490-160858-5

Date Collected: 10/09/18 13:05
Date Received: 10/10/18 10:15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	549195	10/11/18 19:04	P1B	TAL NSH
Total/NA	Prep	3510C			1049.4 mL	1 mL	548892	10/11/18 09:19	MCO	TAL NSH
Total/NA	Analysis	8270D		1			550692	10/17/18 22:39	T1C	TAL NSH
Total/NA	Prep	3510C			1049.4 mL	1 mL	548892	10/11/18 09:19	MCO	TAL NSH
Total/NA	Analysis	8270D		1			551996	10/23/18 16:08	T1C	TAL NSH
Total/NA	Prep	3510C			1044.5 mL	1 mL	549140	10/11/18 07:21	CC	TAL NSH
Total/NA	Analysis	8270D SIM		1			551319	10/19/18 22:35	T1C	TAL NSH
Total/NA	Prep	8011			35 mL	2 mL	549171	10/11/18 09:51	ZXS	TAL NSH
Total/NA	Analysis	8011		1			549199	10/11/18 17:55	ZXS	TAL NSH

Client Sample ID: MW26-ROX-100918

Lab Sample ID: 490-160858-6

Date Collected: 10/09/18 13:50
Date Received: 10/10/18 10:15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	549195	10/11/18 19:30	P1B	TAL NSH
Total/NA	Prep	3510C			1053.6 mL	1 mL	548892	10/11/18 09:19	MCO	TAL NSH
Total/NA	Analysis	8270D		1			550692	10/17/18 22:59	T1C	TAL NSH
Total/NA	Prep	3510C			1053.6 mL	1 mL	548892	10/11/18 09:19	MCO	TAL NSH
Total/NA	Analysis	8270D		1			551996	10/23/18 16:27	T1C	TAL NSH
Total/NA	Prep	3510C			1045.7 mL	1 mL	549140	10/11/18 07:21	CC	TAL NSH
Total/NA	Analysis	8270D SIM		1			551319	10/19/18 22:56	T1C	TAL NSH
Total/NA	Prep	8011			35 mL	2 mL	549171	10/11/18 09:51	ZXS	TAL NSH
Total/NA	Analysis	8011		1			549199	10/11/18 18:10	ZXS	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

GC/MS VOA

Analysis Batch: 549195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160858-2	TB-ROX-100918-8260	Total/NA	Water	8260B	
490-160858-3	ROST3MW-ROX-100918-EB	Total/NA	Water	8260B	
490-160858-4	ROST3MW-ROX-100918	Total/NA	Water	8260B	
490-160858-5	MW27-ROX-100918	Total/NA	Water	8260B	
490-160858-6	MW26-ROX-100918	Total/NA	Water	8260B	
MB 490-549195/8	Method Blank	Total/NA	Water	8260B	
LCS 490-549195/4	Lab Control Sample	Total/NA	Water	8260B	
490-160858-6 MS	MW26-ROX-100918	Total/NA	Water	8260B	
490-160858-6 MSD	MW26-ROX-100918	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 548892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160858-3	ROST3MW-ROX-100918-EB	Total/NA	Water	3510C	
490-160858-4	ROST3MW-ROX-100918	Total/NA	Water	3510C	
490-160858-5	MW27-ROX-100918	Total/NA	Water	3510C	
490-160858-6	MW26-ROX-100918	Total/NA	Water	3510C	
MB 490-548892/1-A	Method Blank	Total/NA	Water	3510C	
LCS 490-548892/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 490-548892/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
490-160858-6 MS	MW26-ROX-100918	Total/NA	Water	3510C	
490-160858-6 MSD	MW26-ROX-100918	Total/NA	Water	3510C	

Prep Batch: 549140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160858-3	ROST3MW-ROX-100918-EB	Total/NA	Water	3510C	
490-160858-4	ROST3MW-ROX-100918	Total/NA	Water	3510C	
490-160858-5	MW27-ROX-100918	Total/NA	Water	3510C	
490-160858-6	MW26-ROX-100918	Total/NA	Water	3510C	
MB 490-549140/1-A	Method Blank	Total/NA	Water	3510C	
LCS 490-549140/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 490-549140/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
490-160858-6 MS	MW26-ROX-100918	Total/NA	Water	3510C	
490-160858-6 MSD	MW26-ROX-100918	Total/NA	Water	3510C	

Analysis Batch: 550692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160858-3	ROST3MW-ROX-100918-EB	Total/NA	Water	8270D	548892
490-160858-4	ROST3MW-ROX-100918	Total/NA	Water	8270D	548892
490-160858-5	MW27-ROX-100918	Total/NA	Water	8270D	548892
490-160858-6	MW26-ROX-100918	Total/NA	Water	8270D	548892
490-160858-6 MS	MW26-ROX-100918	Total/NA	Water	8270D	548892
490-160858-6 MSD	MW26-ROX-100918	Total/NA	Water	8270D	548892

Analysis Batch: 550858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 490-548892/1-A	Method Blank	Total/NA	Water	8270D	548892
LCS 490-548892/2-A	Lab Control Sample	Total/NA	Water	8270D	548892
LCSD 490-548892/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	548892

GC/MS Semi VOA (Continued)

Analysis Batch: 551319

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160858-3	ROST3MW-ROX-100918-EB	Total/NA	Water	8270D SIM	549140
490-160858-4	ROST3MW-ROX-100918	Total/NA	Water	8270D SIM	549140
490-160858-5	MW27-ROX-100918	Total/NA	Water	8270D SIM	549140
490-160858-6	MW26-ROX-100918	Total/NA	Water	8270D SIM	549140
MB 490-549140/1-A	Method Blank	Total/NA	Water	8270D SIM	549140
LCS 490-549140/2-A	Lab Control Sample	Total/NA	Water	8270D SIM	549140
LCSD 490-549140/3-A	Lab Control Sample Dup	Total/NA	Water	8270D SIM	549140
490-160858-6 MS	MW26-ROX-100918	Total/NA	Water	8270D SIM	549140
490-160858-6 MSD	MW26-ROX-100918	Total/NA	Water	8270D SIM	549140

Analysis Batch: 551996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160858-3	ROST3MW-ROX-100918-EB	Total/NA	Water	8270D	548892
490-160858-4	ROST3MW-ROX-100918	Total/NA	Water	8270D	548892
490-160858-5	MW27-ROX-100918	Total/NA	Water	8270D	548892
490-160858-6	MW26-ROX-100918	Total/NA	Water	8270D	548892
MB 490-548892/1-A	Method Blank	Total/NA	Water	8270D	548892

GC Semi VOA

Prep Batch: 549171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160858-1	TB-ROX-100918-8011	Total/NA	Water	8011	
490-160858-3	ROST3MW-ROX-100918-EB	Total/NA	Water	8011	
490-160858-4	ROST3MW-ROX-100918	Total/NA	Water	8011	
490-160858-5	MW27-ROX-100918	Total/NA	Water	8011	
490-160858-6	MW26-ROX-100918	Total/NA	Water	8011	
MB 490-549171/3-A	Method Blank	Total/NA	Water	8011	
LCS 490-549171/4-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 490-549171/5-A	Lab Control Sample Dup	Total/NA	Water	8011	
490-160858-6 MS	MW26-ROX-100918	Total/NA	Water	8011	
490-160858-6 MSD	MW26-ROX-100918	Total/NA	Water	8011	

Analysis Batch: 549199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160858-1	TB-ROX-100918-8011	Total/NA	Water	8011	549171
490-160858-3	ROST3MW-ROX-100918-EB	Total/NA	Water	8011	549171
490-160858-4	ROST3MW-ROX-100918	Total/NA	Water	8011	549171
490-160858-5	MW27-ROX-100918	Total/NA	Water	8011	549171
490-160858-6	MW26-ROX-100918	Total/NA	Water	8011	549171
MB 490-549171/3-A	Method Blank	Total/NA	Water	8011	549171
LCS 490-549171/4-A	Lab Control Sample	Total/NA	Water	8011	549171
LCSD 490-549171/5-A	Lab Control Sample Dup	Total/NA	Water	8011	549171
490-160858-6 MS	MW26-ROX-100918	Total/NA	Water	8011	549171
490-160858-6 MSD	MW26-ROX-100918	Total/NA	Water	8011	549171

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-160858 Chain of Custody

Cooler Received/Opened On 10/10/2018 @ 1015

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 9176 (last 4 digits, FedEx) Courier: FedEx
   IR Gun ID 17960357 pH Strip Lot N/A Chlorine Strip Lot N/A
2. Temperature of rep. sample or temp blank when opened: 3.0 *Degrees Celsius*
3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA
4. Were custody seals on outside of cooler? YES...NO...NA
   If yes, how many and where: 1 Front / 1 Back
5. Were the seals intact, signed, and dated correctly? YES...NO...NA
6. Were custody papers inside cooler? GH YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (Intial) _____

7. Were custody seals on containers: YES NO and Intact YES...NO...NA
   Were these signed and dated correctly? YES...NO...NA
8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None
9. Cooling process: Ice Ice-pack Ice (direct contact) Dry Ice Other None
10. Did all containers arrive in good condition (unbroken)? YES...NO...NA
11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA
12. Did all container labels and tags agree with custody papers? YES...NO...NA
13a. Were VOA vials received? YES...NO...NA
   b. Was there any observable headspace present in any VOA vial? YES...NO...NA

Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (Intial) AOH

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA
   b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA
16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (Intial) AOH

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA
18. Did you sign the custody papers in the appropriate place? YES...NO...NA
19. Were correct containers used for the analysis requested? YES...NO...NA
20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (Intial) AOH

I certify that I attached a label with the unique LIMS number to each container (Intial) AOH

21. Were there Non-Conformance Issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8/23/17
10/26/2018 (Rev. 1)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

Loc: 490
160858

COOLER RECEIPT FORM

Cooler Received/Opened On 10/10/2018 @ 1015

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 9165 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 17610176 pH Strip Lot_____ Chlorine Strip Lot_____

2. Temperature of rep. sample or temp blank when opened: 3.5 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 (Back) 1 (Front)

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) 2.2

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry Ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) ASH

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) ASH

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) ASH

I certify that I attached a label with the unique LIMS number to each container (intial) ASH

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8/23/17
10/26/2018 (Rev. 1)

Loc: 490
160858
#1
B

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

Cooler Received/Opened On 10/10/2018 @ 1015

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 1498 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 17610176 pH Strip Lot N/A Chlorine Strip Lot N/A

2. Temperature of rep. sample or temp blank when opened: 1.9 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 (Front) 1 (Back)

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (Intial) 2.7

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry Ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (Intial) AST

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (Intial) AJD

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (Intial) AJD

I certify that I attached a label with the unique LIMS number to each container (Intial) AST

21. Were there Non-Conformance Issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8 23 17
10/26/2018 (Rev. 1)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

Loc: 490
160858
#2
B

Cooler Received/Opened On 10/10/2018 @ 10:15

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 9143 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 31470366 pH Strip Lot N/A Chlorine Strip Lot N/A

2. Temperature of rep. sample or temp blank when opened: 1.2 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 Front 1 Back

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) _____

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry Ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) AD

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) AD

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) AD

I certify that I attached a label with the unique LIMS number to each container (intial) AD

21. Were there Non-Conformance Issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-I
End of Form

Revised 8/23/17
10/26/2018 (Rev. 1)

Shell Oil Products US Chain Of Custody Record

AECOM

LAB (LOCATION)

☐ ACCUTEST (_____)
☐ CALSCIENCE (_____)
☑ 2960 Foster Creighton DR. Nashville TN 37204
☐ Other (_____)
Lab Vendor #: 1304569 (TestAmerica)

Please Check Appropriate Box:

☐ SGW FDG	☐ PIPELINE	☐ RETAIL
☐ CHEMICALS	☐ CONSULTANT	☐ LUBES
☐ TRANSPORTATION	☑ OTHER _ENV. SERVICES	

Print Bill To Contact Name: Bob Billman

PO #: 60527968 - 01.03.004 | 60527968 - 01.03.0044

PlaNet Site or Project ID: 25278

GSAP Project ID: USPC/00114/R/02

☐ CHECK IF NO INCIDENT # APPLIES
DATE: 10 09 18
PAGE: 1 of 1

SAMPLING COMPANY: AECOM

LOG CODE:

SITE ADDRESS: Street and City: 900 South Central Ave; ROXANA

State: IL

AECOM Project / Task Number: Roxana Quarterly GW 60527968 - 01.03.004 60527968 - 01.03.0044

ADDRESS: 100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA

EDF DELIVERABLE TO (Name, Company, Office Location):

PHONE NO.:

E-MAIL:

AECOM Offer ID:

PROJECT CONTACT (Hardcopy or PDF Report to): Elizabeth Kunkel, Bob Billman, Melissa Remiger

TELEPHONE: 314-429-0100

FAX: 314-429-0462

Add To Contact E-MAIL: bob.billman@aecom.com; elizabeth.kunkel@aecom.com; melissa.remiger@aecom.com

SAMPLER NAME(S) (Print): B. Howell M. Karnick

LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAY ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT

DELIVERABLES: ☑ LLEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) _EDD_____

TEMPERATURE ON RECEIPT C° Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
* Please include "J" values on Reports
* Please provide sample receipt upon login

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE EDD DISK

REQUESTED ANALYSIS

NON-UNIT COST 60527968 - 01.03.004: VOC 8260; SVOC 8270

UNIT COST 60527968 - 01.03.0044: VOC 8011; PAH 8270LL

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

Container PID Readings or Laboratory Notes

Loc: 490
160858

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VOC 8260	SVOC 8270	VOC 8011	PAH 8270LL
	TB-ROX-100918-8011	10.9.18	0000	Water	2					2			✓	
	TB-ROX-100918-8260		0000		2					2	✓			
	ROST3MW-ROX-100918-EB		0900		4			2		6	✓	✓	✓	✓
	ROST3MW-ROX-100918		0940		4			2		6	✓	✓	✓	✓
	MW27-ROX-100918		1305		4			2		6	✓	✓	✓	✓
	MW26-ROX-100918		1350		4			2		6	✓	✓	✓	✓
	MW26-ROX-100918-MS		1350		4			2		6	✓	✓	✓	✓
	MW26-ROX-100918MSD	↓	1350	↓	4			2		6	✓	✓	✓	✓

M. Karnick

Relinquished by: (Signature) Megan K	Received by: (Signature) Fedex: 7908 8375 9143; 7908 8375 9165;	Date: 10/9/18	Time: 1530
Relinquished by: (Signature)	Received by: (Signature) 7908 8375 9176; 7908 8375 9187	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date: 10/10/18	Time: 10:15

Version: 14Dec15

Custody Seals: 562008, 562009, 562010, 562011, 572482, 572483, 572484, 572485

3.0, 3.5, 1.9, 1.2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 490-549195/8
Matrix: Water
Analysis Batch: 549195

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	2.7	ug/L			10/11/18 13:57	1
Acrolein	ND		50	4.1	ug/L			10/11/18 13:57	1
Acrylonitrile	ND		10	0.50	ug/L			10/11/18 13:57	1
Benzene	ND		1.0	0.20	ug/L			10/11/18 13:57	1
Bromobenzene	ND		1.0	0.21	ug/L			10/11/18 13:57	1
Bromochloromethane	ND		1.0	0.15	ug/L			10/11/18 13:57	1
Bromodichloromethane	ND		1.0	0.17	ug/L			10/11/18 13:57	1
Bromoform	ND		1.0	0.29	ug/L			10/11/18 13:57	1
Bromomethane	ND		1.0	0.35	ug/L			10/11/18 13:57	1
2-Butanone (MEK)	ND		50	2.6	ug/L			10/11/18 13:57	1
Carbon disulfide	ND		1.0	0.22	ug/L			10/11/18 13:57	1
Carbon tetrachloride	ND		1.0	0.18	ug/L			10/11/18 13:57	1
Chlorobenzene	ND		1.0	0.18	ug/L			10/11/18 13:57	1
Chloroethane	ND		1.0	0.36	ug/L			10/11/18 13:57	1
2-Chloroethyl vinyl ether	ND		10	0.67	ug/L			10/11/18 13:57	1
Chloroform	ND		1.0	0.23	ug/L			10/11/18 13:57	1
1-Chlorohexane	ND		2.0	0.30	ug/L			10/11/18 13:57	1
Chloromethane	ND		1.0	0.36	ug/L			10/11/18 13:57	1
cis-1,2-Dichloroethene	ND		1.0	0.21	ug/L			10/11/18 13:57	1
cis-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/11/18 13:57	1
Dibromochloromethane	ND		1.0	0.25	ug/L			10/11/18 13:57	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			10/11/18 13:57	1
1,3-Dichlorobenzene	ND		1.0	0.18	ug/L			10/11/18 13:57	1
1,4-Dichlorobenzene	ND		1.0	0.17	ug/L			10/11/18 13:57	1
Dichlorodifluoromethane	ND		1.0	0.17	ug/L			10/11/18 13:57	1
1,1-Dichloroethane	ND		1.0	0.24	ug/L			10/11/18 13:57	1
1,2-Dichloroethane	ND		1.0	0.20	ug/L			10/11/18 13:57	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			10/11/18 13:57	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			10/11/18 13:57	1
1,3-Dichloropropane	ND		1.0	0.19	ug/L			10/11/18 13:57	1
2,2-Dichloropropane	ND		1.0	0.16	ug/L			10/11/18 13:57	1
1,1-Dichloropropene	ND		1.0	0.20	ug/L			10/11/18 13:57	1
Ethylbenzene	ND		1.0	0.19	ug/L			10/11/18 13:57	1
Ethyl methacrylate	ND		10	0.68	ug/L			10/11/18 13:57	1
Hexachlorobutadiene	ND		2.0	0.38	ug/L			10/11/18 13:57	1
2-Hexanone	ND		10	1.3	ug/L			10/11/18 13:57	1
Isopropylbenzene	ND		1.0	0.33	ug/L			10/11/18 13:57	1
Methylene bromide	ND		1.0	0.45	ug/L			10/11/18 13:57	1
Methylene Chloride	ND		5.0	1.0	ug/L			10/11/18 13:57	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.81	ug/L			10/11/18 13:57	1
Methyl tert-butyl ether	ND		1.0	0.17	ug/L			10/11/18 13:57	1
m-Xylene & p-Xylene	ND		2.0	0.38	ug/L			10/11/18 13:57	1
Naphthalene	ND		5.0	0.21	ug/L			10/11/18 13:57	1
n-Butylbenzene	ND		1.0	0.24	ug/L			10/11/18 13:57	1
N-Propylbenzene	ND		1.0	0.17	ug/L			10/11/18 13:57	1
o-Chlorotoluene	ND		1.0	0.18	ug/L			10/11/18 13:57	1
o-Xylene	ND		1.0	0.20	ug/L			10/11/18 13:57	1
p-Chlorotoluene	ND		1.0	0.17	ug/L			10/11/18 13:57	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-549195/8
Matrix: Water
Analysis Batch: 549195

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	ND		1.0	0.17	ug/L			10/11/18 13:57	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			10/11/18 13:57	1
Styrene	ND		1.0	0.28	ug/L			10/11/18 13:57	1
tert-Butylbenzene	ND		1.0	0.17	ug/L			10/11/18 13:57	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.15	ug/L			10/11/18 13:57	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.19	ug/L			10/11/18 13:57	1
Tetrachloroethene	ND		1.0	0.14	ug/L			10/11/18 13:57	1
Toluene	ND		1.0	0.17	ug/L			10/11/18 13:57	1
trans-1,2-Dichloroethene	ND		1.0	0.23	ug/L			10/11/18 13:57	1
trans-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/11/18 13:57	1
1,2,3-Trichlorobenzene	ND		1.0	0.23	ug/L			10/11/18 13:57	1
1,2,4-Trichlorobenzene	ND		1.0	0.20	ug/L			10/11/18 13:57	1
1,1,1-Trichloroethane	ND		1.0	0.19	ug/L			10/11/18 13:57	1
1,1,2-Trichloroethane	ND		1.0	0.19	ug/L			10/11/18 13:57	1
Trichloroethene	ND		1.0	0.20	ug/L			10/11/18 13:57	1
Trichlorofluoromethane	ND		1.0	0.21	ug/L			10/11/18 13:57	1
1,2,3-Trichloropropane	ND		1.0	0.23	ug/L			10/11/18 13:57	1
1,2,4-Trimethylbenzene	ND		1.0	0.17	ug/L			10/11/18 13:57	1
1,3,5-Trimethylbenzene	ND		1.0	0.17	ug/L			10/11/18 13:57	1
Vinyl acetate	ND		10	1.7	ug/L			10/11/18 13:57	1
Vinyl chloride	ND		1.0	0.18	ug/L			10/11/18 13:57	1
Xylenes, Total	ND		3.0	0.58	ug/L			10/11/18 13:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*94*		*70 - 130*		*10/11/18 13:57*	*1*
Dibromofluoromethane (Surr)	*109*		*70 - 130*		*10/11/18 13:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 130*		*10/11/18 13:57*	*1*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*		*10/11/18 13:57*	*1*

Lab Sample ID: LCS 490-549195/4
Matrix: Water
Analysis Batch: 549195

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	112		ug/L		112	39 - 150
Acrolein	49.4	62.1		ug/L		126	10 - 150
Acrylonitrile	200	244		ug/L		122	63 - 135
Benzene	20.0	24.3		ug/L		122	70 - 130
Bromobenzene	20.0	15.7		ug/L		78	70 - 130
Bromochloromethane	20.0	22.3		ug/L		112	70 - 130
Bromodichloromethane	20.0	22.6		ug/L		113	70 - 130
Bromoform	20.0	21.8		ug/L		109	70 - 137
Bromomethane	20.0	22.4		ug/L		112	53 - 150
2-Butanone (MEK)	100	118		ug/L		118	55 - 143
Carbon disulfide	20.0	21.8		ug/L		109	64 - 135
Carbon tetrachloride	20.0	23.3		ug/L		117	70 - 147
Chlorobenzene	20.0	17.6		ug/L		88	70 - 130
Chloroethane	20.0	24.2		ug/L		121	60 - 138

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-549195/4
Matrix: Water
Analysis Batch: 549195

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloroethyl vinyl ether	20.0	20.8		ug/L		104	50 - 139
Chloroform	20.0	22.1		ug/L		110	70 - 130
1-Chlorohexane	20.0	18.5		ug/L		93	69 - 140
Chloromethane	20.0	27.9		ug/L		139	33 - 150
cis-1,2-Dichloroethene	20.0	22.2		ug/L		111	70 - 130
cis-1,3-Dichloropropene	20.0	20.3		ug/L		101	70 - 133
Dibromochloromethane	20.0	19.8		ug/L		99	70 - 133
1,2-Dichlorobenzene	20.0	15.2		ug/L		76	70 - 130
1,3-Dichlorobenzene	20.0	15.1		ug/L		75	70 - 130
1,4-Dichlorobenzene	20.0	15.3		ug/L		76	70 - 130
Dichlorodifluoromethane	20.0	23.4		ug/L		117	48 - 150
1,1-Dichloroethane	20.0	21.1		ug/L		105	70 - 130
1,2-Dichloroethane	20.0	24.2		ug/L		121	70 - 130
1,1-Dichloroethene	20.0	21.2		ug/L		106	70 - 132
1,2-Dichloropropane	20.0	22.4		ug/L		112	70 - 130
1,3-Dichloropropane	20.0	19.5		ug/L		97	70 - 130
2,2-Dichloropropane	20.0	22.7		ug/L		113	60 - 143
1,1-Dichloropropene	20.0	21.9		ug/L		110	70 - 130
Ethylbenzene	20.0	17.7		ug/L		88	70 - 130
Ethyl methacrylate	20.0	20.1		ug/L		100	60 - 136
Hexachlorobutadiene	20.0	19.8		ug/L		99	70 - 138
2-Hexanone	100	106		ug/L		106	54 - 142
Isopropylbenzene	20.0	17.0		ug/L		85	70 - 131
Methylene bromide	20.0	21.2		ug/L		106	70 - 130
Methylene Chloride	20.0	22.9		ug/L		115	70 - 130
4-Methyl-2-pentanone (MIBK)	100	111		ug/L		111	60 - 137
Methyl tert-butyl ether	20.0	22.8		ug/L		114	70 - 130
m-Xylene & p-Xylene	20.0	17.4		ug/L		87	70 - 130
Naphthalene	20.0	15.0		ug/L		75	54 - 150
n-Butylbenzene	20.0	16.4		ug/L		82	68 - 137
N-Propylbenzene	20.0	16.3		ug/L		82	70 - 134
o-Chlorotoluene	20.0	15.8		ug/L		79	70 - 130
o-Xylene	20.0	17.4		ug/L		87	70 - 130
p-Chlorotoluene	20.0	15.3		ug/L		76	70 - 130
p-Isopropyltoluene	20.0	16.2		ug/L		81	66 - 130
sec-Butylbenzene	20.0	15.8		ug/L		79	70 - 135
Styrene	20.0	17.6		ug/L		88	70 - 130
tert-Butylbenzene	20.0	15.6		ug/L		78	70 - 130
1,1,1,2-Tetrachloroethane	20.0	19.8		ug/L		99	70 - 130
1,1,2,2-Tetrachloroethane	20.0	17.8		ug/L		89	69 - 131
Tetrachloroethene	20.0	18.3		ug/L		91	70 - 130
Toluene	20.0	18.4		ug/L		92	70 - 130
trans-1,2-Dichloroethene	20.0	21.8		ug/L		109	70 - 130
trans-1,3-Dichloropropene	20.0	19.9		ug/L		100	63 - 142
1,2,3-Trichlorobenzene	20.0	16.0		ug/L		80	46 - 150
1,2,4-Trichlorobenzene	20.0	15.6		ug/L		78	58 - 147
1,1,1-Trichloroethane	20.0	22.6		ug/L		113	70 - 135
1,1,2-Trichloroethane	20.0	19.2		ug/L		96	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-549195/4
Matrix: Water
Analysis Batch: 549195

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichloroethene	20.0	21.7		ug/L		108	70 - 130
Trichlorofluoromethane	20.0	22.2		ug/L		111	59 - 150
1,2,3-Trichloropropane	20.0	17.0		ug/L		85	70 - 131
1,2,4-Trimethylbenzene	20.0	15.6		ug/L		78	70 - 130
1,3,5-Trimethylbenzene	20.0	15.9		ug/L		79	70 - 130
Vinyl acetate	40.0	43.6		ug/L		109	54 - 146
Vinyl chloride	20.0	24.5		ug/L		122	57 - 137
Xylenes, Total	40.0	34.8		ug/L		87	70 - 132

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*91*		*70 - 130*
Dibromofluoromethane (Surr)	*103*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: 490-160858-6 MS
Matrix: Water
Analysis Batch: 549195

Client Sample ID: MW26-ROX-100918
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	ND		100	106		ug/L		106	39 - 150
Acrolein	ND		49.4	60.0		ug/L		121	10 - 150
Acrylonitrile	ND		200	230		ug/L		115	50 - 135
Benzene	ND		20.0	24.5		ug/L		122	55 - 147
Bromobenzene	ND		20.0	16.5		ug/L		82	60 - 133
Bromochloromethane	ND		20.0	22.3		ug/L		111	59 - 132
Bromodichloromethane	ND		20.0	22.1		ug/L		111	70 - 140
Bromoform	ND		20.0	20.3		ug/L		101	53 - 150
Bromomethane	ND		20.0	20.9		ug/L		105	30 - 150
2-Butanone (MEK)	ND		100	102		ug/L		102	50 - 143
Carbon disulfide	ND		20.0	22.4		ug/L		112	35 - 150
Carbon tetrachloride	ND		20.0	25.0		ug/L		125	56 - 150
Chlorobenzene	ND		20.0	17.8		ug/L		89	70 - 130
Chloroethane	ND		20.0	25.3		ug/L		127	58 - 141
2-Chloroethyl vinyl ether	ND	F1	20.0	ND	F1	ug/L		0	10 - 139
Chloroform	ND		20.0	22.1		ug/L		110	66 - 138
1-Chlorohexane	ND		20.0	20.6		ug/L		103	65 - 150
Chloromethane	ND		20.0	27.9		ug/L		140	10 - 150
cis-1,2-Dichloroethene	ND		20.0	22.5		ug/L		112	68 - 131
cis-1,3-Dichloropropene	ND		20.0	20.0		ug/L		100	70 - 133
Dibromochloromethane	ND		20.0	19.1		ug/L		96	66 - 140
1,2-Dichlorobenzene	ND		20.0	15.4		ug/L		77	70 - 130
1,3-Dichlorobenzene	ND		20.0	15.5		ug/L		77	68 - 131
1,4-Dichlorobenzene	ND		20.0	15.5		ug/L		77	70 - 130
Dichlorodifluoromethane	ND		20.0	24.1		ug/L		121	10 - 150
1,1-Dichloroethane	ND		20.0	22.1		ug/L		110	61 - 139
1,2-Dichloroethane	ND		20.0	22.2		ug/L		111	64 - 136
1,1-Dichloroethene	ND		20.0	22.4		ug/L		112	54 - 150

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-160858-6 MS
Matrix: Water
Analysis Batch: 549195

Client Sample ID: MW26-ROX-100918
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	ND		20.0	22.2		ug/L		111	67 - 130
1,3-Dichloropropane	ND		20.0	18.8		ug/L		94	70 - 130
2,2-Dichloropropane	ND		20.0	22.8		ug/L		114	50 - 146
1,1-Dichloropropene	ND		20.0	23.6		ug/L		118	54 - 150
Ethylbenzene	ND		20.0	18.1		ug/L		91	65 - 139
Ethyl methacrylate	ND		20.0	18.7		ug/L		94	55 - 136
Hexachlorobutadiene	ND		20.0	20.5		ug/L		103	61 - 141
2-Hexanone	ND		100	96.4		ug/L		96	44 - 150
Isopropylbenzene	ND		20.0	17.5		ug/L		88	70 - 137
Methylene bromide	ND		20.0	21.1		ug/L		106	70 - 130
Methylene Chloride	ND		20.0	22.9		ug/L		114	64 - 130
4-Methyl-2-pentanone (MIBK)	ND		100	102		ug/L		102	50 - 140
Methyl tert-butyl ether	ND		20.0	21.5		ug/L		108	55 - 141
m-Xylene & p-Xylene	ND		20.0	17.7		ug/L		89	70 - 130
Naphthalene	ND		20.0	15.2		ug/L		76	32 - 150
n-Butylbenzene	ND		20.0	17.2		ug/L		86	61 - 141
N-Propylbenzene	ND		20.0	17.5		ug/L		88	53 - 150
o-Chlorotoluene	ND		20.0	16.7		ug/L		83	67 - 138
o-Xylene	ND		20.0	17.3		ug/L		87	70 - 131
p-Chlorotoluene	ND		20.0	16.1		ug/L		80	69 - 138
p-Isopropyltoluene	ND		20.0	16.9		ug/L		85	66 - 137
sec-Butylbenzene	ND		20.0	16.9		ug/L		85	55 - 136
Styrene	ND		20.0	17.4		ug/L		87	70 - 130
tert-Butylbenzene	ND		20.0	16.8		ug/L		84	70 - 138
1,1,1,2-Tetrachloroethane	ND		20.0	19.8		ug/L		99	70 - 131
1,1,2,2-Tetrachloroethane	ND		20.0	17.2		ug/L		86	56 - 145
Tetrachloroethene	ND		20.0	19.5		ug/L		98	57 - 138
Toluene	ND		20.0	18.9		ug/L		94	64 - 136
trans-1,2-Dichloroethene	ND		20.0	22.5		ug/L		113	59 - 143
trans-1,3-Dichloropropene	ND		20.0	19.2		ug/L		96	63 - 142
1,2,3-Trichlorobenzene	ND		20.0	15.7		ug/L		78	36 - 150
1,2,4-Trichlorobenzene	ND		20.0	16.1		ug/L		80	47 - 147
1,1,1-Trichloroethane	ND		20.0	23.8		ug/L		119	68 - 144
1,1,2-Trichloroethane	ND		20.0	18.5		ug/L		93	70 - 130
Trichloroethene	ND		20.0	23.0		ug/L		115	63 - 135
Trichlorofluoromethane	ND		20.0	23.4		ug/L		117	44 - 150
1,2,3-Trichloropropane	ND		20.0	16.6		ug/L		83	65 - 131
1,2,4-Trimethylbenzene	ND		20.0	16.3		ug/L		81	64 - 136
1,3,5-Trimethylbenzene	ND		20.0	16.5		ug/L		83	69 - 139
Vinyl acetate	ND		40.0	41.1		ug/L		103	43 - 146
Vinyl chloride	ND		20.0	25.7		ug/L		129	57 - 150
Xylenes, Total	ND		40.0	35.0		ug/L		88	69 - 132

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*92*		*70 - 130*
Dibromofluoromethane (Surr)	*99*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160858-1

Lab Sample ID: 490-160858-6 MSD
Matrix: Water
Analysis Batch: 549195

Client Sample ID: MW26-ROX-100918
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	ND		100	105		ug/L		105	39 - 150	1	28
Acrolein	ND		49.4	60.3		ug/L		122	10 - 150	1	46
Acrylonitrile	ND		200	230		ug/L		115	50 - 135	0	23
Benzene	ND		20.0	25.2		ug/L		126	55 - 147	3	22
Bromobenzene	ND		20.0	16.1		ug/L		80	60 - 133	2	18
Bromochloromethane	ND		20.0	22.0		ug/L		110	59 - 132	1	21
Bromodichloromethane	ND		20.0	22.8		ug/L		114	70 - 140	3	196
Bromoform	ND		20.0	20.7		ug/L		104	53 - 150	2	20
Bromomethane	ND		20.0	22.6		ug/L		113	30 - 150	8	44
2-Butanone (MEK)	ND		100	100		ug/L		100	50 - 143	2	28
Carbon disulfide	ND		20.0	23.5		ug/L		117	35 - 150	5	34
Carbon tetrachloride	ND		20.0	25.8		ug/L		129	56 - 150	3	18
Chlorobenzene	ND		20.0	17.6		ug/L		88	70 - 130	1	15
Chloroethane	ND		20.0	26.0		ug/L		130	58 - 141	2	31
2-Chloroethyl vinyl ether	ND	F1	20.0	ND	F1	ug/L		0	10 - 139	NC	50
Chloroform	ND		20.0	22.3		ug/L		111	66 - 138	1	21
1-Chlorohexane	ND		20.0	20.6		ug/L		103	65 - 150	0	16
Chloromethane	ND		20.0	28.7		ug/L		144	10 - 150	3	43
cis-1,2-Dichloroethene	ND		20.0	23.0		ug/L		115	68 - 131	2	21
cis-1,3-Dichloropropene	ND		20.0	19.8		ug/L		99	70 - 133	1	19
Dibromochloromethane	ND		20.0	19.1		ug/L		95	66 - 140	0	19
1,2-Dichlorobenzene	ND		20.0	15.5		ug/L		77	70 - 130	0	15
1,3-Dichlorobenzene	ND		20.0	15.2		ug/L		76	68 - 131	1	14
1,4-Dichlorobenzene	ND		20.0	15.3		ug/L		76	70 - 130	1	14
Dichlorodifluoromethane	ND		20.0	23.8		ug/L		119	10 - 150	1	50
1,1-Dichloroethane	ND		20.0	21.7		ug/L		108	61 - 139	2	23
1,2-Dichloroethane	ND		20.0	22.4		ug/L		112	64 - 136	1	22
1,1-Dichloroethene	ND		20.0	22.7		ug/L		113	54 - 150	1	24
1,2-Dichloropropane	ND		20.0	22.6		ug/L		113	67 - 130	2	19
1,3-Dichloropropane	ND		20.0	18.8		ug/L		94	70 - 130	0	17
2,2-Dichloropropane	ND		20.0	23.2		ug/L		116	50 - 146	2	20
1,1-Dichloropropene	ND		20.0	24.0		ug/L		120	54 - 150	2	24
Ethylbenzene	ND		20.0	18.2		ug/L		91	65 - 139	0	18
Ethyl methacrylate	ND		20.0	19.1		ug/L		95	55 - 136	2	20
Hexachlorobutadiene	ND		20.0	20.9		ug/L		105	61 - 141	2	26
2-Hexanone	ND		100	95.2		ug/L		95	44 - 150	1	21
Isopropylbenzene	ND		20.0	17.6		ug/L		88	70 - 137	1	17
Methylene bromide	ND		20.0	20.4		ug/L		102	70 - 130	4	19
Methylene Chloride	ND		20.0	23.4		ug/L		117	64 - 130	2	22
4-Methyl-2-pentanone (MIBK)	ND		100	100		ug/L		100	50 - 140	2	24
Methyl tert-butyl ether	ND		20.0	22.1		ug/L		111	55 - 141	3	24
m-Xylene & p-Xylene	ND		20.0	17.7		ug/L		88	70 - 130	0	17
Naphthalene	ND		20.0	15.1		ug/L		76	32 - 150	0	40
n-Butylbenzene	ND		20.0	16.8		ug/L		84	61 - 141	2	17
N-Propylbenzene	ND		20.0	17.0		ug/L		85	53 - 150	3	18
o-Chlorotoluene	ND		20.0	16.1		ug/L		81	67 - 138	3	17
o-Xylene	ND		20.0	17.4		ug/L		87	70 - 131	1	17
p-Chlorotoluene	ND		20.0	15.7		ug/L		78	69 - 138	3	15
p-Isopropyltoluene	ND		20.0	16.9		ug/L		84	66 - 137	0	16
sec-Butylbenzene	ND		20.0	16.8		ug/L		84	55 - 136	1	50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-160858-6 MSD
Matrix: Water
Analysis Batch: 549195

Client Sample ID: MW26-ROX-100918
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Styrene	ND		20.0	17.6		ug/L		88	70 - 130	1	16
tert-Butylbenzene	ND		20.0	16.6		ug/L		83	70 - 138	1	17
1,1,1,2-Tetrachloroethane	ND		20.0	19.4		ug/L		97	70 - 131	2	16
1,1,2,2-Tetrachloroethane	ND		20.0	17.0		ug/L		85	56 - 145	2	19
Tetrachloroethene	ND		20.0	19.3		ug/L		97	57 - 138	1	17
Toluene	ND		20.0	18.8		ug/L		94	64 - 136	0	18
trans-1,2-Dichloroethene	ND		20.0	22.4		ug/L		112	59 - 143	1	25
trans-1,3-Dichloropropene	ND		20.0	18.7		ug/L		94	63 - 142	3	18
1,2,3-Trichlorobenzene	ND		20.0	15.6		ug/L		78	36 - 150	0	43
1,2,4-Trichlorobenzene	ND		20.0	16.2		ug/L		81	47 - 147	1	24
1,1,1-Trichloroethane	ND		20.0	24.1		ug/L		120	68 - 144	1	17
1,1,2-Trichloroethane	ND		20.0	18.4		ug/L		92	70 - 130	1	18
Trichloroethene	ND		20.0	23.6		ug/L		118	63 - 135	3	17
Trichlorofluoromethane	ND		20.0	24.0		ug/L		120	44 - 150	3	32
1,2,3-Trichloropropane	ND		20.0	16.0		ug/L		80	65 - 131	4	19
1,2,4-Trimethylbenzene	ND		20.0	16.1		ug/L		80	64 - 136	1	18
1,3,5-Trimethylbenzene	ND		20.0	16.0		ug/L		80	69 - 139	3	17
Vinyl acetate	ND		40.0	40.7		ug/L		102	43 - 146	1	20
Vinyl chloride	ND		20.0	26.5		ug/L		132	57 - 150	3	37
Xylenes, Total	ND		40.0	35.1		ug/L		88	69 - 132	0	17

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*92*		*70 - 130*
Dibromofluoromethane (Surr)	*105*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 490-548892/1-A
Matrix: Water
Analysis Batch: 550858

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 548892

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		25	2.1	ug/L		10/10/18 09:24	10/18/18 09:28	1
Benzoic acid	ND		50	17	ug/L		10/10/18 09:24	10/18/18 09:28	1
Benzyl alcohol	ND		50	1.5	ug/L		10/10/18 09:24	10/18/18 09:28	1
Bis(2-chloroethoxy)methane	ND		10	2.1	ug/L		10/10/18 09:24	10/18/18 09:28	1
Bis(2-chloroethyl)ether	ND		10	1.9	ug/L		10/10/18 09:24	10/18/18 09:28	1
bis (2-chloroisopropyl) ether	ND		10	1.8	ug/L		10/10/18 09:24	10/18/18 09:28	1
Bis(2-ethylhexyl) phthalate	ND		10	2.6	ug/L		10/10/18 09:24	10/18/18 09:28	1
4-Bromophenyl phenyl ether	ND		10	1.9	ug/L		10/10/18 09:24	10/18/18 09:28	1
Butyl benzyl phthalate	ND		10	2.1	ug/L		10/10/18 09:24	10/18/18 09:28	1
4-Chloroaniline	ND		10	2.7	ug/L		10/10/18 09:24	10/18/18 09:28	1
4-Chloro-3-methylphenol	ND		10	1.7	ug/L		10/10/18 09:24	10/18/18 09:28	1
2-Chloronaphthalene	ND		10	2.3	ug/L		10/10/18 09:24	10/18/18 09:28	1
2-Chlorophenol	ND		10	1.6	ug/L		10/10/18 09:24	10/18/18 09:28	1
4-Chlorophenyl phenyl ether	ND		10	1.9	ug/L		10/10/18 09:24	10/18/18 09:28	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-548892/1-A
Matrix: Water
Analysis Batch: 550858

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 548892

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz[a,h]acridine	ND		10	1.4	ug/L		10/10/18 09:24	10/18/18 09:28	1
Dibenzofuran	ND		10	2.0	ug/L		10/10/18 09:24	10/18/18 09:28	1
3,3'-Dichlorobenzidine	ND		10	1.7	ug/L		10/10/18 09:24	10/18/18 09:28	1
2,4-Dichlorophenol	ND		10	2.0	ug/L		10/10/18 09:24	10/18/18 09:28	1
Diethyl phthalate	ND		10	1.9	ug/L		10/10/18 09:24	10/18/18 09:28	1
2,4-Dimethylphenol	ND		10	1.8	ug/L		10/10/18 09:24	10/18/18 09:28	1
Dimethyl phthalate	ND		10	1.7	ug/L		10/10/18 09:24	10/18/18 09:28	1
Di-n-butyl phthalate	ND		10	2.0	ug/L		10/10/18 09:24	10/18/18 09:28	1
4,6-Dinitro-ortho-cresol	ND		25	2.6	ug/L		10/10/18 09:24	10/18/18 09:28	1
2,4-Dinitrophenol	ND		25	7.0	ug/L		10/10/18 09:24	10/18/18 09:28	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		10/10/18 09:24	10/18/18 09:28	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		10/10/18 09:24	10/18/18 09:28	1
Di-n-octyl phthalate	ND		10	2.0	ug/L		10/10/18 09:24	10/18/18 09:28	1
1,4-Dioxane	ND		10	1.2	ug/L		10/10/18 09:24	10/18/18 09:28	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.8	ug/L		10/10/18 09:24	10/18/18 09:28	1
Hexachlorobenzene	ND		10	1.8	ug/L		10/10/18 09:24	10/18/18 09:28	1
Hexachlorocyclopentadiene	ND		10	2.6	ug/L		10/10/18 09:24	10/18/18 09:28	1
Hexachloroethane	ND		10	3.2	ug/L		10/10/18 09:24	10/18/18 09:28	1
Indene	ND		10	2.4	ug/L		10/10/18 09:24	10/18/18 09:28	1
Isophorone	ND		10	1.9	ug/L		10/10/18 09:24	10/18/18 09:28	1
2-Methylphenol	ND		10	1.6	ug/L		10/10/18 09:24	10/18/18 09:28	1
3 & 4 Methylphenol	ND		10	1.2	ug/L		10/10/18 09:24	10/18/18 09:28	1
2-Nitroaniline	ND		25	1.5	ug/L		10/10/18 09:24	10/18/18 09:28	1
3-Nitroaniline	ND		25	1.6	ug/L		10/10/18 09:24	10/18/18 09:28	1
4-Nitroaniline	ND		25	1.7	ug/L		10/10/18 09:24	10/18/18 09:28	1
Nitrobenzene	ND		10	1.9	ug/L		10/10/18 09:24	10/18/18 09:28	1
2-Nitrophenol	ND		10	2.0	ug/L		10/10/18 09:24	10/18/18 09:28	1
4-Nitrophenol	ND		25	2.4	ug/L		10/10/18 09:24	10/18/18 09:28	1
N-Nitrosodimethylamine	ND		10	3.3	ug/L		10/10/18 09:24	10/18/18 09:28	1
N-Nitrosodi-n-propylamine	ND		10	2.0	ug/L		10/10/18 09:24	10/18/18 09:28	1
N-Nitrosodiphenylamine	ND		10	1.4	ug/L		10/10/18 09:24	10/18/18 09:28	1
Pentachlorophenol	ND		25	3.5	ug/L		10/10/18 09:24	10/18/18 09:28	1
Phenol	ND		10	3.3	ug/L		10/10/18 09:24	10/18/18 09:28	1
Pyridine	ND		10	1.8	ug/L		10/10/18 09:24	10/18/18 09:28	1
Quinoline	ND		10	2.8	ug/L		10/10/18 09:24	10/18/18 09:28	1
2,4,5-Trichlorophenol	ND		10	1.9	ug/L		10/10/18 09:24	10/18/18 09:28	1
2,4,6-Trichlorophenol	ND		10	1.6	ug/L		10/10/18 09:24	10/18/18 09:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*55*		*10 - 120*	*10/10/18 09:24*	*10/18/18 09:28*	*1*
Nitrobenzene-d5	*63*		*27 - 120*	*10/10/18 09:24*	*10/18/18 09:28*	*1*
Phenol-d5	*37*		*10 - 120*	*10/10/18 09:24*	*10/18/18 09:28*	*1*
Terphenyl-d14	*85*		*13 - 120*	*10/10/18 09:24*	*10/18/18 09:28*	*1*
2,4,6-Tribromophenol	*61*		*10 - 120*	*10/10/18 09:24*	*10/18/18 09:28*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-548892/1-A
Matrix: Water
Analysis Batch: 551996

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 548892

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzenethiol	ND		100	25	ug/L		10/10/18 09:24	10/23/18 15:08	1

Lab Sample ID: LCS 490-548892/2-A
Matrix: Water
Analysis Batch: 550858

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 548892

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aniline	100	29.0		ug/L		29	17 - 108
Benzoic acid	100	ND	*	ug/L		6	10 - 110
Benzyl alcohol	100	34.7	J	ug/L		35	21 - 120
Bis(2-chloroethoxy)methane	100	38.0		ug/L		38	35 - 127
Bis(2-chloroethyl)ether	100	37.8		ug/L		38	27 - 132
bis (2-chloroisopropyl) ether	100	32.0		ug/L		32	24 - 136
Bis(2-ethylhexyl) phthalate	100	48.1		ug/L		48	41 - 147
4-Bromophenyl phenyl ether	100	40.3		ug/L		40	36 - 135
Butyl benzyl phthalate	100	43.9		ug/L		44	34 - 146
4-Chloroaniline	100	37.9		ug/L		38	27 - 131
4-Chloro-3-methylphenol	100	37.6		ug/L		38	10 - 150
2-Chloronaphthalene	100	39.4		ug/L		39	32 - 127
2-Chlorophenol	100	39.5		ug/L		40	10 - 150
4-Chlorophenyl phenyl ether	100	41.4		ug/L		41	36 - 131
Dibenzofuran	100	40.8		ug/L		41	35 - 127
3,3'-Dichlorobenzidine	100	40.6	*	ug/L		41	46 - 143
2,4-Dichlorophenol	100	40.1		ug/L		40	10 - 150
Diethyl phthalate	100	40.7		ug/L		41	31 - 136
2,4-Dimethylphenol	100	35.1		ug/L		35	10 - 150
Dimethyl phthalate	100	39.9		ug/L		40	34 - 134
Di-n-butyl phthalate	100	42.3		ug/L		42	42 - 140
4,6-Dinitro-ortho-cresol	200	89.9		ug/L		45	10 - 150
2,4-Dinitrophenol	200	67.4		ug/L		34	10 - 150
2,4-Dinitrotoluene	100	42.3		ug/L		42	36 - 138
2,6-Dinitrotoluene	100	42.3		ug/L		42	41 - 137
Di-n-octyl phthalate	100	42.8		ug/L		43	42 - 142
1,4-Dioxane	100	18.9		ug/L		19	10 - 110
1,2-Diphenylhydrazine (as Azobenzene)	100	39.2		ug/L		39	38 - 142
Hexachlorobenzene	100	42.4		ug/L		42	36 - 140
Hexachlorocyclopentadiene	100	29.0		ug/L		29	17 - 128
Hexachloroethane	100	34.6		ug/L		35	23 - 120
Indene	100	35.8		ug/L		36	30 - 118
Isophorone	100	34.9	*	ug/L		35	39 - 120
2-Methylphenol	100	37.3		ug/L		37	10 - 133
3 & 4 Methylphenol	100	36.7		ug/L		37	10 - 135
2-Nitroaniline	100	37.0		ug/L		37	35 - 147
3-Nitroaniline	100	40.0		ug/L		40	36 - 128
4-Nitroaniline	100	42.4		ug/L		42	38 - 139
Nitrobenzene	100	33.8		ug/L		34	10 - 150
2-Nitrophenol	100	39.6		ug/L		40	10 - 150

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-548892/2-A
Matrix: Water
Analysis Batch: 550858

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 548892

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Nitrophenol	200	44.3		ug/L		22	10 - 110
N-Nitrosodimethylamine	100	22.8		ug/L		23	10 - 110
N-Nitrosodi-n-propylamine	100	38.5		ug/L		38	32 - 136
N-Nitrosodiphenylamine	85.0	41.9		ug/L		49	44 - 123
Pentachlorophenol	200	67.9		ug/L		34	10 - 150
Phenol	100	24.7		ug/L		25	10 - 110
Pyridine	100	17.8		ug/L		18	10 - 110
2,4,5-Trichlorophenol	100	39.7		ug/L		40	10 - 150
2,4,6-Trichlorophenol	100	39.9		ug/L		40	10 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorophenol	*55*		*10 - 120*
Nitrobenzene-d5	*62*		*27 - 120*
Phenol-d5	*41*		*10 - 120*
Terphenyl-d14	*77*		*13 - 120*
2,4,6-Tribromophenol	*66*		*10 - 120*

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Lab Sample ID: LCSD 490-548892/3-A
Matrix: Water
Analysis Batch: 550858

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 548892

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aniline	100	31.9		ug/L		32	17 - 108	9	50
Benzoic acid	100	ND	*	ug/L		7	10 - 110	15	50
Benzyl alcohol	100	36.8	J	ug/L		37	21 - 120	6	50
Bis(2-chloroethoxy)methane	100	37.7		ug/L		38	35 - 127	1	50
Bis(2-chloroethyl)ether	100	37.3		ug/L		37	27 - 132	1	50
bis (2-chloroisopropyl) ether	100	32.4		ug/L		32	24 - 136	1	50
Bis(2-ethylhexyl) phthalate	100	45.0		ug/L		45	41 - 147	7	47
4-Bromophenyl phenyl ether	100	40.1		ug/L		40	36 - 135	1	50
Butyl benzyl phthalate	100	41.4		ug/L		41	34 - 146	6	50
4-Chloroaniline	100	37.9		ug/L		38	27 - 131	0	34
4-Chloro-3-methylphenol	100	38.8		ug/L		39	10 - 150	3	50
2-Chloronaphthalene	100	38.3		ug/L		38	32 - 127	3	50
2-Chlorophenol	100	41.3		ug/L		41	10 - 150	4	49
4-Chlorophenyl phenyl ether	100	39.8		ug/L		40	36 - 131	4	50
Dibenzofuran	100	39.3		ug/L		39	35 - 127	4	50
3,3'-Dichlorobenzidine	100	39.5	*	ug/L		39	46 - 143	3	50
2,4-Dichlorophenol	100	41.2		ug/L		41	10 - 150	3	50
Diethyl phthalate	100	38.8		ug/L		39	31 - 136	5	50
2,4-Dimethylphenol	100	36.4		ug/L		36	10 - 150	4	50
Dimethyl phthalate	100	39.6		ug/L		40	34 - 134	1	50
Di-n-butyl phthalate	100	40.5	*	ug/L		41	42 - 140	4	50
4,6-Dinitro-ortho-cresol	200	86.6		ug/L		43	10 - 150	4	50
2,4-Dinitrophenol	200	74.3		ug/L		37	10 - 150	10	50
2,4-Dinitrotoluene	100	41.2		ug/L		41	36 - 138	3	50
2,6-Dinitrotoluene	100	41.7		ug/L		42	41 - 137	1	50
Di-n-octyl phthalate	100	39.3	*	ug/L		39	42 - 142	8	49

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 490-548892/3-A
Matrix: Water
Analysis Batch: 550858

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 548892

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	100	26.1		ug/L		26	10 - 110	32	33
1,2-Diphenylhydrazine (as Azobenzene)	100	37.7		ug/L		38	38 - 142	4	50
Hexachlorobenzene	100	41.0		ug/L		41	36 - 140	3	50
Hexachlorocyclopentadiene	100	28.2		ug/L		28	17 - 128	3	50
Hexachloroethane	100	35.1		ug/L		35	23 - 120	2	50
Indene	100	36.2		ug/L		36	30 - 118	1	50
Isophorone	100	35.0	*	ug/L		35	39 - 120	0	50
2-Methylphenol	100	38.9		ug/L		39	10 - 133	4	45
3 & 4 Methylphenol	100	39.1		ug/L		39	10 - 135	6	46
2-Nitroaniline	100	37.3		ug/L		37	35 - 147	1	50
3-Nitroaniline	100	41.4		ug/L		41	36 - 128	4	27
4-Nitroaniline	100	42.2		ug/L		42	38 - 139	0	42
Nitrobenzene	100	34.8		ug/L		35	10 - 150	3	50
2-Nitrophenol	100	39.3		ug/L		39	10 - 150	1	50
4-Nitrophenol	200	47.7		ug/L		24	10 - 110	8	40
N-Nitrosodimethylamine	100	26.2		ug/L		26	10 - 110	14	38
N-Nitrosodi-n-propylamine	100	36.8		ug/L		37	32 - 136	5	50
N-Nitrosodiphenylamine	85.0	41.2		ug/L		49	44 - 123	2	50
Pentachlorophenol	200	64.9		ug/L		32	10 - 150	4	50
Phenol	100	28.6		ug/L		29	10 - 110	15	36
Pyridine	100	19.8		ug/L		20	10 - 110	11	50
2,4,5-Trichlorophenol	100	38.8		ug/L		39	10 - 150	2	50
2,4,6-Trichlorophenol	100	39.7		ug/L		40	10 - 150	0	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorophenol	*61*		*10 - 120*
Nitrobenzene-d5	*66*		*27 - 120*
Phenol-d5	*48*		*10 - 120*
Terphenyl-d14	*77*		*13 - 120*
2,4,6-Tribromophenol	*69*		*10 - 120*

Lab Sample ID: 490-160858-6 MS
Matrix: Water
Analysis Batch: 550692

Client Sample ID: MW26-ROX-100918
Prep Type: Total/NA
Prep Batch: 548892

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aniline	ND		95.0	26.0		ug/L		27	10 - 113
Benzoic acid	ND	F1 *	95.0	ND	F1	ug/L		0	10 - 150
Benzyl alcohol	ND		95.0	28.1	J	ug/L		30	21 - 120
Bis(2-chloroethoxy)methane	ND		95.0	33.5		ug/L		35	28 - 127
Bis(2-chloroethyl)ether	ND		95.0	31.4		ug/L		33	27 - 132
bis (2-chloroisopropyl) ether	ND		95.0	28.4		ug/L		30	15 - 136
Bis(2-ethylhexyl) phthalate	ND		95.0	50.8		ug/L		54	10 - 150
4-Bromophenyl phenyl ether	ND		95.0	44.5		ug/L		47	35 - 135
Butyl benzyl phthalate	ND		95.0	47.4		ug/L		50	10 - 150
4-Chloroaniline	ND		95.0	36.3		ug/L		38	19 - 131
4-Chloro-3-methylphenol	ND		95.0	39.8		ug/L		42	10 - 150

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-160858-6 MS
Matrix: Water
Analysis Batch: 550692

Client Sample ID: MW26-ROX-100918
Prep Type: Total/NA
Prep Batch: 548892

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloronaphthalene	ND		95.0	38.8		ug/L		41	28 - 127
2-Chlorophenol	ND		95.0	36.7		ug/L		39	10 - 150
4-Chlorophenyl phenyl ether	ND		95.0	43.9		ug/L		46	36 - 131
Dibenzofuran	ND		95.0	43.1		ug/L		45	28 - 129
3,3'-Dichlorobenzidine	ND	*	95.0	43.5		ug/L		46	10 - 150
2,4-Dichlorophenol	ND		95.0	39.7		ug/L		42	10 - 150
Diethyl phthalate	ND		95.0	41.5		ug/L		44	11 - 143
2,4-Dimethylphenol	ND		95.0	32.9		ug/L		35	10 - 150
Dimethyl phthalate	ND		95.0	41.0		ug/L		43	10 - 140
Di-n-butyl phthalate	ND	*	95.0	44.0		ug/L		46	30 - 140
4,6-Dinitro-ortho-cresol	ND		190	82.4		ug/L		43	10 - 150
2,4-Dinitrophenol	ND		190	67.8		ug/L		36	10 - 150
2,4-Dinitrotoluene	ND		95.0	42.8		ug/L		45	36 - 138
2,6-Dinitrotoluene	ND		95.0	43.9		ug/L		46	41 - 137
Di-n-octyl phthalate	ND	*	95.0	45.2		ug/L		48	10 - 150
1,4-Dioxane	ND	F2	95.0	16.0		ug/L		17	10 - 110
1,2-Diphenylhydrazine (as Azobenzene)	ND		95.0	42.0		ug/L		44	31 - 142
Hexachlorobenzene	ND		95.0	46.5		ug/L		49	23 - 140
Hexachlorocyclopentadiene	ND		95.0	22.9		ug/L		24	10 - 128
Hexachloroethane	ND		95.0	31.8		ug/L		33	13 - 125
Indene	ND		95.0	32.5		ug/L		34	21 - 124
Isophorone	ND	*	95.0	31.3		ug/L		33	29 - 150
2-Methylphenol	ND		95.0	33.2		ug/L		35	10 - 133
3 & 4 Methylphenol	ND		95.0	31.9		ug/L		34	10 - 135
2-Nitroaniline	ND		95.0	40.0		ug/L		42	34 - 147
3-Nitroaniline	ND		95.0	41.2		ug/L		43	31 - 128
4-Nitroaniline	ND		95.0	43.2		ug/L		45	33 - 139
Nitrobenzene	ND		95.0	31.3		ug/L		33	10 - 150
2-Nitrophenol	ND		95.0	36.2		ug/L		38	10 - 150
4-Nitrophenol	ND		190	38.4		ug/L		20	10 - 110
N-Nitrosodimethylamine	ND		95.0	19.8		ug/L		21	10 - 110
N-Nitrosodi-n-propylamine	ND		95.0	32.1		ug/L		34	25 - 136
N-Nitrosodiphenylamine	ND		80.8	46.1		ug/L		57	31 - 150
Pentachlorophenol	ND		190	69.9		ug/L		37	10 - 150
Phenol	ND		95.0	22.0		ug/L		23	10 - 110
Pyridine	ND		95.0	16.3		ug/L		17	10 - 110
2,4,5-Trichlorophenol	ND		95.0	42.9		ug/L		45	10 - 150
2,4,6-Trichlorophenol	ND		95.0	41.6		ug/L		44	10 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorophenol	*51*		*10 - 120*
Nitrobenzene-d5	*60*		*27 - 120*
Phenol-d5	*39*		*10 - 120*
Terphenyl-d14	*87*		*13 - 120*
2,4,6-Tribromophenol	*76*		*10 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-160858-6 MSD
Matrix: Water
Analysis Batch: 550692

Client Sample ID: MW26-ROX-100918
Prep Type: Total/NA
Prep Batch: 548892

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aniline	ND		94.9	28.2		ug/L		30	10 - 113	8	50
Benzoic acid	ND	F1 *	94.9	ND	F1	ug/L		0	10 - 150	NC	50
Benzyl alcohol	ND		94.9	32.0	J	ug/L		34	21 - 120	13	50
Bis(2-chloroethoxy)methane	ND		94.9	37.4		ug/L		39	28 - 127	11	50
Bis(2-chloroethyl)ether	ND		94.9	36.6		ug/L		39	27 - 132	15	50
bis (2-chloroisopropyl) ether	ND		94.9	32.6		ug/L		34	15 - 136	14	50
Bis(2-ethylhexyl) phthalate	ND		94.9	49.6		ug/L		52	10 - 150	3	47
4-Bromophenyl phenyl ether	ND		94.9	42.4		ug/L		45	35 - 135	5	50
Butyl benzyl phthalate	ND		94.9	45.7		ug/L		48	10 - 150	4	50
4-Chloroaniline	ND		94.9	35.7		ug/L		38	19 - 131	2	34
4-Chloro-3-methylphenol	ND		94.9	40.8		ug/L		43	10 - 150	3	50
2-Chloronaphthalene	ND		94.9	41.1		ug/L		43	28 - 127	6	50
2-Chlorophenol	ND		94.9	41.5		ug/L		44	10 - 150	12	49
4-Chlorophenyl phenyl ether	ND		94.9	43.1		ug/L		45	36 - 131	2	50
Dibenzofuran	ND		94.9	43.7		ug/L		46	28 - 129	1	50
3,3'-Dichlorobenzidine	ND	*	94.9	44.2		ug/L		47	10 - 150	2	50
2,4-Dichlorophenol	ND		94.9	42.5		ug/L		45	10 - 150	7	50
Diethyl phthalate	ND		94.9	40.3		ug/L		42	11 - 143	3	50
2,4-Dimethylphenol	ND		94.9	37.2		ug/L		39	10 - 150	12	50
Dimethyl phthalate	ND		94.9	40.1		ug/L		42	10 - 140	2	50
Di-n-butyl phthalate	ND	*	94.9	42.4		ug/L		45	30 - 140	3	50
4,6-Dinitro-ortho-cresol	ND		190	82.9		ug/L		44	10 - 150	1	50
2,4-Dinitrophenol	ND		190	68.4		ug/L		36	10 - 150	1	50
2,4-Dinitrotoluene	ND		94.9	41.7		ug/L		44	36 - 138	3	50
2,6-Dinitrotoluene	ND		94.9	43.9		ug/L		46	41 - 137	0	50
Di-n-octyl phthalate	ND	*	94.9	44.0		ug/L		46	10 - 150	3	49
1,4-Dioxane	ND	F2	94.9	22.8	F2	ug/L		24	10 - 110	35	33
1,2-Diphenylhydrazine (as Azobenzene)	ND		94.9	40.3		ug/L		43	31 - 142	4	50
Hexachlorobenzene	ND		94.9	44.9		ug/L		47	23 - 140	3	50
Hexachlorocyclopentadiene	ND		94.9	26.0		ug/L		27	10 - 128	13	50
Hexachloroethane	ND		94.9	35.7		ug/L		38	13 - 125	12	50
Indene	ND		94.9	38.0		ug/L		40	21 - 124	16	50
Isophorone	ND	*	94.9	33.6		ug/L		35	29 - 150	7	50
2-Methylphenol	ND		94.9	38.6		ug/L		41	10 - 133	15	45
3 & 4 Methylphenol	ND		94.9	36.8		ug/L		39	10 - 135	14	46
2-Nitroaniline	ND		94.9	39.2		ug/L		41	34 - 147	2	50
3-Nitroaniline	ND		94.9	40.3		ug/L		43	31 - 128	2	27
4-Nitroaniline	ND		94.9	41.8		ug/L		44	33 - 139	3	42
Nitrobenzene	ND		94.9	34.6		ug/L		37	10 - 150	10	50
2-Nitrophenol	ND		94.9	39.6		ug/L		42	10 - 150	9	50
4-Nitrophenol	ND		190	37.0		ug/L		20	10 - 110	4	40
N-Nitrosodimethylamine	ND		94.9	23.9		ug/L		25	10 - 110	19	38
N-Nitrosodi-n-propylamine	ND		94.9	35.3		ug/L		37	25 - 136	10	50
N-Nitrosodiphenylamine	ND		80.6	44.2		ug/L		55	31 - 150	4	50
Pentachlorophenol	ND		190	67.9		ug/L		36	10 - 150	3	50
Phenol	ND		94.9	24.7		ug/L		26	10 - 110	12	36
Pyridine	ND		94.9	17.5		ug/L		18	10 - 110	7	50

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-160858-6 MSD
Matrix: Water
Analysis Batch: 550692

Client Sample ID: MW26-ROX-100918
Prep Type: Total/NA
Prep Batch: 548892

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-Trichlorophenol	ND		94.9	42.6		ug/L		45	10 - 150	1	50
2,4,6-Trichlorophenol	ND		94.9	43.9		ug/L		46	10 - 150	5	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorophenol	*57*		*10 - 120*
Nitrobenzene-d5	*65*		*27 - 120*
Phenol-d5	*44*		*10 - 120*
Terphenyl-d14	*86*		*13 - 120*
2,4,6-Tribromophenol	*76*		*10 - 120*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 490-549140/1-A
Matrix: Water
Analysis Batch: 551319

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549140

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.10	0.020	ug/L		10/11/18 07:21	10/19/18 18:01	1
Acenaphthylene	ND		0.10	0.030	ug/L		10/11/18 07:21	10/19/18 18:01	1
Anthracene	ND		0.10	0.030	ug/L		10/11/18 07:21	10/19/18 18:01	1
Benzo[a]anthracene	ND		0.10	0.020	ug/L		10/11/18 07:21	10/19/18 18:01	1
Benzo[a]pyrene	ND		0.10	0.020	ug/L		10/11/18 07:21	10/19/18 18:01	1
Benzo[b]fluoranthene	ND		0.10	0.020	ug/L		10/11/18 07:21	10/19/18 18:01	1
Benzo[g,h,i]perylene	ND		0.10	0.020	ug/L		10/11/18 07:21	10/19/18 18:01	1
Benzo[k]fluoranthene	ND		0.10	0.020	ug/L		10/11/18 07:21	10/19/18 18:01	1
Chrysene	ND		0.10	0.020	ug/L		10/11/18 07:21	10/19/18 18:01	1
Dibenz(a,h)anthracene	ND		0.10	0.020	ug/L		10/11/18 07:21	10/19/18 18:01	1
Fluoranthene	ND		0.10	0.030	ug/L		10/11/18 07:21	10/19/18 18:01	1
Fluorene	ND		0.10	0.020	ug/L		10/11/18 07:21	10/19/18 18:01	1
Indeno[1,2,3-cd]pyrene	ND		0.10	0.020	ug/L		10/11/18 07:21	10/19/18 18:01	1
1-Methylnaphthalene	ND		0.10	0.020	ug/L		10/11/18 07:21	10/19/18 18:01	1
2-Methylnaphthalene	ND		0.10	0.030	ug/L		10/11/18 07:21	10/19/18 18:01	1
Phenanthrene	ND		0.10	0.030	ug/L		10/11/18 07:21	10/19/18 18:01	1
Pyrene	ND		0.10	0.020	ug/L		10/11/18 07:21	10/19/18 18:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*76*		*27 - 120*	*10/11/18 07:21*	*10/19/18 18:01*	*1*
Terphenyl-d14	*93*		*13 - 120*	*10/11/18 07:21*	*10/19/18 18:01*	*1*

Lab Sample ID: LCS 490-549140/2-A
Matrix: Water
Analysis Batch: 551319

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549140

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	2.00	2.02		ug/L		101	46 - 120
Acenaphthylene	2.00	1.79		ug/L		90	48 - 120
Anthracene	2.00	1.73		ug/L		87	58 - 130

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCS 490-549140/2-A
Matrix: Water
Analysis Batch: 551319

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549140

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[a]anthracene	2.00	1.87		ug/L		94	57 - 120
Benzo[a]pyrene	2.00	2.07		ug/L		103	57 - 124
Benzo[b]fluoranthene	2.00	2.17		ug/L		109	51 - 125
Benzo[g,h,i]perylene	2.00	2.28		ug/L		114	51 - 123
Benzo[k]fluoranthene	2.00	2.04		ug/L		102	51 - 120
Chrysene	2.00	2.00		ug/L		100	55 - 120
Dibenz(a,h)anthracene	2.00	2.36		ug/L		118	50 - 125
Fluoranthene	2.00	1.76		ug/L		88	56 - 120
Fluorene	2.00	1.89		ug/L		95	52 - 120
Indeno[1,2,3-cd]pyrene	2.00	2.05		ug/L		103	54 - 125
1-Methylnaphthalene	2.00	1.83		ug/L		92	36 - 120
2-Methylnaphthalene	2.00	1.75		ug/L		87	31 - 120
Phenanthrene	2.00	2.00		ug/L		100	56 - 120
Pyrene	2.00	1.71		ug/L		86	53 - 129

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5	*81*		*27 - 120*
Terphenyl-d14	*80*		*13 - 120*

Lab Sample ID: LCSD 490-549140/3-A
Matrix: Water
Analysis Batch: 551319

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 549140

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	2.00	1.77		ug/L		88	46 - 120	13	31
Acenaphthylene	2.00	1.69		ug/L		85	48 - 120	6	31
Anthracene	2.00	1.66		ug/L		83	58 - 130	5	28
Benzo[a]anthracene	2.00	1.72		ug/L		86	57 - 120	9	27
Benzo[a]pyrene	2.00	2.00		ug/L		100	57 - 124	3	27
Benzo[b]fluoranthene	2.00	2.11		ug/L		106	51 - 125	3	39
Benzo[g,h,i]perylene	2.00	2.17		ug/L		108	51 - 123	5	27
Benzo[k]fluoranthene	2.00	2.09		ug/L		104	51 - 120	2	32
Chrysene	2.00	1.86		ug/L		93	55 - 120	8	27
Dibenz(a,h)anthracene	2.00	2.19		ug/L		109	50 - 125	8	28
Fluoranthene	2.00	1.74		ug/L		87	56 - 120	1	28
Fluorene	2.00	1.69		ug/L		84	52 - 120	12	28
Indeno[1,2,3-cd]pyrene	2.00	1.97		ug/L		99	54 - 125	4	27
1-Methylnaphthalene	2.00	1.56		ug/L		78	36 - 120	16	36
2-Methylnaphthalene	2.00	1.46		ug/L		73	31 - 120	18	35
Phenanthrene	2.00	1.77		ug/L		89	56 - 120	12	26
Pyrene	2.00	1.85		ug/L		92	53 - 129	7	29

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Nitrobenzene-d5	*76*		*27 - 120*
Terphenyl-d14	*88*		*13 - 120*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: 490-160858-6 MS
Matrix: Water
Analysis Batch: 551319

Client Sample ID: MW26-ROX-100918
Prep Type: Total/NA
Prep Batch: 549140

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	0.023	J	1.93	1.70		ug/L		87	46 - 120
Acenaphthylene	ND		1.93	1.58		ug/L		82	48 - 120
Anthracene	ND		1.93	1.62		ug/L		84	56 - 130
Benzo[a]anthracene	ND		1.93	1.74		ug/L		90	57 - 122
Benzo[a]pyrene	ND		1.93	1.95		ug/L		101	46 - 138
Benzo[b]fluoranthene	ND		1.93	2.06		ug/L		107	45 - 138
Benzo[g,h,i]perylene	ND		1.93	2.01		ug/L		104	48 - 137
Benzo[k]fluoranthene	ND		1.93	1.97		ug/L		102	44 - 134
Chrysene	ND		1.93	1.78		ug/L		92	54 - 123
Dibenz(a,h)anthracene	ND		1.93	2.07		ug/L		107	50 - 136
Fluoranthene	ND		1.93	1.74		ug/L		90	56 - 120
Fluorene	ND		1.93	1.56		ug/L		81	52 - 120
Indeno[1,2,3-cd]pyrene	ND		1.93	1.87		ug/L		97	50 - 136
1-Methylnaphthalene	0.030	J	1.93	1.64		ug/L		83	34 - 120
2-Methylnaphthalene	0.044	J	1.93	1.54		ug/L		77	31 - 120
Phenanthrene	0.048	J	1.93	1.73		ug/L		87	53 - 120
Pyrene	ND		1.93	1.82		ug/L		94	50 - 129

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Nitrobenzene-d5	*79*		*27 - 120*
Terphenyl-d14	*87*		*13 - 120*

Lab Sample ID: 490-160858-6 MSD
Matrix: Water
Analysis Batch: 551319

Client Sample ID: MW26-ROX-100918
Prep Type: Total/NA
Prep Batch: 549140

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	0.023	J	1.90	1.82		ug/L		95	46 - 120	7	31
Acenaphthylene	ND		1.90	1.75		ug/L		92	48 - 120	10	31
Anthracene	ND		1.90	1.77		ug/L		93	56 - 130	9	28
Benzo[a]anthracene	ND		1.90	1.91		ug/L		101	57 - 122	9	27
Benzo[a]pyrene	ND		1.90	2.07		ug/L		109	46 - 138	6	27
Benzo[b]fluoranthene	ND		1.90	2.11		ug/L		111	45 - 138	3	39
Benzo[g,h,i]perylene	ND		1.90	2.09		ug/L		110	48 - 137	4	27
Benzo[k]fluoranthene	ND		1.90	2.22		ug/L		117	44 - 134	12	32
Chrysene	ND		1.90	1.80		ug/L		95	54 - 123	1	27
Dibenz(a,h)anthracene	ND		1.90	2.05		ug/L		108	50 - 136	1	28
Fluoranthene	ND		1.90	1.80		ug/L		95	56 - 120	4	28
Fluorene	ND		1.90	1.70		ug/L		90	52 - 120	9	28
Indeno[1,2,3-cd]pyrene	ND		1.90	1.94		ug/L		102	50 - 136	4	27
1-Methylnaphthalene	0.030	J	1.90	1.70		ug/L		88	34 - 120	4	36
2-Methylnaphthalene	0.044	J	1.90	1.61		ug/L		83	31 - 120	5	35
Phenanthrene	0.048	J	1.90	1.82		ug/L		93	53 - 120	5	26
Pyrene	ND		1.90	1.91		ug/L		101	50 - 129	5	29

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Nitrobenzene-d5	*86*		*27 - 120*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: 490-160858-6 MSD
Matrix: Water
Analysis Batch: 551319

Client Sample ID: MW26-ROX-100918
Prep Type: Total/NA
Prep Batch: 549140

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Terphenyl-d14	*91*		*13 - 120*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 490-549171/3-A
Matrix: Water
Analysis Batch: 549199

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549171

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.10	0.028	ug/L		10/11/18 09:50	10/11/18 13:17	1
1,2-Dibromoethane	ND		0.020	0.0060	ug/L		10/11/18 09:50	10/11/18 13:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	*121*		*50 - 150*	*10/11/18 09:50*	*10/11/18 13:17*	*1*

Lab Sample ID: LCS 490-549171/4-A
Matrix: Water
Analysis Batch: 549199

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549171

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	0.286	0.292		ug/L		102	70 - 130
1,2-Dibromoethane	0.286	0.316		ug/L		111	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,3-Dichlorobenzene	*122*		*50 - 150*

Lab Sample ID: LCSD 490-549171/5-A
Matrix: Water
Analysis Batch: 549199

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 549171

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane	0.286	0.294		ug/L		103	70 - 130	1	34
1,2-Dibromoethane	0.286	0.317		ug/L		111	70 - 130	0	50

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,3-Dichlorobenzene	*116*		*50 - 150*

Lab Sample ID: 490-160858-6 MS
Matrix: Water
Analysis Batch: 549199

Client Sample ID: MW26-ROX-100918
Prep Type: Total/NA
Prep Batch: 549171

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	ND		0.288	0.289		ug/L		100	60 - 140
1,2-Dibromoethane	ND		0.288	0.306		ug/L		106	60 - 140

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: 490-160858-6 MS
Matrix: Water
Analysis Batch: 549199

Client Sample ID: MW26-ROX-100918
Prep Type: Total/NA
Prep Batch: 549171

Surrogate	MS %Recovery	MS Qualifier	Limits
1,3-Dichlorobenzene	*56*	*p*	*50 - 150*

Lab Sample ID: 490-160858-6 MSD
Matrix: Water
Analysis Batch: 549199

Client Sample ID: MW26-ROX-100918
Prep Type: Total/NA
Prep Batch: 549171

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane	ND		0.283	0.289		ug/L		102	60 - 140	0	34
1,2-Dibromoethane	ND		0.283	0.302		ug/L		107	60 - 140	1	50

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,3-Dichlorobenzene	*99*		*50 - 150*

Accreditation/Certification Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160858-1

Laboratory: TestAmerica Nashville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	ISO/IEC 17025		0453.07	12-31-19
Alaska (UST)	State Program	10	UST-087	06-30-19
Arizona	State Program	9	AZ0473	05-05-19
Arkansas DEQ	State Program	6	88-0737	04-25-19
California	State Program	9	2938	10-31-18
Connecticut	State Program	1	PH-0220	12-31-19
Florida	NELAP	4	E87358	06-30-19
Georgia	State Program	4	NA: NELAP & A2LA	12-31-19
Illinois	NELAP	5	200010	12-09-18
Iowa	State Program	7	131	04-01-20
Kansas	NELAP	7	E-10229	10-31-18
Kentucky (UST)	State Program	4	19	06-30-19
Kentucky (WW)	State Program	4	90038	12-31-18
Louisiana	NELAP	6	30613	06-30-19
Maine	State Program	1	TN00032	11-03-19
Maryland	State Program	3	316	03-31-19
Massachusetts	State Program	1	M-TN032	06-30-19
Minnesota	NELAP	5	047-999-345	12-31-18
Mississippi	State Program	4	N/A	06-30-19
Montana (UST)	State Program	8	NA	02-24-20
Nevada	State Program	9	TN00032	07-31-19
New Hampshire	NELAP	1	2963	10-09-18 *
New Jersey	NELAP	2	TN965	06-30-19
New York	NELAP	2	11342	03-31-19
North Carolina (WW/SW)	State Program	4	387	12-31-18
North Dakota	State Program	8	R-146	06-30-19
Ohio VAP	State Program	5	CL0033	07-06-19
Oklahoma	State Program	6	9412	08-31-19
Oregon	NELAP	10	TN200001	04-26-19
Pennsylvania	NELAP	3	68-00585	07-31-19
Rhode Island	State Program	1	LAO00268	12-30-18
South Carolina	State Program	4	84009 (001)	02-28-19
Tennessee	State Program	4	2008	02-23-20
Texas	NELAP	6	T104704077	08-31-19
USDA	Federal		P330-13-00306	12-01-19
Utah	NELAP	8	TN00032	07-31-19
Virginia	NELAP	3	460152	06-14-19
Washington	State Program	10	C789	07-19-19
West Virginia DEP	State Program	3	219	02-28-19
Wisconsin	State Program	5	998020430	08-31-19
Wyoming (UST)	A2LA	8	453.07	12-31-19

Laboratory: TestAmerica Pensacola

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	200041	10-09-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Roxana Groundwater Quarterly – 4th Quarter 2018 Data Review

Laboratory SDG: 490-160864-1-Rev.1

Data Reviewer: Melissa Remiger

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 10/30/2018

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2017

Sample Identification	Sample Identification
TB-ROX-100918-8011-BP	TB-ROX-100918-8260-BP
MW23-ROX-100918	

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated several SVOC LCS/LCSD recoveries were outside evaluation criteria. The continuing calibration verifications for benzoic acid and pentachlorophenol were outside evaluation criteria, biased low. These issues are addressed further in the appropriate sections of this data review. Additionally, the laboratory report was revised on October 26, 2018 to include the Detection and Surrogate Summaries, which had previously been omitted.

Three of 69 (2-chloroethyl vinyl ether, acrolein, and acrylonitrile) 8260 VOCs are acid-reactive compounds; results may be biased low due to the presence of HCl in the preservative.

The cooler receipt form did not indicate any problems.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS/LCSD ID	Parameter	Analyte	LCS/ LCSD Recovery	RPD	LCS/LCSD/ RPD Criteria
LCS/LCSD 490-548892/2-A/3-A	SVOCs	Benzoic acid	**6/7**	15	10-110/50
LCS/LCSD 490-548892/2-A/3-A	SVOCs	3,3'-Dichlorobenzidine	**41/39**	3	46-143/50
LCS/LCSD 490-548892/2-A/3-A	SVOCs	Di-n-butyl phthalate	42/**41**	4	42-140/50
LCS/LCSD 490-548892/2-A/3-A	SVOCs	Di-n-octyl phthalate	43/**39**	8	42-142/49
LCS/LCSD 490-548892/2-A/3-A	SVOCs	Isophorone	**35/35**	0	39-120/50

Analytical data that required qualification based on LCS/LCSD data are included in the table below. Professional judgment was used to qualify, however not reject, data associated with benzoic acid in LCS/LCSD 490-548892/2-A/3-A; benzoic acid has been identified as a poor performing analyte under Method 8270.

Sample ID	Parameter	Analyte	Qualification
MW23-ROX-100918	SVOCs	Benzoic acid	**UJ**
MW23-ROX-100918	SVOCs	3,3'-Dichlorobenzidine	**UJ**
MW23-ROX-100918	SVOCs	Di-n-butyl phthalate	**UJ**
MW23-ROX-100918	SVOCs	Di-n-octyl phthalate	**UJ**
MW23-ROX-100918	SVOCs	Isophorone	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; samples analyzed did not require dilution.

12.0 Additional Qualifications

Were additional qualifications applied?

Yes, the continuing calibration verifications for benzoic acid and pentachlorophenol were below acceptance criteria and are qualified as summarized in the following table. Benzoic acid was previously qualified in Section 5.0 of this review due to LCS/LCSD recoveries outside evaluation criteria; no further qualification of benzoic acid was required.

Sample ID	Parameter	Analyte	Qualification
MW23-ROX-100918	SVOCs	Pentachlorophenol	**UJ**

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-160864-1
Client Project/Site: ROXANA QUARTERLY
Revision: 1

For:
AECOM Technical Services Inc.
100 N. Broadway
20th Floor
St. Louis, Missouri 63102

Attn: Elizabeth Kunkel

Authorized for release by:
10/26/2018 1:55:16 PM

Leah Klingensmith, Senior Project Manager
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LINKS

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Reviewed 10/30/18 LR

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 490-160864-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-160864-1

Comments
Revised Report
Report revised to include Detection and Surrogate Summary pages.
Supersedes report dated 10-25-18.

Receipt
The samples were received on 10/10/2018 10:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 1.2° C, 1.9° C, 3.0° C and 3.5° C.

GC/MS VOA
Method(s) 8260B: The preservative used in the sample containers provided is not compatible with one of the Method 8260 analytes requested. The following samples were received preserved with hydrochloric acid: TB-ROX-100918-8260-BP (490-160864-2) and MW23-ROX-100918 (490-160864-3). The requested target analyte list includes 2-Chloroethyl vinyl ether, Acrolein and Acrylonitrile, an acid-labile compound that degrades in an acidic medium.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270D: The continuing calibration verification (CCV) analyzed in batch 490-550692 was outside the method criteria for the following analyte(s): Benzoic acid and Pentachlorophenol. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method(s) 8270D: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 490-548892 and 490-548892 and analytical batch 490-550858 recovered outside control limits for the following analyte(s): Benzoic Acid. Benzoic Acid has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method(s) 8270D: The following analyte(s) recovered outside control limits for the LCS/LCSD associated with preparation batch 490-548892 and 490-548892 and analytical batch 490-550858: 3,3'-Dichlorobenzidine, Isophorone, Di-n-butyl phthalate and Di-n-octyl phthalate. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Method(s) 8270D: The continuing calibration verification (CCV) analyzed in batch 490-551996 was outside the method criteria for the following analyte(s): 2,2'-oxybis(1-chloropropane). A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method(s) 8011: The %RPD between the primary and confirmation column exceeded 40% for 1,3-Dichlorobenzene for the following samples: TB-ROX-100918-8011-BP (490-160864-1). The lower value(s) has been reported and qualified in accordance with the laboratory's SOP.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160864-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-160864-1	TB-ROX-100918-8011-BP	Water	10/09/18 00:01	10/10/18 10:15
490-160864-2	TB-ROX-100918-8260-BP	Water	10/09/18 00:01	10/10/18 10:15
490-160864-3	MW23-ROX-100918	Water	10/09/18 11:35	10/10/18 10:15

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160864-1

Client Sample ID: TB-ROX-100918-8011-BP — Lab Sample ID: 490-160864-1

No Detections.

Client Sample ID: TB-ROX-100918-8260-BP — Lab Sample ID: 490-160864-2

No Detections.

Client Sample ID: MW23-ROX-100918 — Lab Sample ID: 490-160864-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	1.1		1.0	0.17	ug/L	1		8260B	Total/NA
Acenaphthene	0.082	J	0.096	0.019	ug/L	1		8270D SIM	Total/NA
Acenaphthylene	0.040	J	0.096	0.029	ug/L	1		8270D SIM	Total/NA
Fluorene	0.10		0.096	0.019	ug/L	1		8270D SIM	Total/NA
1-Methylnaphthalene	0.055	J	0.096	0.019	ug/L	1		8270D SIM	Total/NA
2-Methylnaphthalene	0.087	J	0.096	0.029	ug/L	1		8270D SIM	Total/NA
Phenanthrene	0.18		0.096	0.029	ug/L	1		8270D SIM	Total/NA
Pyrene	0.025	J	0.096	0.019	ug/L	1		8270D SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160864-1

Client Sample ID: TB-ROX-100918-8011-BP
Date Collected: 10/09/18 00:01
Date Received: 10/10/18 10:15

Lab Sample ID: 490-160864-1
Matrix: Water

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.10	0.029	ug/L		10/11/18 09:51	10/11/18 18:57	1
1,2-Dibromoethane	ND		0.021	0.0062	ug/L		10/11/18 09:51	10/11/18 18:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*52*	*p*	*50 - 150*	*10/11/18 09:51*	*10/11/18 18:57*	*1*

Client Sample ID: TB-ROX-100918-8260-BP
Date Collected: 10/09/18 00:01
Date Received: 10/10/18 10:15

Lab Sample ID: 490-160864-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	2.7	ug/L			10/11/18 15:14	1
Acrolein	ND		50	4.1	ug/L			10/11/18 15:14	1
Acrylonitrile	ND		10	0.50	ug/L			10/11/18 15:14	1
Benzene	ND		1.0	0.20	ug/L			10/11/18 15:14	1
Bromobenzene	ND		1.0	0.21	ug/L			10/11/18 15:14	1
Bromochloromethane	ND		1.0	0.15	ug/L			10/11/18 15:14	1
Bromodichloromethane	ND		1.0	0.17	ug/L			10/11/18 15:14	1
Bromoform	ND		1.0	0.29	ug/L			10/11/18 15:14	1
Bromomethane	ND		1.0	0.35	ug/L			10/11/18 15:14	1
2-Butanone (MEK)	ND		50	2.6	ug/L			10/11/18 15:14	1
Carbon disulfide	ND		1.0	0.22	ug/L			10/11/18 15:14	1
Carbon tetrachloride	ND		1.0	0.18	ug/L			10/11/18 15:14	1
Chlorobenzene	ND		1.0	0.18	ug/L			10/11/18 15:14	1
Chloroethane	ND		1.0	0.36	ug/L			10/11/18 15:14	1
2-Chloroethyl vinyl ether	ND		10	0.67	ug/L			10/11/18 15:14	1
Chloroform	ND		1.0	0.23	ug/L			10/11/18 15:14	1
1-Chlorohexane	ND		2.0	0.30	ug/L			10/11/18 15:14	1
Chloromethane	ND		1.0	0.36	ug/L			10/11/18 15:14	1
cis-1,2-Dichloroethene	ND		1.0	0.21	ug/L			10/11/18 15:14	1
cis-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/11/18 15:14	1
Dibromochloromethane	ND		1.0	0.25	ug/L			10/11/18 15:14	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			10/11/18 15:14	1
1,3-Dichlorobenzene	ND		1.0	0.18	ug/L			10/11/18 15:14	1
1,4-Dichlorobenzene	ND		1.0	0.17	ug/L			10/11/18 15:14	1
Dichlorodifluoromethane	ND		1.0	0.17	ug/L			10/11/18 15:14	1
1,1-Dichloroethane	ND		1.0	0.24	ug/L			10/11/18 15:14	1
1,2-Dichloroethane	ND		1.0	0.20	ug/L			10/11/18 15:14	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			10/11/18 15:14	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			10/11/18 15:14	1
1,3-Dichloropropane	ND		1.0	0.19	ug/L			10/11/18 15:14	1
2,2-Dichloropropane	ND		1.0	0.16	ug/L			10/11/18 15:14	1
1,1-Dichloropropene	ND		1.0	0.20	ug/L			10/11/18 15:14	1
Ethylbenzene	ND		1.0	0.19	ug/L			10/11/18 15:14	1
Ethyl methacrylate	ND		10	0.68	ug/L			10/11/18 15:14	1
Hexachlorobutadiene	ND		2.0	0.38	ug/L			10/11/18 15:14	1
2-Hexanone	ND		10	1.3	ug/L			10/11/18 15:14	1
Isopropylbenzene	ND		1.0	0.33	ug/L			10/11/18 15:14	1
Methylene bromide	ND		1.0	0.45	ug/L			10/11/18 15:14	1
Methylene Chloride	ND		5.0	1.0	ug/L			10/11/18 15:14	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.81	ug/L			10/11/18 15:14	1
Methyl tert-butyl ether	ND		1.0	0.17	ug/L			10/11/18 15:14	1
m-Xylene & p-Xylene	ND		2.0	0.38	ug/L			10/11/18 15:14	1
Naphthalene	ND		5.0	0.21	ug/L			10/11/18 15:14	1
n-Butylbenzene	ND		1.0	0.24	ug/L			10/11/18 15:14	1
N-Propylbenzene	ND		1.0	0.17	ug/L			10/11/18 15:14	1
o-Chlorotoluene	ND		1.0	0.18	ug/L			10/11/18 15:14	1
o-Xylene	ND		1.0	0.20	ug/L			10/11/18 15:14	1
p-Chlorotoluene	ND		1.0	0.17	ug/L			10/11/18 15:14	1
p-Isopropyltoluene	ND		1.0	0.17	ug/L			10/11/18 15:14	1

Client Sample ID: TB-ROX-100918-8260-BP
Date Collected: 10/09/18 00:01
Date Received: 10/10/18 10:15

Lab Sample ID: 490-160864-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.17	ug/L			10/11/18 15:14	1
Styrene	ND		1.0	0.28	ug/L			10/11/18 15:14	1
tert-Butylbenzene	ND		1.0	0.17	ug/L			10/11/18 15:14	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.15	ug/L			10/11/18 15:14	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.19	ug/L			10/11/18 15:14	1
Tetrachloroethene	ND		1.0	0.14	ug/L			10/11/18 15:14	1
Toluene	ND		1.0	0.17	ug/L			10/11/18 15:14	1
trans-1,2-Dichloroethene	ND		1.0	0.23	ug/L			10/11/18 15:14	1
trans-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/11/18 15:14	1
1,2,3-Trichlorobenzene	ND		1.0	0.23	ug/L			10/11/18 15:14	1
1,2,4-Trichlorobenzene	ND		1.0	0.20	ug/L			10/11/18 15:14	1
1,1,1-Trichloroethane	ND		1.0	0.19	ug/L			10/11/18 15:14	1
1,1,2-Trichloroethane	ND		1.0	0.19	ug/L			10/11/18 15:14	1
Trichloroethene	ND		1.0	0.20	ug/L			10/11/18 15:14	1
Trichlorofluoromethane	ND		1.0	0.21	ug/L			10/11/18 15:14	1
1,2,3-Trichloropropane	ND		1.0	0.23	ug/L			10/11/18 15:14	1
1,2,4-Trimethylbenzene	ND		1.0	0.17	ug/L			10/11/18 15:14	1
1,3,5-Trimethylbenzene	ND		1.0	0.17	ug/L			10/11/18 15:14	1
Vinyl acetate	ND		10	1.7	ug/L			10/11/18 15:14	1
Vinyl chloride	ND		1.0	0.18	ug/L			10/11/18 15:14	1
Xylenes, Total	ND		3.0	0.58	ug/L			10/11/18 15:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*92*		*70 - 130*		*10/11/18 15:14*	*1*
Dibromofluoromethane (Surr)	*103*		*70 - 130*		*10/11/18 15:14*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 130*		*10/11/18 15:14*	*1*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*		*10/11/18 15:14*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160864-1

Client Sample ID: MW23-ROX-100918
Date Collected: 10/09/18 11:35
Date Received: 10/10/18 10:15

Lab Sample ID: 490-160864-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	2.7	ug/L			10/11/18 19:55	1
Acrolein	ND		50	4.1	ug/L			10/11/18 19:55	1
Acrylonitrile	ND		10	0.50	ug/L			10/11/18 19:55	1
Benzene	ND		1.0	0.20	ug/L			10/11/18 19:55	1
Bromobenzene	ND		1.0	0.21	ug/L			10/11/18 19:55	1
Bromochloromethane	ND		1.0	0.15	ug/L			10/11/18 19:55	1
Bromodichloromethane	ND		1.0	0.17	ug/L			10/11/18 19:55	1
Bromoform	ND		1.0	0.29	ug/L			10/11/18 19:55	1
Bromomethane	ND		1.0	0.35	ug/L			10/11/18 19:55	1
2-Butanone (MEK)	ND		50	2.6	ug/L			10/11/18 19:55	1
Carbon disulfide	ND		1.0	0.22	ug/L			10/11/18 19:55	1
Carbon tetrachloride	ND		1.0	0.18	ug/L			10/11/18 19:55	1
Chlorobenzene	ND		1.0	0.18	ug/L			10/11/18 19:55	1
Chloroethane	ND		1.0	0.36	ug/L			10/11/18 19:55	1
2-Chloroethyl vinyl ether	ND		10	0.67	ug/L			10/11/18 19:55	1
Chloroform	ND		1.0	0.23	ug/L			10/11/18 19:55	1
1-Chlorohexane	ND		2.0	0.30	ug/L			10/11/18 19:55	1
Chloromethane	ND		1.0	0.36	ug/L			10/11/18 19:55	1
cis-1,2-Dichloroethene	ND		1.0	0.21	ug/L			10/11/18 19:55	1
cis-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/11/18 19:55	1
Dibromochloromethane	ND		1.0	0.25	ug/L			10/11/18 19:55	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			10/11/18 19:55	1
1,3-Dichlorobenzene	ND		1.0	0.18	ug/L			10/11/18 19:55	1
1,4-Dichlorobenzene	ND		1.0	0.17	ug/L			10/11/18 19:55	1
Dichlorodifluoromethane	ND		1.0	0.17	ug/L			10/11/18 19:55	1
1,1-Dichloroethane	ND		1.0	0.24	ug/L			10/11/18 19:55	1
1,2-Dichloroethane	ND		1.0	0.20	ug/L			10/11/18 19:55	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			10/11/18 19:55	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			10/11/18 19:55	1
1,3-Dichloropropane	ND		1.0	0.19	ug/L			10/11/18 19:55	1
2,2-Dichloropropane	ND		1.0	0.16	ug/L			10/11/18 19:55	1
1,1-Dichloropropene	ND		1.0	0.20	ug/L			10/11/18 19:55	1
Ethylbenzene	ND		1.0	0.19	ug/L			10/11/18 19:55	1
Ethyl methacrylate	ND		10	0.68	ug/L			10/11/18 19:55	1
Hexachlorobutadiene	ND		2.0	0.38	ug/L			10/11/18 19:55	1
2-Hexanone	ND		10	1.3	ug/L			10/11/18 19:55	1
Isopropylbenzene	ND		1.0	0.33	ug/L			10/11/18 19:55	1
Methylene bromide	ND		1.0	0.45	ug/L			10/11/18 19:55	1
Methylene Chloride	ND		5.0	1.0	ug/L			10/11/18 19:55	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.81	ug/L			10/11/18 19:55	1
Methyl tert-butyl ether	1.1		1.0	0.17	ug/L			10/11/18 19:55	1
m-Xylene & p-Xylene	ND		2.0	0.38	ug/L			10/11/18 19:55	1
Naphthalene	ND		5.0	0.21	ug/L			10/11/18 19:55	1
n-Butylbenzene	ND		1.0	0.24	ug/L			10/11/18 19:55	1
N-Propylbenzene	ND		1.0	0.17	ug/L			10/11/18 19:55	1
o-Chlorotoluene	ND		1.0	0.18	ug/L			10/11/18 19:55	1
o-Xylene	ND		1.0	0.20	ug/L			10/11/18 19:55	1
p-Chlorotoluene	ND		1.0	0.17	ug/L			10/11/18 19:55	1
p-Isopropyltoluene	ND		1.0	0.17	ug/L			10/11/18 19:55	1

Client Sample ID: MW23-ROX-100918
Date Collected: 10/09/18 11:35
Date Received: 10/10/18 10:15

Lab Sample ID: 490-160864-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.17	ug/L			10/11/18 19:55	1
Styrene	ND		1.0	0.28	ug/L			10/11/18 19:55	1
tert-Butylbenzene	ND		1.0	0.17	ug/L			10/11/18 19:55	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.15	ug/L			10/11/18 19:55	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.19	ug/L			10/11/18 19:55	1
Tetrachloroethene	ND		1.0	0.14	ug/L			10/11/18 19:55	1
Toluene	ND		1.0	0.17	ug/L			10/11/18 19:55	1
trans-1,2-Dichloroethene	ND		1.0	0.23	ug/L			10/11/18 19:55	1
trans-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/11/18 19:55	1
1,2,3-Trichlorobenzene	ND		1.0	0.23	ug/L			10/11/18 19:55	1
1,2,4-Trichlorobenzene	ND		1.0	0.20	ug/L			10/11/18 19:55	1
1,1,1-Trichloroethane	ND		1.0	0.19	ug/L			10/11/18 19:55	1
1,1,2-Trichloroethane	ND		1.0	0.19	ug/L			10/11/18 19:55	1
Trichloroethene	ND		1.0	0.20	ug/L			10/11/18 19:55	1
Trichlorofluoromethane	ND		1.0	0.21	ug/L			10/11/18 19:55	1
1,2,3-Trichloropropane	ND		1.0	0.23	ug/L			10/11/18 19:55	1
1,2,4-Trimethylbenzene	ND		1.0	0.17	ug/L			10/11/18 19:55	1
1,3,5-Trimethylbenzene	ND		1.0	0.17	ug/L			10/11/18 19:55	1
Vinyl acetate	ND		10	1.7	ug/L			10/11/18 19:55	1
Vinyl chloride	ND		1.0	0.18	ug/L			10/11/18 19:55	1
Xylenes, Total	ND		3.0	0.58	ug/L			10/11/18 19:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*92*		*70 - 130*		*10/11/18 19:55*	*1*
Dibromofluoromethane (Surr)	*103*		*70 - 130*		*10/11/18 19:55*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*10/11/18 19:55*	*1*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*		*10/11/18 19:55*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.082	J	0.096	0.019	ug/L		10/11/18 07:21	10/19/18 23:17	1
Acenaphthylene	0.040	J	0.096	0.029	ug/L		10/11/18 07:21	10/19/18 23:17	1
Anthracene	ND		0.096	0.029	ug/L		10/11/18 07:21	10/19/18 23:17	1
Benzo[a]anthracene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 23:17	1
Benzo[a]pyrene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 23:17	1
Benzo[b]fluoranthene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 23:17	1
Benzo[g,h,i]perylene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 23:17	1
Benzo[k]fluoranthene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 23:17	1
Chrysene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 23:17	1
Dibenz(a,h)anthracene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 23:17	1
Fluoranthene	ND		0.096	0.029	ug/L		10/11/18 07:21	10/19/18 23:17	1
Fluorene	0.10		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 23:17	1
Indeno[1,2,3-cd]pyrene	ND		0.096	0.019	ug/L		10/11/18 07:21	10/19/18 23:17	1
1-Methylnaphthalene	0.055	J	0.096	0.019	ug/L		10/11/18 07:21	10/19/18 23:17	1
2-Methylnaphthalene	0.087	J	0.096	0.029	ug/L		10/11/18 07:21	10/19/18 23:17	1
Phenanthrene	0.18		0.096	0.029	ug/L		10/11/18 07:21	10/19/18 23:17	1
Pyrene	0.025	J	0.096	0.019	ug/L		10/11/18 07:21	10/19/18 23:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*115*		*27 - 120*	*10/11/18 07:21*	*10/19/18 23:17*	*1*

Client Sample ID: MW23-ROX-100918

Date Collected: 10/09/18 11:35
Date Received: 10/10/18 10:15

Lab Sample ID: 490-160864-3
Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	89		13 - 120	10/11/18 07:21	10/19/18 23:17	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		24	2.0	ug/L		10/11/18 09:19	10/17/18 23:58	1
Benzenethiol	ND		95	24	ug/L		10/11/18 09:19	10/23/18 16:47	1
Benzoic acid	ND	* UJ	48	16	ug/L		10/11/18 09:19	10/17/18 23:58	1
Benzyl alcohol	ND		48	1.4	ug/L		10/11/18 09:19	10/17/18 23:58	1
Bis(2-chloroethoxy)methane	ND		9.5	2.0	ug/L		10/11/18 09:19	10/17/18 23:58	1
Bis(2-chloroethyl)ether	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 23:58	1
bis (2-chloroisopropyl) ether	ND		9.5	1.7	ug/L		10/11/18 09:19	10/17/18 23:58	1
Bis(2-ethylhexyl) phthalate	ND		9.5	2.4	ug/L		10/11/18 09:19	10/17/18 23:58	1
4-Bromophenyl phenyl ether	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 23:58	1
Butyl benzyl phthalate	ND		9.5	2.0	ug/L		10/11/18 09:19	10/17/18 23:58	1
4-Chloroaniline	ND		9.5	2.6	ug/L		10/11/18 09:19	10/17/18 23:58	1
4-Chloro-3-methylphenol	ND		9.5	1.6	ug/L		10/11/18 09:19	10/17/18 23:58	1
2-Chloronaphthalene	ND		9.5	2.2	ug/L		10/11/18 09:19	10/17/18 23:58	1
2-Chlorophenol	ND		9.5	1.5	ug/L		10/11/18 09:19	10/17/18 23:58	1
4-Chlorophenyl phenyl ether	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 23:58	1
Dibenz[a,h]acridine	ND		9.5	1.3	ug/L		10/11/18 09:19	10/17/18 23:58	1
Dibenzofuran	ND		9.5	1.9	ug/L		10/11/18 09:19	10/17/18 23:58	1
3,3'-Dichlorobenzidine	ND	* UJ	9.5	1.6	ug/L		10/11/18 09:19	10/17/18 23:58	1
2,4-Dichlorophenol	ND		9.5	1.9	ug/L		10/11/18 09:19	10/17/18 23:58	1
Diethyl phthalate	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 23:58	1
2,4-Dimethylphenol	ND		9.5	1.7	ug/L		10/11/18 09:19	10/17/18 23:58	1
Dimethyl phthalate	ND		9.5	1.6	ug/L		10/11/18 09:19	10/17/18 23:58	1
Di-n-butyl phthalate	ND	* UJ	9.5	1.9	ug/L		10/11/18 09:19	10/17/18 23:58	1
4,6-Dinitro-ortho-cresol	ND		24	2.5	ug/L		10/11/18 09:19	10/17/18 23:58	1
2,4-Dinitrophenol	ND		24	6.6	ug/L		10/11/18 09:19	10/17/18 23:58	1
2,4-Dinitrotoluene	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 23:58	1
2,6-Dinitrotoluene	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 23:58	1
Di-n-octyl phthalate	ND	* UJ	9.5	1.9	ug/L		10/11/18 09:19	10/17/18 23:58	1
1,4-Dioxane	ND		9.5	1.2	ug/L		10/11/18 09:19	10/17/18 23:58	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.5	1.7	ug/L		10/11/18 09:19	10/17/18 23:58	1
Hexachlorobenzene	ND		9.5	1.7	ug/L		10/11/18 09:19	10/17/18 23:58	1
Hexachlorocyclopentadiene	ND		9.5	2.5	ug/L		10/11/18 09:19	10/17/18 23:58	1
Hexachloroethane	ND		9.5	3.0	ug/L		10/11/18 09:19	10/17/18 23:58	1
Indene	ND		9.5	2.3	ug/L		10/11/18 09:19	10/17/18 23:58	1
Isophorone	ND	* UJ	9.5	1.8	ug/L		10/11/18 09:19	10/17/18 23:58	1
2-Methylphenol	ND		9.5	1.5	ug/L		10/11/18 09:19	10/17/18 23:58	1
3 & 4 Methylphenol	ND		9.5	1.1	ug/L		10/11/18 09:19	10/17/18 23:58	1
2-Nitroaniline	ND		24	1.4	ug/L		10/11/18 09:19	10/17/18 23:58	1
3-Nitroaniline	ND		24	1.5	ug/L		10/11/18 09:19	10/17/18 23:58	1
4-Nitroaniline	ND		24	1.6	ug/L		10/11/18 09:19	10/17/18 23:58	1
Nitrobenzene	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 23:58	1
2-Nitrophenol	ND		9.5	1.9	ug/L		10/11/18 09:19	10/17/18 23:58	1
4-Nitrophenol	ND		24	2.3	ug/L		10/11/18 09:19	10/17/18 23:58	1
N-Nitrosodimethylamine	ND		9.5	3.2	ug/L		10/11/18 09:19	10/17/18 23:58	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160864-1

Client Sample ID: MW23-ROX-100918
Date Collected: 10/09/18 11:35
Date Received: 10/10/18 10:15

Lab Sample ID: 490-160864-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.5	1.9	ug/L		10/11/18 09:19	10/17/18 23:58	1
N-Nitrosodiphenylamine	ND		9.5	1.4	ug/L		10/11/18 09:19	10/17/18 23:58	1
Pentachlorophenol	ND	U5	24	3.3	ug/L		10/11/18 09:19	10/17/18 23:58	1
Phenol	ND		9.5	3.2	ug/L		10/11/18 09:19	10/17/18 23:58	1
Pyridine	ND		9.5	1.7	ug/L		10/11/18 09:19	10/17/18 23:58	1
Quinoline	ND		9.5	2.7	ug/L		10/11/18 09:19	10/17/18 23:58	1
2,4,5-Trichlorophenol	ND		9.5	1.8	ug/L		10/11/18 09:19	10/17/18 23:58	1
2,4,6-Trichlorophenol	ND		9.5	1.5	ug/L		10/11/18 09:19	10/17/18 23:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*63*		*10 - 120*	*10/11/18 09:19*	*10/17/18 23:58*	*1*
Nitrobenzene-d5	*75*		*27 - 120*	*10/11/18 09:19*	*10/17/18 23:58*	*1*
Phenol-d5	*46*		*10 - 120*	*10/11/18 09:19*	*10/17/18 23:58*	*1*
Terphenyl-d14	*101*		*13 - 120*	*10/11/18 09:19*	*10/17/18 23:58*	*1*
2,4,6-Tribromophenol	*87*		*10 - 120*	*10/11/18 09:19*	*10/17/18 23:58*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.10	0.028	ug/L		10/11/18 09:51	10/11/18 19:12	1
1,2-Dibromoethane	ND		0.020	0.0060	ug/L		10/11/18 09:51	10/11/18 19:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*101*		*50 - 150*	*10/11/18 09:51*	*10/11/18 19:12*	*1*

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160864-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	DBFM	DCA	BFB
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)	(70-130)
490-160864-2	TB-ROX-100918-8260-BP	92	103	111	90
490-160864-3	MW23-ROX-100918	92	103	104	91
LCS 490-549195/4	Lab Control Sample	91	103	103	92
MB 490-549195/8	Method Blank	94	109	108	91

Surrogate Legend

TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)				
		2FP	NBZ	PHL	TPHL	TBP
Lab Sample ID	Client Sample ID	(10-120)	(27-120)	(10-120)	(13-120)	(10-120)
490-160864-3	MW23-ROX-100918	63	75	46	101	87
LCS 490-548892/20-A	Lab Control Sample	51	56	37	94	85
LCS 490-548892/2-A	Lab Control Sample	55	62	41	77	66
LCSD 490-548892/3-A	Lab Control Sample Dup	61	66	48	77	69
MB 490-548892/1-A	Method Blank	55	63	37	85	61

Surrogate Legend

2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPHL = Terphenyl-d14
TBP = 2,4,6-Tribromophenol

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		NBZ	TPHL
Lab Sample ID	Client Sample ID	(27-120)	(13-120)
490-160864-3	MW23-ROX-100918	115	89
LCS 490-549140/2-A	Lab Control Sample	81	80
LCSD 490-549140/3-A	Lab Control Sample Dup	76	88
MB 490-549140/1-A	Method Blank	76	93

Surrogate Legend

NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160864-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	13DCB2 (50-150)
490-160864-1	TB-ROX-100918-8011-BP	52 p
LCS 490-549171/4-A	Lab Control Sample	122
LCSD 490-549171/5-A	Lab Control Sample Dup	116
MB 490-549171/3-A	Method Blank	121

Surrogate Legend

13DCB = 1,3-Dichlorobenzene

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	13DCB1 (50-150)
490-160864-3	MW23-ROX-100918	101

Surrogate Legend

13DCB = 1,3-Dichlorobenzene

Method Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160864-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NSH
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL NSH
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL NSH
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	TAL NSH
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL NSH
5030B	Purge and Trap	SW846	TAL NSH
8011	Microextraction	SW846	TAL NSH

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160864-1

Client Sample ID: TB-ROX-100918-8011-BP

Lab Sample ID: 490-160864-1
Matrix: Water

Date Collected: 10/09/18 00:01
Date Received: 10/10/18 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			33.9 mL	2 mL	549171	10/11/18 09:51	ZXS	TAL NSH
Total/NA	Analysis	8011		1			549199	10/11/18 18:57	ZXS	TAL NSH

Client Sample ID: TB-ROX-100918-8260-BP

Lab Sample ID: 490-160864-2
Matrix: Water

Date Collected: 10/09/18 00:01
Date Received: 10/10/18 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	549195	10/11/18 15:14	P1B	TAL NSH

Client Sample ID: MW23-ROX-100918

Lab Sample ID: 490-160864-3
Matrix: Water

Date Collected: 10/09/18 11:35
Date Received: 10/10/18 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	549195	10/11/18 19:55	P1B	TAL NSH
Total/NA	Prep	3510C			1049.4 mL	1 mL	548892	10/11/18 09:19	MCO	TAL NSH
Total/NA	Analysis	8270D		1			550692	10/17/18 23:58	T1C	TAL NSH
Total/NA	Prep	3510C			1049.4 mL	1 mL	548892	10/11/18 09:19	MCO	TAL NSH
Total/NA	Analysis	8270D		1			551996	10/23/18 16:47	T1C	TAL NSH
Total/NA	Prep	3510C			1043.1 mL	1 mL	549140	10/11/18 07:21	CC	TAL NSH
Total/NA	Analysis	8270D SIM		1			551319	10/19/18 23:17	T1C	TAL NSH
Total/NA	Prep	8011			35 mL	2 mL	549171	10/11/18 09:51	ZXS	TAL NSH
Total/NA	Analysis	8011		1			549199	10/11/18 19:12	ZXS	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

QC Association Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160864-1

GC/MS VOA

Analysis Batch: 549195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160864-2	TB-ROX-100918-8260-BP	Total/NA	Water	8260B	
490-160864-3	MW23-ROX-100918	Total/NA	Water	8260B	
MB 490-549195/8	Method Blank	Total/NA	Water	8260B	
LCS 490-549195/4	Lab Control Sample	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 548892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160864-3	MW23-ROX-100918	Total/NA	Water	3510C	
MB 490-548892/1-A	Method Blank	Total/NA	Water	3510C	
LCS 490-548892/20-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 490-548892/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 490-548892/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Prep Batch: 549140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160864-3	MW23-ROX-100918	Total/NA	Water	3510C	
MB 490-549140/1-A	Method Blank	Total/NA	Water	3510C	
LCS 490-549140/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 490-549140/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 550692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160864-3	MW23-ROX-100918	Total/NA	Water	8270D	548892
LCS 490-548892/20-A	Lab Control Sample	Total/NA	Water	8270D	548892

Analysis Batch: 550858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 490-548892/1-A	Method Blank	Total/NA	Water	8270D	548892
LCS 490-548892/2-A	Lab Control Sample	Total/NA	Water	8270D	548892
LCSD 490-548892/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	548892

Analysis Batch: 551319

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160864-3	MW23-ROX-100918	Total/NA	Water	8270D SIM	549140
MB 490-549140/1-A	Method Blank	Total/NA	Water	8270D SIM	549140
LCS 490-549140/2-A	Lab Control Sample	Total/NA	Water	8270D SIM	549140
LCSD 490-549140/3-A	Lab Control Sample Dup	Total/NA	Water	8270D SIM	549140

Analysis Batch: 551996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160864-3	MW23-ROX-100918	Total/NA	Water	8270D	548892
MB 490-548892/1-A	Method Blank	Total/NA	Water	8270D	548892

GC Semi VOA

Prep Batch: 549171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160864-1	TB-ROX-100918-8011-BP	Total/NA	Water	8011	

GC Semi VOA (Continued)

Prep Batch: 549171 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160864-3	MW23-ROX-100918	Total/NA	Water	8011	
MB 490-549171/3-A	Method Blank	Total/NA	Water	8011	
LCS 490-549171/4-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 490-549171/5-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 549199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160864-1	TB-ROX-100918-8011-BP	Total/NA	Water	8011	549171
490-160864-3	MW23-ROX-100918	Total/NA	Water	8011	549171
MB 490-549171/3-A	Method Blank	Total/NA	Water	8011	549171
LCS 490-549171/4-A	Lab Control Sample	Total/NA	Water	8011	549171
LCSD 490-549171/5-A	Lab Control Sample Dup	Total/NA	Water	8011	549171

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-160864 Chain of Custody

Cooler Received/Opened On 10/10/2018 @ 1015

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 9176 (last 4 digits, FedEx) Courier: FedEx
   IR Gun ID 17960357 pH Strip Lot N/A Chlorine Strip Lot N/A
2. Temperature of rep. sample or temp blank when opened: 3.0 *Degrees Celsius*
3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA
4. Were custody seals on outside of cooler? YES NO NA
   If yes, how many and where: 1 Front / 1 Back
5. Were the seals intact, signed, and dated correctly? YES NO NA
6. Were custody papers inside cooler? GH YES NO NA

I certify that I opened the cooler and answered questions 1-6 (intial) _____

7. Were custody seals on containers: YES NO and intact YES NO NA
   Were these signed and dated correctly? YES NO NA
8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None
9. Cooling process: Ice Ice-pack Ice (direct contact) Dry Ice Other None
10. Did all containers arrive in good condition (unbroken)? YES NO NA
11. Were all container labels complete (#, date, signed, pres., etc)? YES NO NA
12. Did all container labels and tags agree with custody papers? YES NO NA
13a. Were VOA vials received? YES NO NA
   b. Was there any observable headspace present in any VOA vial? YES NO NA


Larger than this.

14. Was there a Trip Blank in this cooler? YES NO NA If multiple coolers, sequence # _____

I certify that I unloaded the cooler and answered questions 7-14 (intial) ADH

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES NO NA
   b. Did the bottle labels indicate that the correct preservatives were used YES NO NA
16. Was residual chlorine present? YES NO NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) ADH

17. Were custody papers properly filled out (ink, signed, etc)? YES NO NA
18. Did you sign the custody papers in the appropriate place? YES NO NA
19. Were correct containers used for the analysis requested? YES NO NA
20. Was sufficient amount of sample sent in each container? YES NO NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) ADH

I certify that I attached a label with the unique LIMS number to each container (intial) ADH

21. Were there Non-Conformance issues at login? YES NO Was a NCM generated? YES NO #_____

BIS = Broken in shipment
Cooler Receipt Form.doc

Loc: 490
160864

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

Cooler Received/Opened On 10/10/2018 @ 1015

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 9165 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 17610176 pH Strip Lot_____ Chlorine Strip Lot_____

2. Temperature of rep. sample or temp blank when opened: 3.5 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 (Back) 1 (Front)

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) 2.2

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry Ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) ADH

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) ADH

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) ADH

I certify that I attached a label with the unique LIMS number to each container (intial) ADH

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

Loc: 490
160864
#1
B

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

Cooler Received/Opened On 10/10/2018 @ 1015

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 1448 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 17610176 pH Strip Lot N/A Chlorine Strip Lot N/A

2. Temperature of rep. sample or temp blank when opened: 1.9 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: (Front) (Back)

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) 2-2

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry Ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) ASH

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) ASH

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) ASH

I certify that I attached a label with the unique LIMS number to each container (intial) ASH

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8 23 17

10/26/2018 (Rev. 1)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

Loc: 490
160864
#2
B

Cooler Received/Opened On 10/10/2018 @ 10:15

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 9143 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 31470366 pH Strip Lot N/A Chlorine Strip Lot N/A

2. Temperature of rep. sample or temp blank when opened: 1.2 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 Front 1 Back

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) _____

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry Ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) ADH

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) ADH

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) ADH

I certify that I attached a label with the unique LIMS number to each container (intial) ADH

21. Were there Non-Conformance Issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8/23/17
10/26/2018 (Rev. 1)

LAB (LOCATION)

Shell Oil Products US Chain Of Custody Record

AECOM

☐ ACCUTEST (_____)
☐ CALSCIENCE (_____)
☑ 2960 Foster Creighton DR Nashville TN 37204
☐ Other _____ Lab Vendor #: 1360586 (TestAmerica)

Please Check Appropriate Box:

☐ SGW FDG	☐ PIPELINE	☐ RETAIL
☐ CHEMICALS	☐ CONSULTANT	☐ LUBES
☐ TRANSPORTATION	☑ OTHER _ENV. SERVICES	

Print Bill To Contact Name: Bob Billman
PO #: 60527968 - 01.03.004 | 60527968 - 01.03.0044
PlaNet Site or Project ID: 25278
GSAP Project ID: USPC/00114/R/02
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 10/09/18
PAGE: 1 of 1

SAMPLING COMPANY: AECOM
LOG CODE:
SITE ADDRESS: Street and City: 900 South Central Ave; ROXANA
State: IL
AECOM Project / Task Number: Roxana Quarterly GW 60527968 - 01.03.004 60527968 - 01.03.0044
ADDRESS: 100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA
EDF DELIVERABLE TO (Name, Company, Office Location):
PHONE NO.:
E-MAIL:
AECOM Other ID
PROJECT CONTACT (Hardcopy or PDF Report to): Elizabeth Kunkel, Bob Billman, Melissa Remiger
SAMPLER NAME(S) (Print): B. Howell M. Karrick
LAB USE ONLY
TELEPHONE: 314-429-0100
FAX: 314-429-0462
Bill To Contact E-MAIL: bob.billman@aecom.com; elizabeth.kunkel@aecom.com; melissa.remiger@aecom.com

TURNAROUND TIME (CALENDAR DAYS)
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAY ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT

DELIVERABLES: ☑ LLEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
* Please include "J" values on Reports
* Please provide sample receipt upon login

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE EEDD DISK

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	NON-UNIT COST 60527968 - 01.03.004: VOC 8260	SVOC 8270	UNIT COST 60527968 - 01.03.0044: VOC 8011	PAH 8270LL
	TB-ROX-100918-8011-BP	10/9/18	0000	Water	2					2			✓	
	TB-ROX-100918-8260-BP	10/9/18	0000		2					2	✓			
	MW23-ROX-100918	10/9/18	1135		4			2		6	✓	✓	✓	✓

FIELD NOTES:
TEMPERATURE ON RECEIPT C°
Container PID Readings or Laboratory Notes
Loc: 490
160864

Relinquished by (Signature)	Received by: (Signature)	Date	Time
	Fedex	10/9/18	1530
		10/10/18	1015

Version: 14Dec15

* Custody seals and tracking numbers are the same as Roxana COC

3.0, 3.5, 1.9, 1.2

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Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 490-549195/8
Matrix: Water
Analysis Batch: 549195

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	2.7	ug/L			10/11/18 13:57	1
Acrolein	ND		50	4.1	ug/L			10/11/18 13:57	1
Acrylonitrile	ND		10	0.50	ug/L			10/11/18 13:57	1
Benzene	ND		1.0	0.20	ug/L			10/11/18 13:57	1
Bromobenzene	ND		1.0	0.21	ug/L			10/11/18 13:57	1
Bromochloromethane	ND		1.0	0.15	ug/L			10/11/18 13:57	1
Bromodichloromethane	ND		1.0	0.17	ug/L			10/11/18 13:57	1
Bromoform	ND		1.0	0.29	ug/L			10/11/18 13:57	1
Bromomethane	ND		1.0	0.35	ug/L			10/11/18 13:57	1
2-Butanone (MEK)	ND		50	2.6	ug/L			10/11/18 13:57	1
Carbon disulfide	ND		1.0	0.22	ug/L			10/11/18 13:57	1
Carbon tetrachloride	ND		1.0	0.18	ug/L			10/11/18 13:57	1
Chlorobenzene	ND		1.0	0.18	ug/L			10/11/18 13:57	1
Chloroethane	ND		1.0	0.36	ug/L			10/11/18 13:57	1
2-Chloroethyl vinyl ether	ND		10	0.67	ug/L			10/11/18 13:57	1
Chloroform	ND		1.0	0.23	ug/L			10/11/18 13:57	1
1-Chlorohexane	ND		2.0	0.30	ug/L			10/11/18 13:57	1
Chloromethane	ND		1.0	0.36	ug/L			10/11/18 13:57	1
cis-1,2-Dichloroethene	ND		1.0	0.21	ug/L			10/11/18 13:57	1
cis-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/11/18 13:57	1
Dibromochloromethane	ND		1.0	0.25	ug/L			10/11/18 13:57	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			10/11/18 13:57	1
1,3-Dichlorobenzene	ND		1.0	0.18	ug/L			10/11/18 13:57	1
1,4-Dichlorobenzene	ND		1.0	0.17	ug/L			10/11/18 13:57	1
Dichlorodifluoromethane	ND		1.0	0.17	ug/L			10/11/18 13:57	1
1,1-Dichloroethane	ND		1.0	0.24	ug/L			10/11/18 13:57	1
1,2-Dichloroethane	ND		1.0	0.20	ug/L			10/11/18 13:57	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			10/11/18 13:57	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			10/11/18 13:57	1
1,3-Dichloropropane	ND		1.0	0.19	ug/L			10/11/18 13:57	1
2,2-Dichloropropane	ND		1.0	0.16	ug/L			10/11/18 13:57	1
1,1-Dichloropropene	ND		1.0	0.20	ug/L			10/11/18 13:57	1
Ethylbenzene	ND		1.0	0.19	ug/L			10/11/18 13:57	1
Ethyl methacrylate	ND		10	0.68	ug/L			10/11/18 13:57	1
Hexachlorobutadiene	ND		2.0	0.38	ug/L			10/11/18 13:57	1
2-Hexanone	ND		10	1.3	ug/L			10/11/18 13:57	1
Isopropylbenzene	ND		1.0	0.33	ug/L			10/11/18 13:57	1
Methylene bromide	ND		1.0	0.45	ug/L			10/11/18 13:57	1
Methylene Chloride	ND		5.0	1.0	ug/L			10/11/18 13:57	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.81	ug/L			10/11/18 13:57	1
Methyl tert-butyl ether	ND		1.0	0.17	ug/L			10/11/18 13:57	1
m-Xylene & p-Xylene	ND		2.0	0.38	ug/L			10/11/18 13:57	1
Naphthalene	ND		5.0	0.21	ug/L			10/11/18 13:57	1
n-Butylbenzene	ND		1.0	0.24	ug/L			10/11/18 13:57	1
N-Propylbenzene	ND		1.0	0.17	ug/L			10/11/18 13:57	1
o-Chlorotoluene	ND		1.0	0.18	ug/L			10/11/18 13:57	1
o-Xylene	ND		1.0	0.20	ug/L			10/11/18 13:57	1
p-Chlorotoluene	ND		1.0	0.17	ug/L			10/11/18 13:57	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-549195/8
Matrix: Water
Analysis Batch: 549195

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	ND		1.0	0.17	ug/L			10/11/18 13:57	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			10/11/18 13:57	1
Styrene	ND		1.0	0.28	ug/L			10/11/18 13:57	1
tert-Butylbenzene	ND		1.0	0.17	ug/L			10/11/18 13:57	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.15	ug/L			10/11/18 13:57	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.19	ug/L			10/11/18 13:57	1
Tetrachloroethene	ND		1.0	0.14	ug/L			10/11/18 13:57	1
Toluene	ND		1.0	0.17	ug/L			10/11/18 13:57	1
trans-1,2-Dichloroethene	ND		1.0	0.23	ug/L			10/11/18 13:57	1
trans-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/11/18 13:57	1
1,2,3-Trichlorobenzene	ND		1.0	0.23	ug/L			10/11/18 13:57	1
1,2,4-Trichlorobenzene	ND		1.0	0.20	ug/L			10/11/18 13:57	1
1,1,1-Trichloroethane	ND		1.0	0.19	ug/L			10/11/18 13:57	1
1,1,2-Trichloroethane	ND		1.0	0.19	ug/L			10/11/18 13:57	1
Trichloroethene	ND		1.0	0.20	ug/L			10/11/18 13:57	1
Trichlorofluoromethane	ND		1.0	0.21	ug/L			10/11/18 13:57	1
1,2,3-Trichloropropane	ND		1.0	0.23	ug/L			10/11/18 13:57	1
1,2,4-Trimethylbenzene	ND		1.0	0.17	ug/L			10/11/18 13:57	1
1,3,5-Trimethylbenzene	ND		1.0	0.17	ug/L			10/11/18 13:57	1
Vinyl acetate	ND		10	1.7	ug/L			10/11/18 13:57	1
Vinyl chloride	ND		1.0	0.18	ug/L			10/11/18 13:57	1
Xylenes, Total	ND		3.0	0.58	ug/L			10/11/18 13:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*94*		*70 - 130*		*10/11/18 13:57*	*1*
Dibromofluoromethane (Surr)	*109*		*70 - 130*		*10/11/18 13:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 130*		*10/11/18 13:57*	*1*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*		*10/11/18 13:57*	*1*

Lab Sample ID: LCS 490-549195/4
Matrix: Water
Analysis Batch: 549195

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	112		ug/L		112	39 - 150
Acrolein	49.4	62.1		ug/L		126	10 - 150
Acrylonitrile	200	244		ug/L		122	63 - 135
Benzene	20.0	24.3		ug/L		122	70 - 130
Bromobenzene	20.0	15.7		ug/L		78	70 - 130
Bromochloromethane	20.0	22.3		ug/L		112	70 - 130
Bromodichloromethane	20.0	22.6		ug/L		113	70 - 130
Bromoform	20.0	21.8		ug/L		109	70 - 137
Bromomethane	20.0	22.4		ug/L		112	53 - 150
2-Butanone (MEK)	100	118		ug/L		118	55 - 143
Carbon disulfide	20.0	21.8		ug/L		109	64 - 135
Carbon tetrachloride	20.0	23.3		ug/L		117	70 - 147
Chlorobenzene	20.0	17.6		ug/L		88	70 - 130
Chloroethane	20.0	24.2		ug/L		121	60 - 138

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-549195/4
Matrix: Water
Analysis Batch: 549195

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloroethyl vinyl ether	20.0	20.8		ug/L		104	50 - 139
Chloroform	20.0	22.1		ug/L		110	70 - 130
1-Chlorohexane	20.0	18.5		ug/L		93	69 - 140
Chloromethane	20.0	27.9		ug/L		139	33 - 150
cis-1,2-Dichloroethene	20.0	22.2		ug/L		111	70 - 130
cis-1,3-Dichloropropene	20.0	20.3		ug/L		101	70 - 133
Dibromochloromethane	20.0	19.8		ug/L		99	70 - 133
1,2-Dichlorobenzene	20.0	15.2		ug/L		76	70 - 130
1,3-Dichlorobenzene	20.0	15.1		ug/L		75	70 - 130
1,4-Dichlorobenzene	20.0	15.3		ug/L		76	70 - 130
Dichlorodifluoromethane	20.0	23.4		ug/L		117	48 - 150
1,1-Dichloroethane	20.0	21.1		ug/L		105	70 - 130
1,2-Dichloroethane	20.0	24.2		ug/L		121	70 - 130
1,1-Dichloroethene	20.0	21.2		ug/L		106	70 - 132
1,2-Dichloropropane	20.0	22.4		ug/L		112	70 - 130
1,3-Dichloropropane	20.0	19.5		ug/L		97	70 - 130
2,2-Dichloropropane	20.0	22.7		ug/L		113	60 - 143
1,1-Dichloropropene	20.0	21.9		ug/L		110	70 - 130
Ethylbenzene	20.0	17.7		ug/L		88	70 - 130
Ethyl methacrylate	20.0	20.1		ug/L		100	60 - 136
Hexachlorobutadiene	20.0	19.8		ug/L		99	70 - 138
2-Hexanone	100	106		ug/L		106	54 - 142
Isopropylbenzene	20.0	17.0		ug/L		85	70 - 131
Methylene bromide	20.0	21.2		ug/L		106	70 - 130
Methylene Chloride	20.0	22.9		ug/L		115	70 - 130
4-Methyl-2-pentanone (MIBK)	100	111		ug/L		111	60 - 137
Methyl tert-butyl ether	20.0	22.8		ug/L		114	70 - 130
m-Xylene & p-Xylene	20.0	17.4		ug/L		87	70 - 130
Naphthalene	20.0	15.0		ug/L		75	54 - 150
n-Butylbenzene	20.0	16.4		ug/L		82	68 - 137
N-Propylbenzene	20.0	16.3		ug/L		82	70 - 134
o-Chlorotoluene	20.0	15.8		ug/L		79	70 - 130
o-Xylene	20.0	17.4		ug/L		87	70 - 130
p-Chlorotoluene	20.0	15.3		ug/L		76	70 - 130
p-Isopropyltoluene	20.0	16.2		ug/L		81	66 - 130
sec-Butylbenzene	20.0	15.8		ug/L		79	70 - 135
Styrene	20.0	17.6		ug/L		88	70 - 130
tert-Butylbenzene	20.0	15.6		ug/L		78	70 - 130
1,1,1,2-Tetrachloroethane	20.0	19.8		ug/L		99	70 - 130
1,1,2,2-Tetrachloroethane	20.0	17.8		ug/L		89	69 - 131
Tetrachloroethene	20.0	18.3		ug/L		91	70 - 130
Toluene	20.0	18.4		ug/L		92	70 - 130
trans-1,2-Dichloroethene	20.0	21.8		ug/L		109	70 - 130
trans-1,3-Dichloropropene	20.0	19.9		ug/L		100	63 - 142
1,2,3-Trichlorobenzene	20.0	16.0		ug/L		80	46 - 150
1,2,4-Trichlorobenzene	20.0	15.6		ug/L		78	58 - 147
1,1,1-Trichloroethane	20.0	22.6		ug/L		113	70 - 135
1,1,2-Trichloroethane	20.0	19.2		ug/L		96	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-549195/4
Matrix: Water
Analysis Batch: 549195

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichloroethene	20.0	21.7		ug/L		108	70 - 130
Trichlorofluoromethane	20.0	22.2		ug/L		111	59 - 150
1,2,3-Trichloropropane	20.0	17.0		ug/L		85	70 - 131
1,2,4-Trimethylbenzene	20.0	15.6		ug/L		78	70 - 130
1,3,5-Trimethylbenzene	20.0	15.9		ug/L		79	70 - 130
Vinyl acetate	40.0	43.6		ug/L		109	54 - 146
Vinyl chloride	20.0	24.5		ug/L		122	57 - 137
Xylenes, Total	40.0	34.8		ug/L		87	70 - 132

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*91*		*70 - 130*
Dibromofluoromethane (Surr)	*103*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 490-548892/1-A
Matrix: Water
Analysis Batch: 550858

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 548892

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		25	2.1	ug/L		10/10/18 09:24	10/18/18 09:28	1
Benzoic acid	ND		50	17	ug/L		10/10/18 09:24	10/18/18 09:28	1
Benzyl alcohol	ND		50	1.5	ug/L		10/10/18 09:24	10/18/18 09:28	1
Bis(2-chloroethoxy)methane	ND		10	2.1	ug/L		10/10/18 09:24	10/18/18 09:28	1
Bis(2-chloroethyl)ether	ND		10	1.9	ug/L		10/10/18 09:24	10/18/18 09:28	1
bis (2-chloroisopropyl) ether	ND		10	1.8	ug/L		10/10/18 09:24	10/18/18 09:28	1
Bis(2-ethylhexyl) phthalate	ND		10	2.6	ug/L		10/10/18 09:24	10/18/18 09:28	1
4-Bromophenyl phenyl ether	ND		10	1.9	ug/L		10/10/18 09:24	10/18/18 09:28	1
Butyl benzyl phthalate	ND		10	2.1	ug/L		10/10/18 09:24	10/18/18 09:28	1
4-Chloroaniline	ND		10	2.7	ug/L		10/10/18 09:24	10/18/18 09:28	1
4-Chloro-3-methylphenol	ND		10	1.7	ug/L		10/10/18 09:24	10/18/18 09:28	1
2-Chloronaphthalene	ND		10	2.3	ug/L		10/10/18 09:24	10/18/18 09:28	1
2-Chlorophenol	ND		10	1.6	ug/L		10/10/18 09:24	10/18/18 09:28	1
4-Chlorophenyl phenyl ether	ND		10	1.9	ug/L		10/10/18 09:24	10/18/18 09:28	1
Dibenz[a,h]acridine	ND		10	1.4	ug/L		10/10/18 09:24	10/18/18 09:28	1
Dibenzofuran	ND		10	2.0	ug/L		10/10/18 09:24	10/18/18 09:28	1
3,3'-Dichlorobenzidine	ND		10	1.7	ug/L		10/10/18 09:24	10/18/18 09:28	1
2,4-Dichlorophenol	ND		10	2.0	ug/L		10/10/18 09:24	10/18/18 09:28	1
Diethyl phthalate	ND		10	1.9	ug/L		10/10/18 09:24	10/18/18 09:28	1
2,4-Dimethylphenol	ND		10	1.8	ug/L		10/10/18 09:24	10/18/18 09:28	1
Dimethyl phthalate	ND		10	1.7	ug/L		10/10/18 09:24	10/18/18 09:28	1
Di-n-butyl phthalate	ND		10	2.0	ug/L		10/10/18 09:24	10/18/18 09:28	1
4,6-Dinitro-ortho-cresol	ND		25	2.6	ug/L		10/10/18 09:24	10/18/18 09:28	1
2,4-Dinitrophenol	ND		25	7.0	ug/L		10/10/18 09:24	10/18/18 09:28	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		10/10/18 09:24	10/18/18 09:28	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		10/10/18 09:24	10/18/18 09:28	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-548892/1-A
Matrix: Water
Analysis Batch: 550858

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 548892

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate	ND		10	2.0	ug/L		10/10/18 09:24	10/18/18 09:28	1
1,4-Dioxane	ND		10	1.2	ug/L		10/10/18 09:24	10/18/18 09:28	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.8	ug/L		10/10/18 09:24	10/18/18 09:28	1
Hexachlorobenzene	ND		10	1.8	ug/L		10/10/18 09:24	10/18/18 09:28	1
Hexachlorocyclopentadiene	ND		10	2.6	ug/L		10/10/18 09:24	10/18/18 09:28	1
Hexachloroethane	ND		10	3.2	ug/L		10/10/18 09:24	10/18/18 09:28	1
Indene	ND		10	2.4	ug/L		10/10/18 09:24	10/18/18 09:28	1
Isophorone	ND		10	1.9	ug/L		10/10/18 09:24	10/18/18 09:28	1
2-Methylphenol	ND		10	1.6	ug/L		10/10/18 09:24	10/18/18 09:28	1
3 & 4 Methylphenol	ND		10	1.2	ug/L		10/10/18 09:24	10/18/18 09:28	1
2-Nitroaniline	ND		25	1.5	ug/L		10/10/18 09:24	10/18/18 09:28	1
3-Nitroaniline	ND		25	1.6	ug/L		10/10/18 09:24	10/18/18 09:28	1
4-Nitroaniline	ND		25	1.7	ug/L		10/10/18 09:24	10/18/18 09:28	1
Nitrobenzene	ND		10	1.9	ug/L		10/10/18 09:24	10/18/18 09:28	1
2-Nitrophenol	ND		10	2.0	ug/L		10/10/18 09:24	10/18/18 09:28	1
4-Nitrophenol	ND		25	2.4	ug/L		10/10/18 09:24	10/18/18 09:28	1
N-Nitrosodimethylamine	ND		10	3.3	ug/L		10/10/18 09:24	10/18/18 09:28	1
N-Nitrosodi-n-propylamine	ND		10	2.0	ug/L		10/10/18 09:24	10/18/18 09:28	1
N-Nitrosodiphenylamine	ND		10	1.4	ug/L		10/10/18 09:24	10/18/18 09:28	1
Pentachlorophenol	ND		25	3.5	ug/L		10/10/18 09:24	10/18/18 09:28	1
Phenol	ND		10	3.3	ug/L		10/10/18 09:24	10/18/18 09:28	1
Pyridine	ND		10	1.8	ug/L		10/10/18 09:24	10/18/18 09:28	1
Quinoline	ND		10	2.8	ug/L		10/10/18 09:24	10/18/18 09:28	1
2,4,5-Trichlorophenol	ND		10	1.9	ug/L		10/10/18 09:24	10/18/18 09:28	1
2,4,6-Trichlorophenol	ND		10	1.6	ug/L		10/10/18 09:24	10/18/18 09:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*55*		*10 - 120*	*10/10/18 09:24*	*10/18/18 09:28*	*1*
Nitrobenzene-d5	*63*		*27 - 120*	*10/10/18 09:24*	*10/18/18 09:28*	*1*
Phenol-d5	*37*		*10 - 120*	*10/10/18 09:24*	*10/18/18 09:28*	*1*
Terphenyl-d14	*85*		*13 - 120*	*10/10/18 09:24*	*10/18/18 09:28*	*1*
2,4,6-Tribromophenol	*61*		*10 - 120*	*10/10/18 09:24*	*10/18/18 09:28*	*1*

Lab Sample ID: MB 490-548892/1-A
Matrix: Water
Analysis Batch: 551996

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 548892

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzenethiol	ND		100	25	ug/L		10/10/18 09:24	10/23/18 15:08	1

Lab Sample ID: LCS 490-548892/20-A
Matrix: Water
Analysis Batch: 550692

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 548892

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dibenz[a,h]acridine	50.0	42.2		ug/L		84	10 - 150
Quinoline	50.0	31.5		ug/L		63	10 - 150

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-548892/20-A
Matrix: Water
Analysis Batch: 550692

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 548892

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorophenol	51		10 - 120
Nitrobenzene-d5	56		27 - 120
Phenol-d5	37		10 - 120
Terphenyl-d14	94		13 - 120
2,4,6-Tribromophenol	85		10 - 120

Lab Sample ID: LCS 490-548892/2-A
Matrix: Water
Analysis Batch: 550858

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 548892

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aniline	100	29.0		ug/L		29	17 - 108
Benzoic acid	100	ND	*	ug/L		6	10 - 110
Benzyl alcohol	100	34.7	J	ug/L		35	21 - 120
Bis(2-chloroethoxy)methane	100	38.0		ug/L		38	35 - 127
Bis(2-chloroethyl)ether	100	37.8		ug/L		38	27 - 132
bis (2-chloroisopropyl) ether	100	32.0		ug/L		32	24 - 136
Bis(2-ethylhexyl) phthalate	100	48.1		ug/L		48	41 - 147
4-Bromophenyl phenyl ether	100	40.3		ug/L		40	36 - 135
Butyl benzyl phthalate	100	43.9		ug/L		44	34 - 146
4-Chloroaniline	100	37.9		ug/L		38	27 - 131
4-Chloro-3-methylphenol	100	37.6		ug/L		38	10 - 150
2-Chloronaphthalene	100	39.4		ug/L		39	32 - 127
2-Chlorophenol	100	39.5		ug/L		40	10 - 150
4-Chlorophenyl phenyl ether	100	41.4		ug/L		41	36 - 131
Dibenzofuran	100	40.8		ug/L		41	35 - 127
3,3'-Dichlorobenzidine	100	40.6	*	ug/L		41	46 - 143
2,4-Dichlorophenol	100	40.1		ug/L		40	10 - 150
Diethyl phthalate	100	40.7		ug/L		41	31 - 136
2,4-Dimethylphenol	100	35.1		ug/L		35	10 - 150
Dimethyl phthalate	100	39.9		ug/L		40	34 - 134
Di-n-butyl phthalate	100	42.3		ug/L		42	42 - 140
4,6-Dinitro-ortho-cresol	200	89.9		ug/L		45	10 - 150
2,4-Dinitrophenol	200	67.4		ug/L		34	10 - 150
2,4-Dinitrotoluene	100	42.3		ug/L		42	36 - 138
2,6-Dinitrotoluene	100	42.3		ug/L		42	41 - 137
Di-n-octyl phthalate	100	42.8		ug/L		43	42 - 142
1,4-Dioxane	100	18.9		ug/L		19	10 - 110
1,2-Diphenylhydrazine (as Azobenzene)	100	39.2		ug/L		39	38 - 142
Hexachlorobenzene	100	42.4		ug/L		42	36 - 140
Hexachlorocyclopentadiene	100	29.0		ug/L		29	17 - 128
Hexachloroethane	100	34.6		ug/L		35	23 - 120
Indene	100	35.8		ug/L		36	30 - 118
Isophorone	100	34.9	*	ug/L		35	39 - 120
2-Methylphenol	100	37.3		ug/L		37	10 - 133
3 & 4 Methylphenol	100	36.7		ug/L		37	10 - 135
2-Nitroaniline	100	37.0		ug/L		37	35 - 147

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-548892/2-A
Matrix: Water
Analysis Batch: 550858

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 548892

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
3-Nitroaniline	100	40.0		ug/L		40	36 - 128
4-Nitroaniline	100	42.4		ug/L		42	38 - 139
Nitrobenzene	100	33.8		ug/L		34	10 - 150
2-Nitrophenol	100	39.6		ug/L		40	10 - 150
4-Nitrophenol	200	44.3		ug/L		22	10 - 110
N-Nitrosodimethylamine	100	22.8		ug/L		23	10 - 110
N-Nitrosodi-n-propylamine	100	38.5		ug/L		38	32 - 136
N-Nitrosodiphenylamine	85.0	41.9		ug/L		49	44 - 123
Pentachlorophenol	200	67.9		ug/L		34	10 - 150
Phenol	100	24.7		ug/L		25	10 - 110
Pyridine	100	17.8		ug/L		18	10 - 110
2,4,5-Trichlorophenol	100	39.7		ug/L		40	10 - 150
2,4,6-Trichlorophenol	100	39.9		ug/L		40	10 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorophenol	*55*		*10 - 120*
Nitrobenzene-d5	*62*		*27 - 120*
Phenol-d5	*41*		*10 - 120*
Terphenyl-d14	*77*		*13 - 120*
2,4,6-Tribromophenol	*66*		*10 - 120*

Lab Sample ID: LCSD 490-548892/3-A
Matrix: Water
Analysis Batch: 550858

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 548892

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aniline	100	31.9		ug/L		32	17 - 108	9	50
Benzoic acid	100	ND	*	ug/L		7	10 - 110	15	50
Benzyl alcohol	100	36.8	J	ug/L		37	21 - 120	6	50
Bis(2-chloroethoxy)methane	100	37.7		ug/L		38	35 - 127	1	50
Bis(2-chloroethyl)ether	100	37.3		ug/L		37	27 - 132	1	50
bis (2-chloroisopropyl) ether	100	32.4		ug/L		32	24 - 136	1	50
Bis(2-ethylhexyl) phthalate	100	45.0		ug/L		45	41 - 147	7	47
4-Bromophenyl phenyl ether	100	40.1		ug/L		40	36 - 135	1	50
Butyl benzyl phthalate	100	41.4		ug/L		41	34 - 146	6	50
4-Chloroaniline	100	37.9		ug/L		38	27 - 131	0	34
4-Chloro-3-methylphenol	100	38.8		ug/L		39	10 - 150	3	50
2-Chloronaphthalene	100	38.3		ug/L		38	32 - 127	3	50
2-Chlorophenol	100	41.3		ug/L		41	10 - 150	4	49
4-Chlorophenyl phenyl ether	100	39.8		ug/L		40	36 - 131	4	50
Dibenzofuran	100	39.3		ug/L		39	35 - 127	4	50
3,3'-Dichlorobenzidine	100	39.5	*	ug/L		39	46 - 143	3	50
2,4-Dichlorophenol	100	41.2		ug/L		41	10 - 150	3	50
Diethyl phthalate	100	38.8		ug/L		39	31 - 136	5	50
2,4-Dimethylphenol	100	36.4		ug/L		36	10 - 150	4	50
Dimethyl phthalate	100	39.6		ug/L		40	34 - 134	1	50
Di-n-butyl phthalate	100	40.5	*	ug/L		41	42 - 140	4	50
4,6-Dinitro-ortho-cresol	200	86.6		ug/L		43	10 - 150	4	50

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 490-548892/3-A
Matrix: Water
Analysis Batch: 550858

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 548892

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4-Dinitrophenol	200	74.3		ug/L		37	10 - 150	10	50
2,4-Dinitrotoluene	100	41.2		ug/L		41	36 - 138	3	50
2,6-Dinitrotoluene	100	41.7		ug/L		42	41 - 137	1	50
Di-n-octyl phthalate	100	39.3	*	ug/L		39	42 - 142	8	49
1,4-Dioxane	100	26.1		ug/L		26	10 - 110	32	33
1,2-Diphenylhydrazine (as Azobenzene)	100	37.7		ug/L		38	38 - 142	4	50
Hexachlorobenzene	100	41.0		ug/L		41	36 - 140	3	50
Hexachlorocyclopentadiene	100	28.2		ug/L		28	17 - 128	3	50
Hexachloroethane	100	35.1		ug/L		35	23 - 120	2	50
Indene	100	36.2		ug/L		36	30 - 118	1	50
Isophorone	100	35.0	*	ug/L		35	39 - 120	0	50
2-Methylphenol	100	38.9		ug/L		39	10 - 133	4	45
3 & 4 Methylphenol	100	39.1		ug/L		39	10 - 135	6	46
2-Nitroaniline	100	37.3		ug/L		37	35 - 147	1	50
3-Nitroaniline	100	41.4		ug/L		41	36 - 128	4	27
4-Nitroaniline	100	42.2		ug/L		42	38 - 139	0	42
Nitrobenzene	100	34.8		ug/L		35	10 - 150	3	50
2-Nitrophenol	100	39.3		ug/L		39	10 - 150	1	50
4-Nitrophenol	200	47.7		ug/L		24	10 - 110	8	40
N-Nitrosodimethylamine	100	26.2		ug/L		26	10 - 110	14	38
N-Nitrosodi-n-propylamine	100	36.8		ug/L		37	32 - 136	5	50
N-Nitrosodiphenylamine	85.0	41.2		ug/L		49	44 - 123	2	50
Pentachlorophenol	200	64.9		ug/L		32	10 - 150	4	50
Phenol	100	28.6		ug/L		29	10 - 110	15	36
Pyridine	100	19.8		ug/L		20	10 - 110	11	50
2,4,5-Trichlorophenol	100	38.8		ug/L		39	10 - 150	2	50
2,4,6-Trichlorophenol	100	39.7		ug/L		40	10 - 150	0	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorophenol	*61*		*10 - 120*
Nitrobenzene-d5	*66*		*27 - 120*
Phenol-d5	*48*		*10 - 120*
Terphenyl-d14	*77*		*13 - 120*
2,4,6-Tribromophenol	*69*		*10 - 120*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 490-549140/1-A
Matrix: Water
Analysis Batch: 551319

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549140

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.10	0.020	ug/L		10/11/18 07:21	10/19/18 18:01	1
Acenaphthylene	ND		0.10	0.030	ug/L		10/11/18 07:21	10/19/18 18:01	1
Anthracene	ND		0.10	0.030	ug/L		10/11/18 07:21	10/19/18 18:01	1
Benzo[a]anthracene	ND		0.10	0.020	ug/L		10/11/18 07:21	10/19/18 18:01	1
Benzo[a]pyrene	ND		0.10	0.020	ug/L		10/11/18 07:21	10/19/18 18:01	1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: MB 490-549140/1-A
Matrix: Water
Analysis Batch: 551319

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549140

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		0.10	0.020	ug/L		10/11/18 07:21	10/19/18 18:01	1
Benzo[g,h,i]perylene	ND		0.10	0.020	ug/L		10/11/18 07:21	10/19/18 18:01	1
Benzo[k]fluoranthene	ND		0.10	0.020	ug/L		10/11/18 07:21	10/19/18 18:01	1
Chrysene	ND		0.10	0.020	ug/L		10/11/18 07:21	10/19/18 18:01	1
Dibenz(a,h)anthracene	ND		0.10	0.020	ug/L		10/11/18 07:21	10/19/18 18:01	1
Fluoranthene	ND		0.10	0.030	ug/L		10/11/18 07:21	10/19/18 18:01	1
Fluorene	ND		0.10	0.020	ug/L		10/11/18 07:21	10/19/18 18:01	1
Indeno[1,2,3-cd]pyrene	ND		0.10	0.020	ug/L		10/11/18 07:21	10/19/18 18:01	1
1-Methylnaphthalene	ND		0.10	0.020	ug/L		10/11/18 07:21	10/19/18 18:01	1
2-Methylnaphthalene	ND		0.10	0.030	ug/L		10/11/18 07:21	10/19/18 18:01	1
Phenanthrene	ND		0.10	0.030	ug/L		10/11/18 07:21	10/19/18 18:01	1
Pyrene	ND		0.10	0.020	ug/L		10/11/18 07:21	10/19/18 18:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*76*		*27 - 120*	*10/11/18 07:21*	*10/19/18 18:01*	*1*
Terphenyl-d14	*93*		*13 - 120*	*10/11/18 07:21*	*10/19/18 18:01*	*1*

Lab Sample ID: LCS 490-549140/2-A
Matrix: Water
Analysis Batch: 551319

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549140

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	2.00	2.02		ug/L		101	46 - 120
Acenaphthylene	2.00	1.79		ug/L		90	48 - 120
Anthracene	2.00	1.73		ug/L		87	58 - 130
Benzo[a]anthracene	2.00	1.87		ug/L		94	57 - 120
Benzo[a]pyrene	2.00	2.07		ug/L		103	57 - 124
Benzo[b]fluoranthene	2.00	2.17		ug/L		109	51 - 125
Benzo[g,h,i]perylene	2.00	2.28		ug/L		114	51 - 123
Benzo[k]fluoranthene	2.00	2.04		ug/L		102	51 - 120
Chrysene	2.00	2.00		ug/L		100	55 - 120
Dibenz(a,h)anthracene	2.00	2.36		ug/L		118	50 - 125
Fluoranthene	2.00	1.76		ug/L		88	56 - 120
Fluorene	2.00	1.89		ug/L		95	52 - 120
Indeno[1,2,3-cd]pyrene	2.00	2.05		ug/L		103	54 - 125
1-Methylnaphthalene	2.00	1.83		ug/L		92	36 - 120
2-Methylnaphthalene	2.00	1.75		ug/L		87	31 - 120
Phenanthrene	2.00	2.00		ug/L		100	56 - 120
Pyrene	2.00	1.71		ug/L		86	53 - 129

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5	*81*		*27 - 120*
Terphenyl-d14	*80*		*13 - 120*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCSD 490-549140/3-A
Matrix: Water
Analysis Batch: 551319

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 549140

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	2.00	1.77		ug/L		88	46 - 120	13	31
Acenaphthylene	2.00	1.69		ug/L		85	48 - 120	6	31
Anthracene	2.00	1.66		ug/L		83	58 - 130	5	28
Benzo[a]anthracene	2.00	1.72		ug/L		86	57 - 120	9	27
Benzo[a]pyrene	2.00	2.00		ug/L		100	57 - 124	3	27
Benzo[b]fluoranthene	2.00	2.11		ug/L		106	51 - 125	3	39
Benzo[g,h,i]perylene	2.00	2.17		ug/L		108	51 - 123	5	27
Benzo[k]fluoranthene	2.00	2.09		ug/L		104	51 - 120	2	32
Chrysene	2.00	1.86		ug/L		93	55 - 120	8	27
Dibenz(a,h)anthracene	2.00	2.19		ug/L		109	50 - 125	8	28
Fluoranthene	2.00	1.74		ug/L		87	56 - 120	1	28
Fluorene	2.00	1.69		ug/L		84	52 - 120	12	28
Indeno[1,2,3-cd]pyrene	2.00	1.97		ug/L		99	54 - 125	4	27
1-Methylnaphthalene	2.00	1.56		ug/L		78	36 - 120	16	36
2-Methylnaphthalene	2.00	1.46		ug/L		73	31 - 120	18	35
Phenanthrene	2.00	1.77		ug/L		89	56 - 120	12	26
Pyrene	2.00	1.85		ug/L		92	53 - 129	7	29

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Nitrobenzene-d5	*76*		*27 - 120*
Terphenyl-d14	*88*		*13 - 120*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 490-549171/3-A
Matrix: Water
Analysis Batch: 549199

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549171

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.10	0.028	ug/L		10/11/18 09:50	10/11/18 13:17	1
1,2-Dibromoethane	ND		0.020	0.0060	ug/L		10/11/18 09:50	10/11/18 13:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*121*		*50 - 150*	*10/11/18 09:50*	*10/11/18 13:17*	*1*

Lab Sample ID: LCS 490-549171/4-A
Matrix: Water
Analysis Batch: 549199

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549171

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	0.286	0.292		ug/L		102	70 - 130
1,2-Dibromoethane	0.286	0.316		ug/L		111	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,3-Dichlorobenzene	*122*		*50 - 150*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: LCSD 490-549171/5-A
Matrix: Water
Analysis Batch: 549199

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 549171

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane			0.286	0.294		ug/L		103	70 - 130	1	34
1,2-Dibromoethane			0.286	0.317		ug/L		111	70 - 130	0	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,3-Dichlorobenzene	*116*		*50 - 150*

Accreditation/Certification Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160864-1

Laboratory: TestAmerica Nashville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	ISO/IEC 17025		0453.07	12-31-19
Alaska (UST)	State Program	10	UST-087	06-30-19
Arizona	State Program	9	AZ0473	05-05-19
Arkansas DEQ	State Program	6	88-0737	04-25-19
California	State Program	9	2938	10-31-18
Connecticut	State Program	1	PH-0220	12-31-19
Florida	NELAP	4	E87358	06-30-19
Georgia	State Program	4	NA: NELAP & A2LA	12-31-19
Illinois	NELAP	5	200010	12-09-18
Iowa	State Program	7	131	04-01-20
Kansas	NELAP	7	E-10229	10-31-18
Kentucky (UST)	State Program	4	19	06-30-19
Kentucky (WW)	State Program	4	90038	12-31-18
Louisiana	NELAP	6	30613	06-30-19
Maine	State Program	1	TN00032	11-03-19
Maryland	State Program	3	316	03-31-19
Massachusetts	State Program	1	M-TN032	06-30-19
Minnesota	NELAP	5	047-999-345	12-31-18
Mississippi	State Program	4	N/A	06-30-19
Montana (UST)	State Program	8	NA	02-24-20
Nevada	State Program	9	TN00032	07-31-19
New Hampshire	NELAP	1	2963	10-09-18 *
New Jersey	NELAP	2	TN965	06-30-19
New York	NELAP	2	11342	03-31-19
North Carolina (WW/SW)	State Program	4	387	12-31-18
North Dakota	State Program	8	R-146	06-30-19
Ohio VAP	State Program	5	CL0033	07-06-19
Oklahoma	State Program	6	9412	08-31-19
Oregon	NELAP	10	TN200001	04-26-19
Pennsylvania	NELAP	3	68-00585	07-31-19
Rhode Island	State Program	1	LAO00268	12-30-18
South Carolina	State Program	4	84009 (001)	02-28-19
Tennessee	State Program	4	2008	02-23-20
Texas	NELAP	6	T104704077	08-31-19
USDA	Federal		P330-13-00306	12-01-19
Utah	NELAP	8	TN00032	07-31-19
Virginia	NELAP	3	460152	06-14-19
Washington	State Program	10	C789	07-19-19
West Virginia DEP	State Program	3	219	02-28-19
Wisconsin	State Program	5	998020430	08-31-19
Wyoming (UST)	A2LA	8	453.07	12-31-19

Laboratory: TestAmerica Pensacola

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	200041	10-09-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Roxana Groundwater Quarterly – 4th Quarter 2018 Data Review

Laboratory SDG: 490-160957-1

Data Reviewer: Melissa Remiger

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 11/8/2018

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2017

Sample Identification	Sample Identification
TB-ROX-101018-8011	TB-ROX-101018-8260
MW1-ROX-101018	MW12-ROX-101018-EB
MW12-ROX-101018	MW10-ROX-101018
MW9-ROX-101018	

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, although not indicated in the laboratory case narrative, acetone and acenaphthene were detected in the equipment blank. Several SVOC LCS/LCSD recoveries and SVOC LCS/LCSD RPDs were outside evaluation criteria. The surrogate recovery for terphenyl-d_{14} was outside criteria in the SVOC LCS. The continuing calibration verification for bis(2-chloroisopropyl)ether was outside evaluation criteria, biased low; the continuing calibration verification for benzo[a]pyrene was outside evaluation criteria, biased high. These issues are addressed further in the appropriate sections of this data review.

Three of 69 (2-chloroethyl vinyl ether, acrolein, and acrylonitrile) 8260 VOCs are acid-reactive compounds; results may be biased low due to the presence of HCl in the preservative.

The cooler receipt form did not indicate any problems.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

Yes

Blank ID	Parameter	Analyte	Concentration/ Amount
MW12-ROX-101018-EB	VOCs	Acetone	5.5 µg/L
MW12-ROX-101018-EB	PAHs	Acenaphthene	0.019 µg/L

Analytical data that were reported non-detect or at concentrations greater than five times (5X) the associated blank concentration did not require qualification. No qualification of data was required.

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS/LCSD ID	Parameter	Analyte	LCS/ LCSD Recovery	RPD	LCS/LCSD/ RPD Criteria
LCS/LCSD 400-549362/2-A/3-A	SVOCs	Benzoic acid	**9/16**	**55**	10-110/50
LCS/LCSD 400-549362/2-A/3-A	SVOCs	1,4-Dioxane	38/57	**39**	10-110/33
LCS/LCSD 400-549362/2-A/3-A	SVOCs	n-Nitrosodiphenylamine	119/**128**	7	44-123/50

Analytical data that required qualification based on LCS/LCSD data are included in the table below. Professional judgment was used to qualify, however not reject, data associated with benzoic acid in LCS/LCSD 400-549362/2-A/3-A; benzoic acid has been identified as a poor performing analyte under Method 8270. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Analytical data associated with RPD alone outside evaluation criteria did not require qualification.

Sample ID	Parameter	Analyte	Qualification
MW1-ROX-101018	SVOCs	Benzoic acid	**UJ**
MW12-ROX-101018	SVOCs	Benzoic acid	**UJ**
MW10-ROX-101018	SVOCs	Benzoic acid	**UJ**
MW9-ROX-101018	SVOCs	Benzoic acid	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
LCS 490-549362/7-A	SVOCs	Terphenyl-d_{14}	**126**	13-120

Quality control samples do not require qualification. No qualification of data was required.

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; samples analyzed did not require dilution.

12.0 Additional Qualifications

Were additional qualifications applied?

Yes, The continuing calibration verification for bis(2-chloroisopropyl)ether was outside evaluation criteria, biased low; the continuing calibration verification for benzo[a]pyrene was outside evaluation criteria, biased high, and are qualified as summarized in the following table. Analytical data reported as non-detect and associated with CCV recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Sample ID	Parameter	Analyte	Qualification
MW1-ROX-101018	SVOCs	bis(2-Chloroisopropyl)ether	**UJ**
MW12-ROX-101018	SVOCs	bis(2-Chloroisopropyl)ether	**UJ**
MW10-ROX-101018	SVOCs	bis(2-Chloroisopropyl)ether	**UJ**
MW9-ROX-101018	SVOCs	bis(2-Chloroisopropyl)ether	**UJ**
MW12-ROX-101018	PAHs	Benzo[a]pyrene	**J**

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-160957-1
Client Project/Site: ROXANA QUARTERLY

For:
AECOM Technical Services Inc.
100 N. Broadway
20th Floor
St. Louis, Missouri 63102

Attn: Elizabeth Kunkel

Authorized for release by:
10/29/2018 12:27:30 PM

Leah Klingensmith, Senior Project Manager
(615)301-5038
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LINKS

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Reviewed 11/8/18 TR

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 490-160957-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-160957-1

Comments
No additional comments.

Receipt
The samples were received on 10/11/2018 10:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 1.1° C, 1.1° C, 1.5° C and 3.1° C.

GC/MS VOA
Method(s) 8260B: The preservative used in the sample containers provided is not compatible with one of the Method 8260 analytes requested. The following samples were received preserved with hydrochloric acid: TB-ROX-101018-8260 (490-160957-2), MW1-ROX-101018 (490-160957-3), MW12-ROX-101018-EB (490-160957-4), MW12-ROX-101018 (490-160957-5), MW10-ROX-101018 (490-160957-6) and MW9-ROX-101018 (490-160957-7). The requested target analyte list includes 2-chloroethyl vinyl ether, Acrolein and Acrylonitrile, which are acid-labile compounds that degrade in an acidic medium.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270D: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 490-549362 recovered outside control limits for the following analyte(s): Benzoic Acid. Benzoic Acid has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method(s) 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 490-549362 recovered outside control limits for the following analytes: 1,4-Dioxane, N-Nitrosodiphenylamine and Benzoic acid.

Method(s) 8270D: The continuing calibration verification (CCV) analyzed in analytical batch 490-551996 was outside the method criteria for the following analyte(s): bis (2-chloroisopropyl) ether. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method(s) 8270D: Internal standard (ISTD) response for Acenaphthene-d10, Chrysene-d12, Naphthalene-d8, Perylene-d12 and Phenenthrene-d10 the following samples was outside of acceptance limits: (CCV 490-551996/8). None of the compounds reported in the sample are associated with this ISTD; therefore, the data is reported.

Method(s) 8270D: The surrogate recovery for the LCS associated with preparation batch 490-549362 was outside the upper control limits. None of target analytes associate with this surrogate.

Method(s) 8270D SIM: The continuing calibration verification (CCV) associated with analytical batch 490-552604 recovered above the upper control limit for Benzo[a]pyrene. The samples associated with this CCV were non-detected above the RL for the affected analytes; therefore, the data has been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method(s) 8011: The %RPD between the primary and confirmation column exceeded 40% for 1,3-Dichlorobenzene for the following sample: MW12-ROX-101018-EB (490-160957-4). The lower value(s) has been reported and qualified in accordance with the laboratory's SOP.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Job ID: 490-160957-1 (Continued)

Laboratory: TestAmerica Nashville (Continued)

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160957-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-160957-1	TB-ROX-101018-8011	Water	10/10/18 00:01	10/11/18 10:15
490-160957-2	TB-ROX-101018-8260	Water	10/10/18 00:01	10/11/18 10:15
490-160957-3	MW1-ROX-101018	Water	10/10/18 09:05	10/11/18 10:15
490-160957-4	MW12-ROX-101018-EB	Water	10/10/18 10:00	10/11/18 10:15
490-160957-5	MW12-ROX-101018	Water	10/10/18 10:40	10/11/18 10:15
490-160957-6	MW10-ROX-101018	Water	10/10/18 12:00	10/11/18 10:15
490-160957-7	MW9-ROX-101018	Water	10/10/18 12:55	10/11/18 10:15

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160957-1

Client Sample ID: TB-ROX-101018-8011 — Lab Sample ID: 490-160957-1

No Detections.

Client Sample ID: TB-ROX-101018-8260 — Lab Sample ID: 490-160957-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	4.2	J	25	2.7	ug/L	1		8260B	Total/NA

Client Sample ID: MW1-ROX-101018 — Lab Sample ID: 490-160957-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.8		1.0	0.20	ug/L	1		8260B	Total/NA

Client Sample ID: MW12-ROX-101018-EB — Lab Sample ID: 490-160957-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	5.5	J	25	2.7	ug/L	1		8260B	Total/NA
Acenaphthene	0.019	J	0.095	0.019	ug/L	1		8270D SIM	Total/NA

Client Sample ID: MW12-ROX-101018 — Lab Sample ID: 490-160957-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	0.031	J	0.095	0.019	ug/L	1		8270D SIM	Total/NA
Benzo[a]pyrene	0.061	J	0.095	0.019	ug/L	1		8270D SIM	Total/NA
Benzo[b]fluoranthene	0.11		0.095	0.019	ug/L	1		8270D SIM	Total/NA
Benzo[g,h,i]perylene	0.064	J	0.095	0.019	ug/L	1		8270D SIM	Total/NA
Benzo[k]fluoranthene	0.039	J	0.095	0.019	ug/L	1		8270D SIM	Total/NA
Chrysene	0.059	J	0.095	0.019	ug/L	1		8270D SIM	Total/NA
Fluoranthene	0.077	J	0.095	0.029	ug/L	1		8270D SIM	Total/NA
Indeno[1,2,3-cd]pyrene	0.066	J	0.095	0.019	ug/L	1		8270D SIM	Total/NA
Pyrene	0.071	J	0.095	0.019	ug/L	1		8270D SIM	Total/NA

Client Sample ID: MW10-ROX-101018 — Lab Sample ID: 490-160957-6

No Detections.

Client Sample ID: MW9-ROX-101018 — Lab Sample ID: 490-160957-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.24	J	1.0	0.20	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160957-1

Client Sample ID: TB-ROX-101018-8011
Date Collected: 10/10/18 00:01
Date Received: 10/11/18 10:15

Lab Sample ID: 490-160957-1
Matrix: Water

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.10	0.028	ug/L		10/11/18 14:51	10/11/18 21:47	1
1,2-Dibromoethane	ND		0.020	0.0061	ug/L		10/11/18 14:51	10/11/18 21:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*98*		*50 - 150*	*10/11/18 14:51*	*10/11/18 21:47*	*1*

Client Sample ID: TB-ROX-101018-8260
Date Collected: 10/10/18 00:01
Date Received: 10/11/18 10:15

Lab Sample ID: 490-160957-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	4.2	J	25	2.7	ug/L			10/12/18 08:15	1
Acrolein	ND		50	4.1	ug/L			10/12/18 08:15	1
Acrylonitrile	ND		10	0.50	ug/L			10/12/18 08:15	1
Benzene	ND		1.0	0.20	ug/L			10/12/18 08:15	1
Bromobenzene	ND		1.0	0.21	ug/L			10/12/18 08:15	1
Bromochloromethane	ND		1.0	0.15	ug/L			10/12/18 08:15	1
Bromodichloromethane	ND		1.0	0.17	ug/L			10/12/18 08:15	1
Bromoform	ND		1.0	0.29	ug/L			10/12/18 08:15	1
Bromomethane	ND		1.0	0.35	ug/L			10/12/18 08:15	1
2-Butanone (MEK)	ND		50	2.6	ug/L			10/12/18 08:15	1
Carbon disulfide	ND		1.0	0.22	ug/L			10/12/18 08:15	1
Carbon tetrachloride	ND		1.0	0.18	ug/L			10/12/18 08:15	1
Chlorobenzene	ND		1.0	0.18	ug/L			10/12/18 08:15	1
Chloroethane	ND		1.0	0.36	ug/L			10/12/18 08:15	1
2-Chloroethyl vinyl ether	ND		10	0.67	ug/L			10/12/18 08:15	1
Chloroform	ND		1.0	0.23	ug/L			10/12/18 08:15	1
1-Chlorohexane	ND		2.0	0.30	ug/L			10/12/18 08:15	1
Chloromethane	ND		1.0	0.36	ug/L			10/12/18 08:15	1
cis-1,2-Dichloroethene	ND		1.0	0.21	ug/L			10/12/18 08:15	1
cis-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/12/18 08:15	1
Dibromochloromethane	ND		1.0	0.25	ug/L			10/12/18 08:15	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			10/12/18 08:15	1
1,3-Dichlorobenzene	ND		1.0	0.18	ug/L			10/12/18 08:15	1
1,4-Dichlorobenzene	ND		1.0	0.17	ug/L			10/12/18 08:15	1
Dichlorodifluoromethane	ND		1.0	0.17	ug/L			10/12/18 08:15	1
1,1-Dichloroethane	ND		1.0	0.24	ug/L			10/12/18 08:15	1
1,2-Dichloroethane	ND		1.0	0.20	ug/L			10/12/18 08:15	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			10/12/18 08:15	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			10/12/18 08:15	1
1,3-Dichloropropane	ND		1.0	0.19	ug/L			10/12/18 08:15	1
2,2-Dichloropropane	ND		1.0	0.16	ug/L			10/12/18 08:15	1
1,1-Dichloropropene	ND		1.0	0.20	ug/L			10/12/18 08:15	1
Ethylbenzene	ND		1.0	0.19	ug/L			10/12/18 08:15	1
Ethyl methacrylate	ND		10	0.68	ug/L			10/12/18 08:15	1
Hexachlorobutadiene	ND		2.0	0.38	ug/L			10/12/18 08:15	1
2-Hexanone	ND		10	1.3	ug/L			10/12/18 08:15	1
Isopropylbenzene	ND		1.0	0.33	ug/L			10/12/18 08:15	1
Methylene bromide	ND		1.0	0.45	ug/L			10/12/18 08:15	1
Methylene Chloride	ND		5.0	1.0	ug/L			10/12/18 08:15	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.81	ug/L			10/12/18 08:15	1
Methyl tert-butyl ether	ND		1.0	0.17	ug/L			10/12/18 08:15	1
m-Xylene & p-Xylene	ND		2.0	0.38	ug/L			10/12/18 08:15	1
Naphthalene	ND		5.0	0.21	ug/L			10/12/18 08:15	1
n-Butylbenzene	ND		1.0	0.24	ug/L			10/12/18 08:15	1
N-Propylbenzene	ND		1.0	0.17	ug/L			10/12/18 08:15	1
o-Chlorotoluene	ND		1.0	0.18	ug/L			10/12/18 08:15	1
o-Xylene	ND		1.0	0.20	ug/L			10/12/18 08:15	1
p-Chlorotoluene	ND		1.0	0.17	ug/L			10/12/18 08:15	1
p-Isopropyltoluene	ND		1.0	0.17	ug/L			10/12/18 08:15	1

Client Sample ID: TB-ROX-101018-8260
Date Collected: 10/10/18 00:01
Date Received: 10/11/18 10:15

Lab Sample ID: 490-160957-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.17	ug/L			10/12/18 08:15	1
Styrene	ND		1.0	0.28	ug/L			10/12/18 08:15	1
tert-Butylbenzene	ND		1.0	0.17	ug/L			10/12/18 08:15	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.15	ug/L			10/12/18 08:15	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.19	ug/L			10/12/18 08:15	1
Tetrachloroethene	ND		1.0	0.14	ug/L			10/12/18 08:15	1
Toluene	ND		1.0	0.17	ug/L			10/12/18 08:15	1
trans-1,2-Dichloroethene	ND		1.0	0.23	ug/L			10/12/18 08:15	1
trans-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/12/18 08:15	1
1,2,3-Trichlorobenzene	ND		1.0	0.23	ug/L			10/12/18 08:15	1
1,2,4-Trichlorobenzene	ND		1.0	0.20	ug/L			10/12/18 08:15	1
1,1,1-Trichloroethane	ND		1.0	0.19	ug/L			10/12/18 08:15	1
1,1,2-Trichloroethane	ND		1.0	0.19	ug/L			10/12/18 08:15	1
Trichloroethene	ND		1.0	0.20	ug/L			10/12/18 08:15	1
Trichlorofluoromethane	ND		1.0	0.21	ug/L			10/12/18 08:15	1
1,2,3-Trichloropropane	ND		1.0	0.23	ug/L			10/12/18 08:15	1
1,2,4-Trimethylbenzene	ND		1.0	0.17	ug/L			10/12/18 08:15	1
1,3,5-Trimethylbenzene	ND		1.0	0.17	ug/L			10/12/18 08:15	1
Vinyl acetate	ND		10	1.7	ug/L			10/12/18 08:15	1
Vinyl chloride	ND		1.0	0.18	ug/L			10/12/18 08:15	1
Xylenes, Total	ND		3.0	0.58	ug/L			10/12/18 08:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*110*		*70 - 130*		*10/12/18 08:15*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*10/12/18 08:15*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 130*		*10/12/18 08:15*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*10/12/18 08:15*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160957-1

Client Sample ID: MW1-ROX-101018
Date Collected: 10/10/18 09:05
Date Received: 10/11/18 10:15

Lab Sample ID: 490-160957-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	2.7	ug/L			10/12/18 08:42	1
Acrolein	ND		50	4.1	ug/L			10/12/18 08:42	1
Acrylonitrile	ND		10	0.50	ug/L			10/12/18 08:42	1
Benzene	1.8		1.0	0.20	ug/L			10/12/18 08:42	1
Bromobenzene	ND		1.0	0.21	ug/L			10/12/18 08:42	1
Bromochloromethane	ND		1.0	0.15	ug/L			10/12/18 08:42	1
Bromodichloromethane	ND		1.0	0.17	ug/L			10/12/18 08:42	1
Bromoform	ND		1.0	0.29	ug/L			10/12/18 08:42	1
Bromomethane	ND		1.0	0.35	ug/L			10/12/18 08:42	1
2-Butanone (MEK)	ND		50	2.6	ug/L			10/12/18 08:42	1
Carbon disulfide	ND		1.0	0.22	ug/L			10/12/18 08:42	1
Carbon tetrachloride	ND		1.0	0.18	ug/L			10/12/18 08:42	1
Chlorobenzene	ND		1.0	0.18	ug/L			10/12/18 08:42	1
Chloroethane	ND		1.0	0.36	ug/L			10/12/18 08:42	1
2-Chloroethyl vinyl ether	ND		10	0.67	ug/L			10/12/18 08:42	1
Chloroform	ND		1.0	0.23	ug/L			10/12/18 08:42	1
1-Chlorohexane	ND		2.0	0.30	ug/L			10/12/18 08:42	1
Chloromethane	ND		1.0	0.36	ug/L			10/12/18 08:42	1
cis-1,2-Dichloroethene	ND		1.0	0.21	ug/L			10/12/18 08:42	1
cis-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/12/18 08:42	1
Dibromochloromethane	ND		1.0	0.25	ug/L			10/12/18 08:42	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			10/12/18 08:42	1
1,3-Dichlorobenzene	ND		1.0	0.18	ug/L			10/12/18 08:42	1
1,4-Dichlorobenzene	ND		1.0	0.17	ug/L			10/12/18 08:42	1
Dichlorodifluoromethane	ND		1.0	0.17	ug/L			10/12/18 08:42	1
1,1-Dichloroethane	ND		1.0	0.24	ug/L			10/12/18 08:42	1
1,2-Dichloroethane	ND		1.0	0.20	ug/L			10/12/18 08:42	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			10/12/18 08:42	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			10/12/18 08:42	1
1,3-Dichloropropane	ND		1.0	0.19	ug/L			10/12/18 08:42	1
2,2-Dichloropropane	ND		1.0	0.16	ug/L			10/12/18 08:42	1
1,1-Dichloropropene	ND		1.0	0.20	ug/L			10/12/18 08:42	1
Ethylbenzene	ND		1.0	0.19	ug/L			10/12/18 08:42	1
Ethyl methacrylate	ND		10	0.68	ug/L			10/12/18 08:42	1
Hexachlorobutadiene	ND		2.0	0.38	ug/L			10/12/18 08:42	1
2-Hexanone	ND		10	1.3	ug/L			10/12/18 08:42	1
Isopropylbenzene	ND		1.0	0.33	ug/L			10/12/18 08:42	1
Methylene bromide	ND		1.0	0.45	ug/L			10/12/18 08:42	1
Methylene Chloride	ND		5.0	1.0	ug/L			10/12/18 08:42	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.81	ug/L			10/12/18 08:42	1
Methyl tert-butyl ether	ND		1.0	0.17	ug/L			10/12/18 08:42	1
m-Xylene & p-Xylene	ND		2.0	0.38	ug/L			10/12/18 08:42	1
Naphthalene	ND		5.0	0.21	ug/L			10/12/18 08:42	1
n-Butylbenzene	ND		1.0	0.24	ug/L			10/12/18 08:42	1
N-Propylbenzene	ND		1.0	0.17	ug/L			10/12/18 08:42	1
o-Chlorotoluene	ND		1.0	0.18	ug/L			10/12/18 08:42	1
o-Xylene	ND		1.0	0.20	ug/L			10/12/18 08:42	1
p-Chlorotoluene	ND		1.0	0.17	ug/L			10/12/18 08:42	1
p-Isopropyltoluene	ND		1.0	0.17	ug/L			10/12/18 08:42	1

Client Sample ID: MW1-ROX-101018
Date Collected: 10/10/18 09:05
Date Received: 10/11/18 10:15

Lab Sample ID: 490-160957-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.17	ug/L			10/12/18 08:42	1
Styrene	ND		1.0	0.28	ug/L			10/12/18 08:42	1
tert-Butylbenzene	ND		1.0	0.17	ug/L			10/12/18 08:42	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.15	ug/L			10/12/18 08:42	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.19	ug/L			10/12/18 08:42	1
Tetrachloroethene	ND		1.0	0.14	ug/L			10/12/18 08:42	1
Toluene	ND		1.0	0.17	ug/L			10/12/18 08:42	1
trans-1,2-Dichloroethene	ND		1.0	0.23	ug/L			10/12/18 08:42	1
trans-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/12/18 08:42	1
1,2,3-Trichlorobenzene	ND		1.0	0.23	ug/L			10/12/18 08:42	1
1,2,4-Trichlorobenzene	ND		1.0	0.20	ug/L			10/12/18 08:42	1
1,1,1-Trichloroethane	ND		1.0	0.19	ug/L			10/12/18 08:42	1
1,1,2-Trichloroethane	ND		1.0	0.19	ug/L			10/12/18 08:42	1
Trichloroethene	ND		1.0	0.20	ug/L			10/12/18 08:42	1
Trichlorofluoromethane	ND		1.0	0.21	ug/L			10/12/18 08:42	1
1,2,3-Trichloropropane	ND		1.0	0.23	ug/L			10/12/18 08:42	1
1,2,4-Trimethylbenzene	ND		1.0	0.17	ug/L			10/12/18 08:42	1
1,3,5-Trimethylbenzene	ND		1.0	0.17	ug/L			10/12/18 08:42	1
Vinyl acetate	ND		10	1.7	ug/L			10/12/18 08:42	1
Vinyl chloride	ND		1.0	0.18	ug/L			10/12/18 08:42	1
Xylenes, Total	ND		3.0	0.58	ug/L			10/12/18 08:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*111*		*70 - 130*		*10/12/18 08:42*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*10/12/18 08:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*		*10/12/18 08:42*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*10/12/18 08:42*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:04	1
Acenaphthylene	ND		0.095	0.028	ug/L		10/13/18 09:44	10/25/18 15:04	1
Anthracene	ND		0.095	0.028	ug/L		10/13/18 09:44	10/25/18 15:04	1
Benzo[a]anthracene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:04	1
Benzo[a]pyrene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:04	1
Benzo[b]fluoranthene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:04	1
Benzo[g,h,i]perylene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:04	1
Benzo[k]fluoranthene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:04	1
Chrysene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:04	1
Dibenz(a,h)anthracene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:04	1
Fluoranthene	ND		0.095	0.028	ug/L		10/13/18 09:44	10/25/18 15:04	1
Fluorene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:04	1
Indeno[1,2,3-cd]pyrene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:04	1
1-Methylnaphthalene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:04	1
2-Methylnaphthalene	ND		0.095	0.028	ug/L		10/13/18 09:44	10/25/18 15:04	1
Phenanthrene	ND		0.095	0.028	ug/L		10/13/18 09:44	10/25/18 15:04	1
Pyrene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*64*		*27 - 120*	*10/13/18 09:44*	*10/25/18 15:04*	*1*

Client Sample ID: MW1-ROX-101018
Date Collected: 10/10/18 09:05
Date Received: 10/11/18 10:15

Lab Sample ID: 490-160957-3
Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	76		13 - 120	10/13/18 09:44	10/25/18 15:04	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		24	2.0	ug/L		10/12/18 09:33	10/23/18 17:27	1
Benzenethiol	ND		95	24	ug/L		10/12/18 09:33	10/23/18 17:27	1
Benzoic acid	ND	* UJ	48	16	ug/L		10/12/18 09:33	10/23/18 17:27	1
Benzyl alcohol	ND		48	1.4	ug/L		10/12/18 09:33	10/23/18 17:27	1
Bis(2-chloroethoxy)methane	ND		9.5	2.0	ug/L		10/12/18 09:33	10/23/18 17:27	1
Bis(2-chloroethyl)ether	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 17:27	1
bis (2-chloroisopropyl) ether	ND	UJ	9.5	1.7	ug/L		10/12/18 09:33	10/23/18 17:27	1
Bis(2-ethylhexyl) phthalate	ND		9.5	2.4	ug/L		10/12/18 09:33	10/23/18 17:27	1
4-Bromophenyl phenyl ether	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 17:27	1
Butyl benzyl phthalate	ND		9.5	2.0	ug/L		10/12/18 09:33	10/23/18 17:27	1
4-Chloroaniline	ND		9.5	2.6	ug/L		10/12/18 09:33	10/23/18 17:27	1
4-Chloro-3-methylphenol	ND		9.5	1.6	ug/L		10/12/18 09:33	10/23/18 17:27	1
2-Chloronaphthalene	ND		9.5	2.2	ug/L		10/12/18 09:33	10/23/18 17:27	1
2-Chlorophenol	ND		9.5	1.5	ug/L		10/12/18 09:33	10/23/18 17:27	1
4-Chlorophenyl phenyl ether	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 17:27	1
Dibenz[a,h]acridine	ND		9.5	1.3	ug/L		10/12/18 09:33	10/24/18 12:47	1
Dibenzofuran	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 17:27	1
3,3'-Dichlorobenzidine	ND		9.5	1.6	ug/L		10/12/18 09:33	10/23/18 17:27	1
2,4-Dichlorophenol	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 17:27	1
Diethyl phthalate	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 17:27	1
2,4-Dimethylphenol	ND		9.5	1.7	ug/L		10/12/18 09:33	10/23/18 17:27	1
Dimethyl phthalate	ND		9.5	1.6	ug/L		10/12/18 09:33	10/23/18 17:27	1
Di-n-butyl phthalate	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 17:27	1
4,6-Dinitro-ortho-cresol	ND		24	2.5	ug/L		10/12/18 09:33	10/23/18 17:27	1
2,4-Dinitrophenol	ND		24	6.7	ug/L		10/12/18 09:33	10/23/18 17:27	1
2,4-Dinitrotoluene	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 17:27	1
2,6-Dinitrotoluene	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 17:27	1
Di-n-octyl phthalate	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 17:27	1
1,4-Dioxane	ND	*	9.5	1.2	ug/L		10/12/18 09:33	10/23/18 17:27	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.5	1.7	ug/L		10/12/18 09:33	10/23/18 17:27	1
Hexachlorobenzene	ND		9.5	1.7	ug/L		10/12/18 09:33	10/23/18 17:27	1
Hexachlorocyclopentadiene	ND		9.5	2.5	ug/L		10/12/18 09:33	10/23/18 17:27	1
Hexachloroethane	ND		9.5	3.1	ug/L		10/12/18 09:33	10/23/18 17:27	1
Indene	ND		9.5	2.3	ug/L		10/12/18 09:33	10/23/18 17:27	1
Isophorone	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 17:27	1
2-Methylphenol	ND		9.5	1.5	ug/L		10/12/18 09:33	10/23/18 17:27	1
3 & 4 Methylphenol	ND		9.5	1.1	ug/L		10/12/18 09:33	10/23/18 17:27	1
2-Nitroaniline	ND		24	1.4	ug/L		10/12/18 09:33	10/23/18 17:27	1
3-Nitroaniline	ND		24	1.5	ug/L		10/12/18 09:33	10/23/18 17:27	1
4-Nitroaniline	ND		24	1.6	ug/L		10/12/18 09:33	10/23/18 17:27	1
Nitrobenzene	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 17:27	1
2-Nitrophenol	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 17:27	1
4-Nitrophenol	ND		24	2.3	ug/L		10/12/18 09:33	10/23/18 17:27	1
N-Nitrosodimethylamine	ND		9.5	3.2	ug/L		10/12/18 09:33	10/23/18 17:27	1

Client Sample ID: MW1-ROX-101018
Date Collected: 10/10/18 09:05
Date Received: 10/11/18 10:15

Lab Sample ID: 490-160957-3
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 17:27	1
N-Nitrosodiphenylamine	ND	*	9.5	1.4	ug/L		10/12/18 09:33	10/23/18 17:27	1
Pentachlorophenol	ND		24	3.3	ug/L		10/12/18 09:33	10/23/18 17:27	1
Phenol	ND		9.5	3.2	ug/L		10/12/18 09:33	10/23/18 17:27	1
Pyridine	ND		9.5	1.7	ug/L		10/12/18 09:33	10/23/18 17:27	1
Quinoline	ND		9.5	2.7	ug/L		10/12/18 09:33	10/24/18 12:47	1
2,4,5-Trichlorophenol	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 17:27	1
2,4,6-Trichlorophenol	ND		9.5	1.5	ug/L		10/12/18 09:33	10/23/18 17:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*44*		*10 - 120*	*10/12/18 09:33*	*10/23/18 17:27*	*1*
Nitrobenzene-d5	*46*		*27 - 120*	*10/12/18 09:33*	*10/23/18 17:27*	*1*
Phenol-d5	*28*		*10 - 120*	*10/12/18 09:33*	*10/23/18 17:27*	*1*
Terphenyl-d14	*68*		*13 - 120*	*10/12/18 09:33*	*10/23/18 17:27*	*1*
2,4,6-Tribromophenol	*54*		*10 - 120*	*10/12/18 09:33*	*10/23/18 17:27*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.10	0.028	ug/L		10/11/18 14:51	10/11/18 22:02	1
1,2-Dibromoethane	ND		0.020	0.0060	ug/L		10/11/18 14:51	10/11/18 22:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*96*		*50 - 150*	*10/11/18 14:51*	*10/11/18 22:02*	*1*

Client Sample ID: MW12-ROX-101018-EB

Date Collected: 10/10/18 10:00
Date Received: 10/11/18 10:15

Lab Sample ID: 490-160957-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5.5	J	25	2.7	ug/L			10/12/18 09:08	1
Acrolein	ND		50	4.1	ug/L			10/12/18 09:08	1
Acrylonitrile	ND		10	0.50	ug/L			10/12/18 09:08	1
Benzene	ND		1.0	0.20	ug/L			10/12/18 09:08	1
Bromobenzene	ND		1.0	0.21	ug/L			10/12/18 09:08	1
Bromochloromethane	ND		1.0	0.15	ug/L			10/12/18 09:08	1
Bromodichloromethane	ND		1.0	0.17	ug/L			10/12/18 09:08	1
Bromoform	ND		1.0	0.29	ug/L			10/12/18 09:08	1
Bromomethane	ND		1.0	0.35	ug/L			10/12/18 09:08	1
2-Butanone (MEK)	ND		50	2.6	ug/L			10/12/18 09:08	1
Carbon disulfide	ND		1.0	0.22	ug/L			10/12/18 09:08	1
Carbon tetrachloride	ND		1.0	0.18	ug/L			10/12/18 09:08	1
Chlorobenzene	ND		1.0	0.18	ug/L			10/12/18 09:08	1
Chloroethane	ND		1.0	0.36	ug/L			10/12/18 09:08	1
2-Chloroethyl vinyl ether	ND		10	0.67	ug/L			10/12/18 09:08	1
Chloroform	ND		1.0	0.23	ug/L			10/12/18 09:08	1
1-Chlorohexane	ND		2.0	0.30	ug/L			10/12/18 09:08	1
Chloromethane	ND		1.0	0.36	ug/L			10/12/18 09:08	1
cis-1,2-Dichloroethene	ND		1.0	0.21	ug/L			10/12/18 09:08	1
cis-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/12/18 09:08	1
Dibromochloromethane	ND		1.0	0.25	ug/L			10/12/18 09:08	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			10/12/18 09:08	1
1,3-Dichlorobenzene	ND		1.0	0.18	ug/L			10/12/18 09:08	1
1,4-Dichlorobenzene	ND		1.0	0.17	ug/L			10/12/18 09:08	1
Dichlorodifluoromethane	ND		1.0	0.17	ug/L			10/12/18 09:08	1
1,1-Dichloroethane	ND		1.0	0.24	ug/L			10/12/18 09:08	1
1,2-Dichloroethane	ND		1.0	0.20	ug/L			10/12/18 09:08	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			10/12/18 09:08	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			10/12/18 09:08	1
1,3-Dichloropropane	ND		1.0	0.19	ug/L			10/12/18 09:08	1
2,2-Dichloropropane	ND		1.0	0.16	ug/L			10/12/18 09:08	1
1,1-Dichloropropene	ND		1.0	0.20	ug/L			10/12/18 09:08	1
Ethylbenzene	ND		1.0	0.19	ug/L			10/12/18 09:08	1
Ethyl methacrylate	ND		10	0.68	ug/L			10/12/18 09:08	1
Hexachlorobutadiene	ND		2.0	0.38	ug/L			10/12/18 09:08	1
2-Hexanone	ND		10	1.3	ug/L			10/12/18 09:08	1
Isopropylbenzene	ND		1.0	0.33	ug/L			10/12/18 09:08	1
Methylene bromide	ND		1.0	0.45	ug/L			10/12/18 09:08	1
Methylene Chloride	ND		5.0	1.0	ug/L			10/12/18 09:08	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.81	ug/L			10/12/18 09:08	1
Methyl tert-butyl ether	ND		1.0	0.17	ug/L			10/12/18 09:08	1
m-Xylene & p-Xylene	ND		2.0	0.38	ug/L			10/12/18 09:08	1
Naphthalene	ND		5.0	0.21	ug/L			10/12/18 09:08	1
n-Butylbenzene	ND		1.0	0.24	ug/L			10/12/18 09:08	1
N-Propylbenzene	ND		1.0	0.17	ug/L			10/12/18 09:08	1
o-Chlorotoluene	ND		1.0	0.18	ug/L			10/12/18 09:08	1
o-Xylene	ND		1.0	0.20	ug/L			10/12/18 09:08	1
p-Chlorotoluene	ND		1.0	0.17	ug/L			10/12/18 09:08	1
p-Isopropyltoluene	ND		1.0	0.17	ug/L			10/12/18 09:08	1

Client Sample ID: MW12-ROX-101018-EB

Lab Sample ID: 490-160957-4
Matrix: Water

Date Collected: 10/10/18 10:00
Date Received: 10/11/18 10:15

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.17	ug/L			10/12/18 09:08	1
Styrene	ND		1.0	0.28	ug/L			10/12/18 09:08	1
tert-Butylbenzene	ND		1.0	0.17	ug/L			10/12/18 09:08	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.15	ug/L			10/12/18 09:08	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.19	ug/L			10/12/18 09:08	1
Tetrachloroethene	ND		1.0	0.14	ug/L			10/12/18 09:08	1
Toluene	ND		1.0	0.17	ug/L			10/12/18 09:08	1
trans-1,2-Dichloroethene	ND		1.0	0.23	ug/L			10/12/18 09:08	1
trans-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/12/18 09:08	1
1,2,3-Trichlorobenzene	ND		1.0	0.23	ug/L			10/12/18 09:08	1
1,2,4-Trichlorobenzene	ND		1.0	0.20	ug/L			10/12/18 09:08	1
1,1,1-Trichloroethane	ND		1.0	0.19	ug/L			10/12/18 09:08	1
1,1,2-Trichloroethane	ND		1.0	0.19	ug/L			10/12/18 09:08	1
Trichloroethene	ND		1.0	0.20	ug/L			10/12/18 09:08	1
Trichlorofluoromethane	ND		1.0	0.21	ug/L			10/12/18 09:08	1
1,2,3-Trichloropropane	ND		1.0	0.23	ug/L			10/12/18 09:08	1
1,2,4-Trimethylbenzene	ND		1.0	0.17	ug/L			10/12/18 09:08	1
1,3,5-Trimethylbenzene	ND		1.0	0.17	ug/L			10/12/18 09:08	1
Vinyl acetate	ND		10	1.7	ug/L			10/12/18 09:08	1
Vinyl chloride	ND		1.0	0.18	ug/L			10/12/18 09:08	1
Xylenes, Total	ND		3.0	0.58	ug/L			10/12/18 09:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*111*		*70 - 130*		*10/12/18 09:08*	*1*
Dibromofluoromethane (Surr)	*94*		*70 - 130*		*10/12/18 09:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 130*		*10/12/18 09:08*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*10/12/18 09:08*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.019	J	0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:24	1
Acenaphthylene	ND		0.095	0.028	ug/L		10/13/18 09:44	10/25/18 15:24	1
Anthracene	ND		0.095	0.028	ug/L		10/13/18 09:44	10/25/18 15:24	1
Benzo[a]anthracene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:24	1
Benzo[a]pyrene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:24	1
Benzo[b]fluoranthene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:24	1
Benzo[g,h,i]perylene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:24	1
Benzo[k]fluoranthene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:24	1
Chrysene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:24	1
Dibenz(a,h)anthracene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:24	1
Fluoranthene	ND		0.095	0.028	ug/L		10/13/18 09:44	10/25/18 15:24	1
Fluorene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:24	1
Indeno[1,2,3-cd]pyrene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:24	1
1-Methylnaphthalene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:24	1
2-Methylnaphthalene	ND		0.095	0.028	ug/L		10/13/18 09:44	10/25/18 15:24	1
Phenanthrene	ND		0.095	0.028	ug/L		10/13/18 09:44	10/25/18 15:24	1
Pyrene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*77*		*27 - 120*	*10/13/18 09:44*	*10/25/18 15:24*	*1*

Client Sample ID: MW12-ROX-101018-EB

Lab Sample ID: 490-160957-4
Matrix: Water

Date Collected: 10/10/18 10:00
Date Received: 10/11/18 10:15

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	89		13 - 120	10/13/18 09:44	10/25/18 15:24	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		24	2.0	ug/L		10/12/18 09:33	10/23/18 17:47	1
Benzenethiol	ND		95	24	ug/L		10/12/18 09:33	10/23/18 17:47	1
Benzoic acid	ND	*	47	16	ug/L		10/12/18 09:33	10/23/18 17:47	1
Benzyl alcohol	ND		47	1.4	ug/L		10/12/18 09:33	10/23/18 17:47	1
Bis(2-chloroethoxy)methane	ND		9.5	2.0	ug/L		10/12/18 09:33	10/23/18 17:47	1
Bis(2-chloroethyl)ether	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 17:47	1
bis (2-chloroisopropyl) ether	ND		9.5	1.7	ug/L		10/12/18 09:33	10/23/18 17:47	1
Bis(2-ethylhexyl) phthalate	ND		9.5	2.4	ug/L		10/12/18 09:33	10/23/18 17:47	1
4-Bromophenyl phenyl ether	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 17:47	1
Butyl benzyl phthalate	ND		9.5	2.0	ug/L		10/12/18 09:33	10/23/18 17:47	1
4-Chloroaniline	ND		9.5	2.6	ug/L		10/12/18 09:33	10/23/18 17:47	1
4-Chloro-3-methylphenol	ND		9.5	1.6	ug/L		10/12/18 09:33	10/23/18 17:47	1
2-Chloronaphthalene	ND		9.5	2.2	ug/L		10/12/18 09:33	10/23/18 17:47	1
2-Chlorophenol	ND		9.5	1.5	ug/L		10/12/18 09:33	10/23/18 17:47	1
4-Chlorophenyl phenyl ether	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 17:47	1
Dibenz[a,h]acridine	ND		9.5	1.3	ug/L		10/12/18 09:33	10/24/18 13:07	1
Dibenzofuran	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 17:47	1
3,3'-Dichlorobenzidine	ND		9.5	1.6	ug/L		10/12/18 09:33	10/23/18 17:47	1
2,4-Dichlorophenol	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 17:47	1
Diethyl phthalate	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 17:47	1
2,4-Dimethylphenol	ND		9.5	1.7	ug/L		10/12/18 09:33	10/23/18 17:47	1
Dimethyl phthalate	ND		9.5	1.6	ug/L		10/12/18 09:33	10/23/18 17:47	1
Di-n-butyl phthalate	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 17:47	1
4,6-Dinitro-ortho-cresol	ND		24	2.5	ug/L		10/12/18 09:33	10/23/18 17:47	1
2,4-Dinitrophenol	ND		24	6.6	ug/L		10/12/18 09:33	10/23/18 17:47	1
2,4-Dinitrotoluene	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 17:47	1
2,6-Dinitrotoluene	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 17:47	1
Di-n-octyl phthalate	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 17:47	1
1,4-Dioxane	ND	*	9.5	1.2	ug/L		10/12/18 09:33	10/23/18 17:47	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.5	1.7	ug/L		10/12/18 09:33	10/23/18 17:47	1
Hexachlorobenzene	ND		9.5	1.7	ug/L		10/12/18 09:33	10/23/18 17:47	1
Hexachlorocyclopentadiene	ND		9.5	2.5	ug/L		10/12/18 09:33	10/23/18 17:47	1
Hexachloroethane	ND		9.5	3.0	ug/L		10/12/18 09:33	10/23/18 17:47	1
Indene	ND		9.5	2.3	ug/L		10/12/18 09:33	10/23/18 17:47	1
Isophorone	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 17:47	1
2-Methylphenol	ND		9.5	1.5	ug/L		10/12/18 09:33	10/23/18 17:47	1
3 & 4 Methylphenol	ND		9.5	1.1	ug/L		10/12/18 09:33	10/23/18 17:47	1
2-Nitroaniline	ND		24	1.4	ug/L		10/12/18 09:33	10/23/18 17:47	1
3-Nitroaniline	ND		24	1.5	ug/L		10/12/18 09:33	10/23/18 17:47	1
4-Nitroaniline	ND		24	1.6	ug/L		10/12/18 09:33	10/23/18 17:47	1
Nitrobenzene	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 17:47	1
2-Nitrophenol	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 17:47	1
4-Nitrophenol	ND		24	2.3	ug/L		10/12/18 09:33	10/23/18 17:47	1
N-Nitrosodimethylamine	ND		9.5	3.2	ug/L		10/12/18 09:33	10/23/18 17:47	1

Client Sample ID: MW12-ROX-101018-EB
Date Collected: 10/10/18 10:00
Date Received: 10/11/18 10:15

Lab Sample ID: 490-160957-4
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 17:47	1
N-Nitrosodiphenylamine	ND	*	9.5	1.4	ug/L		10/12/18 09:33	10/23/18 17:47	1
Pentachlorophenol	ND		24	3.3	ug/L		10/12/18 09:33	10/23/18 17:47	1
Phenol	ND		9.5	3.2	ug/L		10/12/18 09:33	10/23/18 17:47	1
Pyridine	ND		9.5	1.7	ug/L		10/12/18 09:33	10/23/18 17:47	1
Quinoline	ND		9.5	2.7	ug/L		10/12/18 09:33	10/24/18 13:07	1
2,4,5-Trichlorophenol	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 17:47	1
2,4,6-Trichlorophenol	ND		9.5	1.5	ug/L		10/12/18 09:33	10/23/18 17:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*46*		*10 - 120*	*10/12/18 09:33*	*10/23/18 17:47*	*1*
Nitrobenzene-d5	*52*		*27 - 120*	*10/12/18 09:33*	*10/23/18 17:47*	*1*
Phenol-d5	*31*		*10 - 120*	*10/12/18 09:33*	*10/23/18 17:47*	*1*
Terphenyl-d14	*74*		*13 - 120*	*10/12/18 09:33*	*10/23/18 17:47*	*1*
2,4,6-Tribromophenol	*57*		*10 - 120*	*10/12/18 09:33*	*10/23/18 17:47*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.099	0.028	ug/L		10/11/18 14:51	10/11/18 22:18	1
1,2-Dibromoethane	ND		0.020	0.0059	ug/L		10/11/18 14:51	10/11/18 22:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*63*	*p*	*50 - 150*	*10/11/18 14:51*	*10/11/18 22:18*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160957-1

Client Sample ID: MW12-ROX-101018
Date Collected: 10/10/18 10:40
Date Received: 10/11/18 10:15

Lab Sample ID: 490-160957-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	2.7	ug/L			10/12/18 09:35	1
Acrolein	ND		50	4.1	ug/L			10/12/18 09:35	1
Acrylonitrile	ND		10	0.50	ug/L			10/12/18 09:35	1
Benzene	ND		1.0	0.20	ug/L			10/12/18 09:35	1
Bromobenzene	ND		1.0	0.21	ug/L			10/12/18 09:35	1
Bromochloromethane	ND		1.0	0.15	ug/L			10/12/18 09:35	1
Bromodichloromethane	ND		1.0	0.17	ug/L			10/12/18 09:35	1
Bromoform	ND		1.0	0.29	ug/L			10/12/18 09:35	1
Bromomethane	ND		1.0	0.35	ug/L			10/12/18 09:35	1
2-Butanone (MEK)	ND		50	2.6	ug/L			10/12/18 09:35	1
Carbon disulfide	ND		1.0	0.22	ug/L			10/12/18 09:35	1
Carbon tetrachloride	ND		1.0	0.18	ug/L			10/12/18 09:35	1
Chlorobenzene	ND		1.0	0.18	ug/L			10/12/18 09:35	1
Chloroethane	ND		1.0	0.36	ug/L			10/12/18 09:35	1
2-Chloroethyl vinyl ether	ND		10	0.67	ug/L			10/12/18 09:35	1
Chloroform	ND		1.0	0.23	ug/L			10/12/18 09:35	1
1-Chlorohexane	ND		2.0	0.30	ug/L			10/12/18 09:35	1
Chloromethane	ND		1.0	0.36	ug/L			10/12/18 09:35	1
cis-1,2-Dichloroethene	ND		1.0	0.21	ug/L			10/12/18 09:35	1
cis-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/12/18 09:35	1
Dibromochloromethane	ND		1.0	0.25	ug/L			10/12/18 09:35	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			10/12/18 09:35	1
1,3-Dichlorobenzene	ND		1.0	0.18	ug/L			10/12/18 09:35	1
1,4-Dichlorobenzene	ND		1.0	0.17	ug/L			10/12/18 09:35	1
Dichlorodifluoromethane	ND		1.0	0.17	ug/L			10/12/18 09:35	1
1,1-Dichloroethane	ND		1.0	0.24	ug/L			10/12/18 09:35	1
1,2-Dichloroethane	ND		1.0	0.20	ug/L			10/12/18 09:35	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			10/12/18 09:35	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			10/12/18 09:35	1
1,3-Dichloropropane	ND		1.0	0.19	ug/L			10/12/18 09:35	1
2,2-Dichloropropane	ND		1.0	0.16	ug/L			10/12/18 09:35	1
1,1-Dichloropropene	ND		1.0	0.20	ug/L			10/12/18 09:35	1
Ethylbenzene	ND		1.0	0.19	ug/L			10/12/18 09:35	1
Ethyl methacrylate	ND		10	0.68	ug/L			10/12/18 09:35	1
Hexachlorobutadiene	ND		2.0	0.38	ug/L			10/12/18 09:35	1
2-Hexanone	ND		10	1.3	ug/L			10/12/18 09:35	1
Isopropylbenzene	ND		1.0	0.33	ug/L			10/12/18 09:35	1
Methylene bromide	ND		1.0	0.45	ug/L			10/12/18 09:35	1
Methylene Chloride	ND		5.0	1.0	ug/L			10/12/18 09:35	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.81	ug/L			10/12/18 09:35	1
Methyl tert-butyl ether	ND		1.0	0.17	ug/L			10/12/18 09:35	1
m-Xylene & p-Xylene	ND		2.0	0.38	ug/L			10/12/18 09:35	1
Naphthalene	ND		5.0	0.21	ug/L			10/12/18 09:35	1
n-Butylbenzene	ND		1.0	0.24	ug/L			10/12/18 09:35	1
N-Propylbenzene	ND		1.0	0.17	ug/L			10/12/18 09:35	1
o-Chlorotoluene	ND		1.0	0.18	ug/L			10/12/18 09:35	1
o-Xylene	ND		1.0	0.20	ug/L			10/12/18 09:35	1
p-Chlorotoluene	ND		1.0	0.17	ug/L			10/12/18 09:35	1
p-Isopropyltoluene	ND		1.0	0.17	ug/L			10/12/18 09:35	1

Client Sample ID: MW12-ROX-101018

Date Collected: 10/10/18 10:40
Date Received: 10/11/18 10:15

Lab Sample ID: 490-160957-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.17	ug/L			10/12/18 09:35	1
Styrene	ND		1.0	0.28	ug/L			10/12/18 09:35	1
tert-Butylbenzene	ND		1.0	0.17	ug/L			10/12/18 09:35	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.15	ug/L			10/12/18 09:35	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.19	ug/L			10/12/18 09:35	1
Tetrachloroethene	ND		1.0	0.14	ug/L			10/12/18 09:35	1
Toluene	ND		1.0	0.17	ug/L			10/12/18 09:35	1
trans-1,2-Dichloroethene	ND		1.0	0.23	ug/L			10/12/18 09:35	1
trans-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/12/18 09:35	1
1,2,3-Trichlorobenzene	ND		1.0	0.23	ug/L			10/12/18 09:35	1
1,2,4-Trichlorobenzene	ND		1.0	0.20	ug/L			10/12/18 09:35	1
1,1,1-Trichloroethane	ND		1.0	0.19	ug/L			10/12/18 09:35	1
1,1,2-Trichloroethane	ND		1.0	0.19	ug/L			10/12/18 09:35	1
Trichloroethene	ND		1.0	0.20	ug/L			10/12/18 09:35	1
Trichlorofluoromethane	ND		1.0	0.21	ug/L			10/12/18 09:35	1
1,2,3-Trichloropropane	ND		1.0	0.23	ug/L			10/12/18 09:35	1
1,2,4-Trimethylbenzene	ND		1.0	0.17	ug/L			10/12/18 09:35	1
1,3,5-Trimethylbenzene	ND		1.0	0.17	ug/L			10/12/18 09:35	1
Vinyl acetate	ND		10	1.7	ug/L			10/12/18 09:35	1
Vinyl chloride	ND		1.0	0.18	ug/L			10/12/18 09:35	1
Xylenes, Total	ND		3.0	0.58	ug/L			10/12/18 09:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*109*		*70 - 130*		*10/12/18 09:35*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*10/12/18 09:35*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*10/12/18 09:35*	*1*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*10/12/18 09:35*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:44	1
Acenaphthylene	ND		0.095	0.029	ug/L		10/13/18 09:44	10/25/18 15:44	1
Anthracene	ND		0.095	0.029	ug/L		10/13/18 09:44	10/25/18 15:44	1
Benzo[a]anthracene	0.031	J	0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:44	1
Benzo[a]pyrene	0.061	J J	0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:44	1
Benzo[b]fluoranthene	0.11		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:44	1
Benzo[g,h,i]perylene	0.064	J	0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:44	1
Benzo[k]fluoranthene	0.039	J	0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:44	1
Chrysene	0.059	J	0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:44	1
Dibenz(a,h)anthracene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:44	1
Fluoranthene	0.077	J	0.095	0.029	ug/L		10/13/18 09:44	10/25/18 15:44	1
Fluorene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:44	1
Indeno[1,2,3-cd]pyrene	0.066	J	0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:44	1
1-Methylnaphthalene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:44	1
2-Methylnaphthalene	ND		0.095	0.029	ug/L		10/13/18 09:44	10/25/18 15:44	1
Phenanthrene	ND		0.095	0.029	ug/L		10/13/18 09:44	10/25/18 15:44	1
Pyrene	0.071	J	0.095	0.019	ug/L		10/13/18 09:44	10/25/18 15:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*70*		*27 - 120*	*10/13/18 09:44*	*10/25/18 15:44*	*1*

Client Sample ID: MW12-ROX-101018

Lab Sample ID: 490-160957-5
Matrix: Water

Date Collected: 10/10/18 10:40
Date Received: 10/11/18 10:15

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	85		13 - 120	10/13/18 09:44	10/25/18 15:44	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		24	2.0	ug/L		10/12/18 09:33	10/23/18 18:06	1
Benzenethiol	ND		95	24	ug/L		10/12/18 09:33	10/23/18 18:06	1
Benzoic acid	ND	* UJ	48	16	ug/L		10/12/18 09:33	10/23/18 18:06	1
Benzyl alcohol	ND		48	1.4	ug/L		10/12/18 09:33	10/23/18 18:06	1
Bis(2-chloroethoxy)methane	ND		9.5	2.0	ug/L		10/12/18 09:33	10/23/18 18:06	1
Bis(2-chloroethyl)ether	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:06	1
bis (2-chloroisopropyl) ether	ND	UJ	9.5	1.7	ug/L		10/12/18 09:33	10/23/18 18:06	1
Bis(2-ethylhexyl) phthalate	ND		9.5	2.4	ug/L		10/12/18 09:33	10/23/18 18:06	1
4-Bromophenyl phenyl ether	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:06	1
Butyl benzyl phthalate	ND		9.5	2.0	ug/L		10/12/18 09:33	10/23/18 18:06	1
4-Chloroaniline	ND		9.5	2.6	ug/L		10/12/18 09:33	10/23/18 18:06	1
4-Chloro-3-methylphenol	ND		9.5	1.6	ug/L		10/12/18 09:33	10/23/18 18:06	1
2-Chloronaphthalene	ND		9.5	2.2	ug/L		10/12/18 09:33	10/23/18 18:06	1
2-Chlorophenol	ND		9.5	1.5	ug/L		10/12/18 09:33	10/23/18 18:06	1
4-Chlorophenyl phenyl ether	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:06	1
Dibenz[a,h]acridine	ND		9.5	1.3	ug/L		10/12/18 09:33	10/24/18 13:27	1
Dibenzofuran	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 18:06	1
3,3'-Dichlorobenzidine	ND		9.5	1.6	ug/L		10/12/18 09:33	10/23/18 18:06	1
2,4-Dichlorophenol	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 18:06	1
Diethyl phthalate	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:06	1
2,4-Dimethylphenol	ND		9.5	1.7	ug/L		10/12/18 09:33	10/23/18 18:06	1
Dimethyl phthalate	ND		9.5	1.6	ug/L		10/12/18 09:33	10/23/18 18:06	1
Di-n-butyl phthalate	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 18:06	1
4,6-Dinitro-ortho-cresol	ND		24	2.5	ug/L		10/12/18 09:33	10/23/18 18:06	1
2,4-Dinitrophenol	ND		24	6.6	ug/L		10/12/18 09:33	10/23/18 18:06	1
2,4-Dinitrotoluene	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:06	1
2,6-Dinitrotoluene	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:06	1
Di-n-octyl phthalate	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 18:06	1
1,4-Dioxane	ND	*	9.5	1.2	ug/L		10/12/18 09:33	10/23/18 18:06	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.5	1.7	ug/L		10/12/18 09:33	10/23/18 18:06	1
Hexachlorobenzene	ND		9.5	1.7	ug/L		10/12/18 09:33	10/23/18 18:06	1
Hexachlorocyclopentadiene	ND		9.5	2.5	ug/L		10/12/18 09:33	10/23/18 18:06	1
Hexachloroethane	ND		9.5	3.0	ug/L		10/12/18 09:33	10/23/18 18:06	1
Indene	ND		9.5	2.3	ug/L		10/12/18 09:33	10/23/18 18:06	1
Isophorone	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:06	1
2-Methylphenol	ND		9.5	1.5	ug/L		10/12/18 09:33	10/23/18 18:06	1
3 & 4 Methylphenol	ND		9.5	1.1	ug/L		10/12/18 09:33	10/23/18 18:06	1
2-Nitroaniline	ND		24	1.4	ug/L		10/12/18 09:33	10/23/18 18:06	1
3-Nitroaniline	ND		24	1.5	ug/L		10/12/18 09:33	10/23/18 18:06	1
4-Nitroaniline	ND		24	1.6	ug/L		10/12/18 09:33	10/23/18 18:06	1
Nitrobenzene	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:06	1
2-Nitrophenol	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 18:06	1
4-Nitrophenol	ND		24	2.3	ug/L		10/12/18 09:33	10/23/18 18:06	1
N-Nitrosodimethylamine	ND		9.5	3.2	ug/L		10/12/18 09:33	10/23/18 18:06	1

Client Sample ID: MW12-ROX-101018
Date Collected: 10/10/18 10:40
Date Received: 10/11/18 10:15

Lab Sample ID: 490-160957-5
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 18:06	1
N-Nitrosodiphenylamine	ND	*	9.5	1.4	ug/L		10/12/18 09:33	10/23/18 18:06	1
Pentachlorophenol	ND		24	3.3	ug/L		10/12/18 09:33	10/23/18 18:06	1
Phenol	ND		9.5	3.2	ug/L		10/12/18 09:33	10/23/18 18:06	1
Pyridine	ND		9.5	1.7	ug/L		10/12/18 09:33	10/23/18 18:06	1
Quinoline	ND		9.5	2.7	ug/L		10/12/18 09:33	10/24/18 13:27	1
2,4,5-Trichlorophenol	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:06	1
2,4,6-Trichlorophenol	ND		9.5	1.5	ug/L		10/12/18 09:33	10/23/18 18:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*39*		*10 - 120*	*10/12/18 09:33*	*10/23/18 18:06*	*1*
Nitrobenzene-d5	*46*		*27 - 120*	*10/12/18 09:33*	*10/23/18 18:06*	*1*
Phenol-d5	*28*		*10 - 120*	*10/12/18 09:33*	*10/23/18 18:06*	*1*
Terphenyl-d14	*79*		*13 - 120*	*10/12/18 09:33*	*10/23/18 18:06*	*1*
2,4,6-Tribromophenol	*62*		*10 - 120*	*10/12/18 09:33*	*10/23/18 18:06*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.10	0.028	ug/L		10/11/18 14:51	10/11/18 22:33	1
1,2-Dibromoethane	ND		0.020	0.0060	ug/L		10/11/18 14:51	10/11/18 22:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*112*		*50 - 150*	*10/11/18 14:51*	*10/11/18 22:33*	*1*

Client Sample ID: MW10-ROX-101018
Date Collected: 10/10/18 12:00
Date Received: 10/11/18 10:15

Lab Sample ID: 490-160957-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	2.7	ug/L			10/12/18 10:02	1
Acrolein	ND		50	4.1	ug/L			10/12/18 10:02	1
Acrylonitrile	ND		10	0.50	ug/L			10/12/18 10:02	1
Benzene	ND		1.0	0.20	ug/L			10/12/18 10:02	1
Bromobenzene	ND		1.0	0.21	ug/L			10/12/18 10:02	1
Bromochloromethane	ND		1.0	0.15	ug/L			10/12/18 10:02	1
Bromodichloromethane	ND		1.0	0.17	ug/L			10/12/18 10:02	1
Bromoform	ND		1.0	0.29	ug/L			10/12/18 10:02	1
Bromomethane	ND		1.0	0.35	ug/L			10/12/18 10:02	1
2-Butanone (MEK)	ND		50	2.6	ug/L			10/12/18 10:02	1
Carbon disulfide	ND		1.0	0.22	ug/L			10/12/18 10:02	1
Carbon tetrachloride	ND		1.0	0.18	ug/L			10/12/18 10:02	1
Chlorobenzene	ND		1.0	0.18	ug/L			10/12/18 10:02	1
Chloroethane	ND		1.0	0.36	ug/L			10/12/18 10:02	1
2-Chloroethyl vinyl ether	ND		10	0.67	ug/L			10/12/18 10:02	1
Chloroform	ND		1.0	0.23	ug/L			10/12/18 10:02	1
1-Chlorohexane	ND		2.0	0.30	ug/L			10/12/18 10:02	1
Chloromethane	ND		1.0	0.36	ug/L			10/12/18 10:02	1
cis-1,2-Dichloroethene	ND		1.0	0.21	ug/L			10/12/18 10:02	1
cis-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/12/18 10:02	1
Dibromochloromethane	ND		1.0	0.25	ug/L			10/12/18 10:02	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			10/12/18 10:02	1
1,3-Dichlorobenzene	ND		1.0	0.18	ug/L			10/12/18 10:02	1
1,4-Dichlorobenzene	ND		1.0	0.17	ug/L			10/12/18 10:02	1
Dichlorodifluoromethane	ND		1.0	0.17	ug/L			10/12/18 10:02	1
1,1-Dichloroethane	ND		1.0	0.24	ug/L			10/12/18 10:02	1
1,2-Dichloroethane	ND		1.0	0.20	ug/L			10/12/18 10:02	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			10/12/18 10:02	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			10/12/18 10:02	1
1,3-Dichloropropane	ND		1.0	0.19	ug/L			10/12/18 10:02	1
2,2-Dichloropropane	ND		1.0	0.16	ug/L			10/12/18 10:02	1
1,1-Dichloropropene	ND		1.0	0.20	ug/L			10/12/18 10:02	1
Ethylbenzene	ND		1.0	0.19	ug/L			10/12/18 10:02	1
Ethyl methacrylate	ND		10	0.68	ug/L			10/12/18 10:02	1
Hexachlorobutadiene	ND		2.0	0.38	ug/L			10/12/18 10:02	1
2-Hexanone	ND		10	1.3	ug/L			10/12/18 10:02	1
Isopropylbenzene	ND		1.0	0.33	ug/L			10/12/18 10:02	1
Methylene bromide	ND		1.0	0.45	ug/L			10/12/18 10:02	1
Methylene Chloride	ND		5.0	1.0	ug/L			10/12/18 10:02	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.81	ug/L			10/12/18 10:02	1
Methyl tert-butyl ether	ND		1.0	0.17	ug/L			10/12/18 10:02	1
m-Xylene & p-Xylene	ND		2.0	0.38	ug/L			10/12/18 10:02	1
Naphthalene	ND		5.0	0.21	ug/L			10/12/18 10:02	1
n-Butylbenzene	ND		1.0	0.24	ug/L			10/12/18 10:02	1
N-Propylbenzene	ND		1.0	0.17	ug/L			10/12/18 10:02	1
o-Chlorotoluene	ND		1.0	0.18	ug/L			10/12/18 10:02	1
o-Xylene	ND		1.0	0.20	ug/L			10/12/18 10:02	1
p-Chlorotoluene	ND		1.0	0.17	ug/L			10/12/18 10:02	1
p-Isopropyltoluene	ND		1.0	0.17	ug/L			10/12/18 10:02	1

Client Sample ID: MW10-ROX-101018
Date Collected: 10/10/18 12:00
Date Received: 10/11/18 10:15

Lab Sample ID: 490-160957-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.17	ug/L			10/12/18 10:02	1
Styrene	ND		1.0	0.28	ug/L			10/12/18 10:02	1
tert-Butylbenzene	ND		1.0	0.17	ug/L			10/12/18 10:02	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.15	ug/L			10/12/18 10:02	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.19	ug/L			10/12/18 10:02	1
Tetrachloroethene	ND		1.0	0.14	ug/L			10/12/18 10:02	1
Toluene	ND		1.0	0.17	ug/L			10/12/18 10:02	1
trans-1,2-Dichloroethene	ND		1.0	0.23	ug/L			10/12/18 10:02	1
trans-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/12/18 10:02	1
1,2,3-Trichlorobenzene	ND		1.0	0.23	ug/L			10/12/18 10:02	1
1,2,4-Trichlorobenzene	ND		1.0	0.20	ug/L			10/12/18 10:02	1
1,1,1-Trichloroethane	ND		1.0	0.19	ug/L			10/12/18 10:02	1
1,1,2-Trichloroethane	ND		1.0	0.19	ug/L			10/12/18 10:02	1
Trichloroethene	ND		1.0	0.20	ug/L			10/12/18 10:02	1
Trichlorofluoromethane	ND		1.0	0.21	ug/L			10/12/18 10:02	1
1,2,3-Trichloropropane	ND		1.0	0.23	ug/L			10/12/18 10:02	1
1,2,4-Trimethylbenzene	ND		1.0	0.17	ug/L			10/12/18 10:02	1
1,3,5-Trimethylbenzene	ND		1.0	0.17	ug/L			10/12/18 10:02	1
Vinyl acetate	ND		10	1.7	ug/L			10/12/18 10:02	1
Vinyl chloride	ND		1.0	0.18	ug/L			10/12/18 10:02	1
Xylenes, Total	ND		3.0	0.58	ug/L			10/12/18 10:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*108*		*70 - 130*		*10/12/18 10:02*	*1*
Dibromofluoromethane (Surr)	*93*		*70 - 130*		*10/12/18 10:02*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*		*10/12/18 10:02*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*10/12/18 10:02*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 16:05	1
Acenaphthylene	ND		0.095	0.028	ug/L		10/13/18 09:44	10/25/18 16:05	1
Anthracene	ND		0.095	0.028	ug/L		10/13/18 09:44	10/25/18 16:05	1
Benzo[a]anthracene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 16:05	1
Benzo[a]pyrene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 16:05	1
Benzo[b]fluoranthene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 16:05	1
Benzo[g,h,i]perylene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 16:05	1
Benzo[k]fluoranthene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 16:05	1
Chrysene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 16:05	1
Dibenz(a,h)anthracene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 16:05	1
Fluoranthene	ND		0.095	0.028	ug/L		10/13/18 09:44	10/25/18 16:05	1
Fluorene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 16:05	1
Indeno[1,2,3-cd]pyrene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 16:05	1
1-Methylnaphthalene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 16:05	1
2-Methylnaphthalene	ND		0.095	0.028	ug/L		10/13/18 09:44	10/25/18 16:05	1
Phenanthrene	ND		0.095	0.028	ug/L		10/13/18 09:44	10/25/18 16:05	1
Pyrene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 16:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*76*		*27 - 120*	*10/13/18 09:44*	*10/25/18 16:05*	*1*

Client Sample ID: MW10-ROX-101018
Date Collected: 10/10/18 12:00
Date Received: 10/11/18 10:15

Lab Sample ID: 490-160957-6
Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	87		13 - 120	10/13/18 09:44	10/25/18 16:05	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		24	2.0	ug/L		10/12/18 09:33	10/23/18 18:26	1
Benzenethiol	ND		95	24	ug/L		10/12/18 09:33	10/23/18 18:26	1
Benzoic acid	ND	* UJ	47	16	ug/L		10/12/18 09:33	10/23/18 18:26	1
Benzyl alcohol	ND		47	1.4	ug/L		10/12/18 09:33	10/23/18 18:26	1
Bis(2-chloroethoxy)methane	ND		9.5	2.0	ug/L		10/12/18 09:33	10/23/18 18:26	1
Bis(2-chloroethyl)ether	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:26	1
bis (2-chloroisopropyl) ether	ND	UJ	9.5	1.7	ug/L		10/12/18 09:33	10/23/18 18:26	1
Bis(2-ethylhexyl) phthalate	ND		9.5	2.4	ug/L		10/12/18 09:33	10/23/18 18:26	1
4-Bromophenyl phenyl ether	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:26	1
Butyl benzyl phthalate	ND		9.5	2.0	ug/L		10/12/18 09:33	10/23/18 18:26	1
4-Chloroaniline	ND		9.5	2.6	ug/L		10/12/18 09:33	10/23/18 18:26	1
4-Chloro-3-methylphenol	ND		9.5	1.6	ug/L		10/12/18 09:33	10/23/18 18:26	1
2-Chloronaphthalene	ND		9.5	2.2	ug/L		10/12/18 09:33	10/23/18 18:26	1
2-Chlorophenol	ND		9.5	1.5	ug/L		10/12/18 09:33	10/23/18 18:26	1
4-Chlorophenyl phenyl ether	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:26	1
Dibenz[a,h]acridine	ND		9.5	1.3	ug/L		10/12/18 09:33	10/24/18 13:46	1
Dibenzofuran	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 18:26	1
3,3'-Dichlorobenzidine	ND		9.5	1.6	ug/L		10/12/18 09:33	10/23/18 18:26	1
2,4-Dichlorophenol	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 18:26	1
Diethyl phthalate	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:26	1
2,4-Dimethylphenol	ND		9.5	1.7	ug/L		10/12/18 09:33	10/23/18 18:26	1
Dimethyl phthalate	ND		9.5	1.6	ug/L		10/12/18 09:33	10/23/18 18:26	1
Di-n-butyl phthalate	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 18:26	1
4,6-Dinitro-ortho-cresol	ND		24	2.5	ug/L		10/12/18 09:33	10/23/18 18:26	1
2,4-Dinitrophenol	ND		24	6.6	ug/L		10/12/18 09:33	10/23/18 18:26	1
2,4-Dinitrotoluene	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:26	1
2,6-Dinitrotoluene	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:26	1
Di-n-octyl phthalate	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 18:26	1
1,4-Dioxane	ND	*	9.5	1.2	ug/L		10/12/18 09:33	10/23/18 18:26	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.5	1.7	ug/L		10/12/18 09:33	10/23/18 18:26	1
Hexachlorobenzene	ND		9.5	1.7	ug/L		10/12/18 09:33	10/23/18 18:26	1
Hexachlorocyclopentadiene	ND		9.5	2.5	ug/L		10/12/18 09:33	10/23/18 18:26	1
Hexachloroethane	ND		9.5	3.0	ug/L		10/12/18 09:33	10/23/18 18:26	1
Indene	ND		9.5	2.3	ug/L		10/12/18 09:33	10/23/18 18:26	1
Isophorone	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:26	1
2-Methylphenol	ND		9.5	1.5	ug/L		10/12/18 09:33	10/23/18 18:26	1
3 & 4 Methylphenol	ND		9.5	1.1	ug/L		10/12/18 09:33	10/23/18 18:26	1
2-Nitroaniline	ND		24	1.4	ug/L		10/12/18 09:33	10/23/18 18:26	1
3-Nitroaniline	ND		24	1.5	ug/L		10/12/18 09:33	10/23/18 18:26	1
4-Nitroaniline	ND		24	1.6	ug/L		10/12/18 09:33	10/23/18 18:26	1
Nitrobenzene	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:26	1
2-Nitrophenol	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 18:26	1
4-Nitrophenol	ND		24	2.3	ug/L		10/12/18 09:33	10/23/18 18:26	1
N-Nitrosodimethylamine	ND		9.5	3.2	ug/L		10/12/18 09:33	10/23/18 18:26	1

Client Sample ID: MW10-ROX-101018
Date Collected: 10/10/18 12:00
Date Received: 10/11/18 10:15

Lab Sample ID: 490-160957-6
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 18:26	1
N-Nitrosodiphenylamine	ND	*	9.5	1.4	ug/L		10/12/18 09:33	10/23/18 18:26	1
Pentachlorophenol	ND		24	3.3	ug/L		10/12/18 09:33	10/23/18 18:26	1
Phenol	ND		9.5	3.2	ug/L		10/12/18 09:33	10/23/18 18:26	1
Pyridine	ND		9.5	1.7	ug/L		10/12/18 09:33	10/23/18 18:26	1
Quinoline	ND		9.5	2.7	ug/L		10/12/18 09:33	10/24/18 13:46	1
2,4,5-Trichlorophenol	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:26	1
2,4,6-Trichlorophenol	ND		9.5	1.5	ug/L		10/12/18 09:33	10/23/18 18:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*49*		*10 - 120*	*10/12/18 09:33*	*10/23/18 18:26*	*1*
Nitrobenzene-d5	*56*		*27 - 120*	*10/12/18 09:33*	*10/23/18 18:26*	*1*
Phenol-d5	*35*		*10 - 120*	*10/12/18 09:33*	*10/23/18 18:26*	*1*
Terphenyl-d14	*90*		*13 - 120*	*10/12/18 09:33*	*10/23/18 18:26*	*1*
2,4,6-Tribromophenol	*71*		*10 - 120*	*10/12/18 09:33*	*10/23/18 18:26*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.10	0.028	ug/L		10/11/18 14:51	10/11/18 22:48	1
1,2-Dibromoethane	ND		0.020	0.0060	ug/L		10/11/18 14:51	10/11/18 22:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*105*		*50 - 150*	*10/11/18 14:51*	*10/11/18 22:48*	*1*

Client Sample ID: MW9-ROX-101018
Date Collected: 10/10/18 12:55
Date Received: 10/11/18 10:15

Lab Sample ID: 490-160957-7
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	2.7	ug/L			10/12/18 10:28	1
Acrolein	ND		50	4.1	ug/L			10/12/18 10:28	1
Acrylonitrile	ND		10	0.50	ug/L			10/12/18 10:28	1
Benzene	0.24	J	1.0	0.20	ug/L			10/12/18 10:28	1
Bromobenzene	ND		1.0	0.21	ug/L			10/12/18 10:28	1
Bromochloromethane	ND		1.0	0.15	ug/L			10/12/18 10:28	1
Bromodichloromethane	ND		1.0	0.17	ug/L			10/12/18 10:28	1
Bromoform	ND		1.0	0.29	ug/L			10/12/18 10:28	1
Bromomethane	ND		1.0	0.35	ug/L			10/12/18 10:28	1
2-Butanone (MEK)	ND		50	2.6	ug/L			10/12/18 10:28	1
Carbon disulfide	ND		1.0	0.22	ug/L			10/12/18 10:28	1
Carbon tetrachloride	ND		1.0	0.18	ug/L			10/12/18 10:28	1
Chlorobenzene	ND		1.0	0.18	ug/L			10/12/18 10:28	1
Chloroethane	ND		1.0	0.36	ug/L			10/12/18 10:28	1
2-Chloroethyl vinyl ether	ND		10	0.67	ug/L			10/12/18 10:28	1
Chloroform	ND		1.0	0.23	ug/L			10/12/18 10:28	1
1-Chlorohexane	ND		2.0	0.30	ug/L			10/12/18 10:28	1
Chloromethane	ND		1.0	0.36	ug/L			10/12/18 10:28	1
cis-1,2-Dichloroethene	ND		1.0	0.21	ug/L			10/12/18 10:28	1
cis-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/12/18 10:28	1
Dibromochloromethane	ND		1.0	0.25	ug/L			10/12/18 10:28	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			10/12/18 10:28	1
1,3-Dichlorobenzene	ND		1.0	0.18	ug/L			10/12/18 10:28	1
1,4-Dichlorobenzene	ND		1.0	0.17	ug/L			10/12/18 10:28	1
Dichlorodifluoromethane	ND		1.0	0.17	ug/L			10/12/18 10:28	1
1,1-Dichloroethane	ND		1.0	0.24	ug/L			10/12/18 10:28	1
1,2-Dichloroethane	ND		1.0	0.20	ug/L			10/12/18 10:28	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			10/12/18 10:28	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			10/12/18 10:28	1
1,3-Dichloropropane	ND		1.0	0.19	ug/L			10/12/18 10:28	1
2,2-Dichloropropane	ND		1.0	0.16	ug/L			10/12/18 10:28	1
1,1-Dichloropropene	ND		1.0	0.20	ug/L			10/12/18 10:28	1
Ethylbenzene	ND		1.0	0.19	ug/L			10/12/18 10:28	1
Ethyl methacrylate	ND		10	0.68	ug/L			10/12/18 10:28	1
Hexachlorobutadiene	ND		2.0	0.38	ug/L			10/12/18 10:28	1
2-Hexanone	ND		10	1.3	ug/L			10/12/18 10:28	1
Isopropylbenzene	ND		1.0	0.33	ug/L			10/12/18 10:28	1
Methylene bromide	ND		1.0	0.45	ug/L			10/12/18 10:28	1
Methylene Chloride	ND		5.0	1.0	ug/L			10/12/18 10:28	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.81	ug/L			10/12/18 10:28	1
Methyl tert-butyl ether	ND		1.0	0.17	ug/L			10/12/18 10:28	1
m-Xylene & p-Xylene	ND		2.0	0.38	ug/L			10/12/18 10:28	1
Naphthalene	ND		5.0	0.21	ug/L			10/12/18 10:28	1
n-Butylbenzene	ND		1.0	0.24	ug/L			10/12/18 10:28	1
N-Propylbenzene	ND		1.0	0.17	ug/L			10/12/18 10:28	1
o-Chlorotoluene	ND		1.0	0.18	ug/L			10/12/18 10:28	1
o-Xylene	ND		1.0	0.20	ug/L			10/12/18 10:28	1
p-Chlorotoluene	ND		1.0	0.17	ug/L			10/12/18 10:28	1
p-Isopropyltoluene	ND		1.0	0.17	ug/L			10/12/18 10:28	1

Client Sample ID: MW9-ROX-101018
Date Collected: 10/10/18 12:55
Date Received: 10/11/18 10:15

Lab Sample ID: 490-160957-7
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0	0.17	ug/L			10/12/18 10:28	1
Styrene	ND		1.0	0.28	ug/L			10/12/18 10:28	1
tert-Butylbenzene	ND		1.0	0.17	ug/L			10/12/18 10:28	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.15	ug/L			10/12/18 10:28	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.19	ug/L			10/12/18 10:28	1
Tetrachloroethene	ND		1.0	0.14	ug/L			10/12/18 10:28	1
Toluene	ND		1.0	0.17	ug/L			10/12/18 10:28	1
trans-1,2-Dichloroethene	ND		1.0	0.23	ug/L			10/12/18 10:28	1
trans-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/12/18 10:28	1
1,2,3-Trichlorobenzene	ND		1.0	0.23	ug/L			10/12/18 10:28	1
1,2,4-Trichlorobenzene	ND		1.0	0.20	ug/L			10/12/18 10:28	1
1,1,1-Trichloroethane	ND		1.0	0.19	ug/L			10/12/18 10:28	1
1,1,2-Trichloroethane	ND		1.0	0.19	ug/L			10/12/18 10:28	1
Trichloroethene	ND		1.0	0.20	ug/L			10/12/18 10:28	1
Trichlorofluoromethane	ND		1.0	0.21	ug/L			10/12/18 10:28	1
1,2,3-Trichloropropane	ND		1.0	0.23	ug/L			10/12/18 10:28	1
1,2,4-Trimethylbenzene	ND		1.0	0.17	ug/L			10/12/18 10:28	1
1,3,5-Trimethylbenzene	ND		1.0	0.17	ug/L			10/12/18 10:28	1
Vinyl acetate	ND		10	1.7	ug/L			10/12/18 10:28	1
Vinyl chloride	ND		1.0	0.18	ug/L			10/12/18 10:28	1
Xylenes, Total	ND		3.0	0.58	ug/L			10/12/18 10:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*110*		*70 - 130*		*10/12/18 10:28*	*1*
Dibromofluoromethane (Surr)	*94*		*70 - 130*		*10/12/18 10:28*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*		*10/12/18 10:28*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*10/12/18 10:28*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 16:25	1
Acenaphthylene	ND		0.095	0.029	ug/L		10/13/18 09:44	10/25/18 16:25	1
Anthracene	ND		0.095	0.029	ug/L		10/13/18 09:44	10/25/18 16:25	1
Benzo[a]anthracene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 16:25	1
Benzo[a]pyrene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 16:25	1
Benzo[b]fluoranthene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 16:25	1
Benzo[g,h,i]perylene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 16:25	1
Benzo[k]fluoranthene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 16:25	1
Chrysene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 16:25	1
Dibenz(a,h)anthracene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 16:25	1
Fluoranthene	ND		0.095	0.029	ug/L		10/13/18 09:44	10/25/18 16:25	1
Fluorene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 16:25	1
Indeno[1,2,3-cd]pyrene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 16:25	1
1-Methylnaphthalene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 16:25	1
2-Methylnaphthalene	ND		0.095	0.029	ug/L		10/13/18 09:44	10/25/18 16:25	1
Phenanthrene	ND		0.095	0.029	ug/L		10/13/18 09:44	10/25/18 16:25	1
Pyrene	ND		0.095	0.019	ug/L		10/13/18 09:44	10/25/18 16:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*72*		*27 - 120*	*10/13/18 09:44*	*10/25/18 16:25*	*1*

Client Sample ID: MW9-ROX-101018

Lab Sample ID: 490-160957-7
Matrix: Water

Date Collected: 10/10/18 12:55
Date Received: 10/11/18 10:15

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	85		13 - 120	10/13/18 09:44	10/25/18 16:25	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		24	2.0	ug/L		10/12/18 09:33	10/23/18 18:46	1
Benzenethiol	ND		95	24	ug/L		10/12/18 09:33	10/23/18 18:46	1
Benzoic acid	ND	* UJ	48	16	ug/L		10/12/18 09:33	10/23/18 18:46	1
Benzyl alcohol	ND		48	1.4	ug/L		10/12/18 09:33	10/23/18 18:46	1
Bis(2-chloroethoxy)methane	ND		9.5	2.0	ug/L		10/12/18 09:33	10/23/18 18:46	1
Bis(2-chloroethyl)ether	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:46	1
bis (2-chloroisopropyl) ether	ND	UJ	9.5	1.7	ug/L		10/12/18 09:33	10/23/18 18:46	1
Bis(2-ethylhexyl) phthalate	ND		9.5	2.4	ug/L		10/12/18 09:33	10/23/18 18:46	1
4-Bromophenyl phenyl ether	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:46	1
Butyl benzyl phthalate	ND		9.5	2.0	ug/L		10/12/18 09:33	10/23/18 18:46	1
4-Chloroaniline	ND		9.5	2.6	ug/L		10/12/18 09:33	10/23/18 18:46	1
4-Chloro-3-methylphenol	ND		9.5	1.6	ug/L		10/12/18 09:33	10/23/18 18:46	1
2-Chloronaphthalene	ND		9.5	2.2	ug/L		10/12/18 09:33	10/23/18 18:46	1
2-Chlorophenol	ND		9.5	1.5	ug/L		10/12/18 09:33	10/23/18 18:46	1
4-Chlorophenyl phenyl ether	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:46	1
Dibenz[a,h]acridine	ND		9.5	1.3	ug/L		10/12/18 09:33	10/24/18 14:06	1
Dibenzofuran	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 18:46	1
3,3'-Dichlorobenzidine	ND		9.5	1.6	ug/L		10/12/18 09:33	10/23/18 18:46	1
2,4-Dichlorophenol	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 18:46	1
Diethyl phthalate	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:46	1
2,4-Dimethylphenol	ND		9.5	1.7	ug/L		10/12/18 09:33	10/23/18 18:46	1
Dimethyl phthalate	ND		9.5	1.6	ug/L		10/12/18 09:33	10/23/18 18:46	1
Di-n-butyl phthalate	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 18:46	1
4,6-Dinitro-ortho-cresol	ND		24	2.5	ug/L		10/12/18 09:33	10/23/18 18:46	1
2,4-Dinitrophenol	ND		24	6.6	ug/L		10/12/18 09:33	10/23/18 18:46	1
2,4-Dinitrotoluene	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:46	1
2,6-Dinitrotoluene	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:46	1
Di-n-octyl phthalate	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 18:46	1
1,4-Dioxane	ND	*	9.5	1.2	ug/L		10/12/18 09:33	10/23/18 18:46	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.5	1.7	ug/L		10/12/18 09:33	10/23/18 18:46	1
Hexachlorobenzene	ND		9.5	1.7	ug/L		10/12/18 09:33	10/23/18 18:46	1
Hexachlorocyclopentadiene	ND		9.5	2.5	ug/L		10/12/18 09:33	10/23/18 18:46	1
Hexachloroethane	ND		9.5	3.0	ug/L		10/12/18 09:33	10/23/18 18:46	1
Indene	ND		9.5	2.3	ug/L		10/12/18 09:33	10/23/18 18:46	1
Isophorone	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:46	1
2-Methylphenol	ND		9.5	1.5	ug/L		10/12/18 09:33	10/23/18 18:46	1
3 & 4 Methylphenol	ND		9.5	1.1	ug/L		10/12/18 09:33	10/23/18 18:46	1
2-Nitroaniline	ND		24	1.4	ug/L		10/12/18 09:33	10/23/18 18:46	1
3-Nitroaniline	ND		24	1.5	ug/L		10/12/18 09:33	10/23/18 18:46	1
4-Nitroaniline	ND		24	1.6	ug/L		10/12/18 09:33	10/23/18 18:46	1
Nitrobenzene	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:46	1
2-Nitrophenol	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 18:46	1
4-Nitrophenol	ND		24	2.3	ug/L		10/12/18 09:33	10/23/18 18:46	1
N-Nitrosodimethylamine	ND		9.5	3.2	ug/L		10/12/18 09:33	10/23/18 18:46	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160957-1

Client Sample ID: MW9-ROX-101018
Date Collected: 10/10/18 12:55
Date Received: 10/11/18 10:15

Lab Sample ID: 490-160957-7
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.5	1.9	ug/L		10/12/18 09:33	10/23/18 18:46	1
N-Nitrosodiphenylamine	ND	*	9.5	1.4	ug/L		10/12/18 09:33	10/23/18 18:46	1
Pentachlorophenol	ND		24	3.3	ug/L		10/12/18 09:33	10/23/18 18:46	1
Phenol	ND		9.5	3.2	ug/L		10/12/18 09:33	10/23/18 18:46	1
Pyridine	ND		9.5	1.7	ug/L		10/12/18 09:33	10/23/18 18:46	1
Quinoline	ND		9.5	2.7	ug/L		10/12/18 09:33	10/24/18 14:06	1
2,4,5-Trichlorophenol	ND		9.5	1.8	ug/L		10/12/18 09:33	10/23/18 18:46	1
2,4,6-Trichlorophenol	ND		9.5	1.5	ug/L		10/12/18 09:33	10/23/18 18:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*43*		*10 - 120*	*10/12/18 09:33*	*10/23/18 18:46*	*1*
Nitrobenzene-d5	*51*		*27 - 120*	*10/12/18 09:33*	*10/23/18 18:46*	*1*
Phenol-d5	*32*		*10 - 120*	*10/12/18 09:33*	*10/23/18 18:46*	*1*
Terphenyl-d14	*78*		*13 - 120*	*10/12/18 09:33*	*10/23/18 18:46*	*1*
2,4,6-Tribromophenol	*57*		*10 - 120*	*10/12/18 09:33*	*10/23/18 18:46*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.099	0.028	ug/L		10/11/18 14:51	10/11/18 23:19	1
1,2-Dibromoethane	ND		0.020	0.0059	ug/L		10/11/18 14:51	10/11/18 23:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*109*		*50 - 150*	*10/11/18 14:51*	*10/11/18 23:19*	*1*

Definitions/Glossary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160957-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

GC Semi VOA

Qualifier	Qualifier Description
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160957-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	DBFM	DCA	BFB
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)	(70-130)
490-160957-2	TB-ROX-101018-8260	110	97	91	100
490-160957-3	MW1-ROX-101018	111	96	94	101
490-160957-4	MW12-ROX-101018-EB	111	94	91	100
490-160957-5	MW12-ROX-101018	109	97	93	99
490-160957-6	MW10-ROX-101018	108	93	92	102
490-160957-7	MW9-ROX-101018	110	94	92	101
LCS 490-549419/4	Lab Control Sample	106	95	90	101
MB 490-549419/6	Method Blank	110	93	91	101

Surrogate Legend

TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)				
		2FP	NBZ	PHL	TPHL	TBP
Lab Sample ID	Client Sample ID	(10-120)	(27-120)	(10-120)	(13-120)	(10-120)
490-160957-3	MW1-ROX-101018	44	46	28	68	54
490-160957-4	MW12-ROX-101018-EB	46	52	31	74	57
490-160957-5	MW12-ROX-101018	39	46	28	79	62
490-160957-6	MW10-ROX-101018	49	56	35	90	71
490-160957-7	MW9-ROX-101018	43	51	32	78	57
LCS 490-549362/2-A	Lab Control Sample	45	56	35	89	75
LCS 490-549362/7-A	Lab Control Sample	84	79	60	126 X	111
LCSD 490-549362/3-A	Lab Control Sample Dup	66	77	51	97	84
MB 490-549362/1-A	Method Blank	53	63	34	93	64

Surrogate Legend

2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPHL = Terphenyl-d14
TBP = 2,4,6-Tribromophenol

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		NBZ	TPHL
Lab Sample ID	Client Sample ID	(27-120)	(13-120)
490-160957-3	MW1-ROX-101018	64	76
490-160957-4	MW12-ROX-101018-EB	77	89
490-160957-5	MW12-ROX-101018	70	85
490-160957-6	MW10-ROX-101018	76	87
490-160957-7	MW9-ROX-101018	72	85
LCS 490-549784/2-A	Lab Control Sample	65	72

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160957-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	NBZ (27-120)	TPHL (13-120)
MB 490-549784/1-A	Method Blank	63	74

Surrogate Legend

NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	13DCB1 (50-150)
490-160957-1	TB-ROX-101018-8011	98
490-160957-3	MW1-ROX-101018	96

Surrogate Legend

13DCB = 1,3-Dichlorobenzene

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	13DCB2 (50-150)
490-160957-4	MW12-ROX-101018-EB	63 p
490-160957-5	MW12-ROX-101018	112
490-160957-6	MW10-ROX-101018	105
490-160957-7	MW9-ROX-101018	109
LCS 490-549329/4-A	Lab Control Sample	119
LCSD 490-549329/5-A	Lab Control Sample Dup	121
MB 490-549329/3-A	Method Blank	129

Surrogate Legend

13DCB = 1,3-Dichlorobenzene

Method Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160957-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NSH
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL NSH
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL NSH
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	TAL NSH
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL NSH
5030B	Purge and Trap	SW846	TAL NSH
8011	Microextraction	SW846	TAL NSH

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160957-1

Client Sample ID: TB-ROX-101018-8011

Date Collected: 10/10/18 00:01
Date Received: 10/11/18 10:15

Lab Sample ID: 490-160957-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			34.6 mL	2 mL	549329	10/11/18 14:51	ZXS	TAL NSH
Total/NA	Analysis	8011		1			549199	10/11/18 21:47	ZXS	TAL NSH

Client Sample ID: TB-ROX-101018-8260

Date Collected: 10/10/18 00:01
Date Received: 10/11/18 10:15

Lab Sample ID: 490-160957-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	549419	10/12/18 08:15	S1S	TAL NSH

Client Sample ID: MW1-ROX-101018

Date Collected: 10/10/18 09:05
Date Received: 10/11/18 10:15

Lab Sample ID: 490-160957-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	549419	10/12/18 08:42	S1S	TAL NSH
Total/NA	Prep	3510C			1047.8 mL	1 mL	549362	10/12/18 09:33	MCO	TAL NSH
Total/NA	Analysis	8270D		1			551996	10/23/18 17:27	T1C	TAL NSH
Total/NA	Prep	3510C			1047.8 mL	1 mL	549362	10/12/18 09:33	MCO	TAL NSH
Total/NA	Analysis	8270D		1			552289	10/24/18 12:47	T1C	TAL NSH
Total/NA	Prep	3510C			1054.6 mL	1 mL	549784	10/13/18 09:44	MCO	TAL NSH
Total/NA	Analysis	8270D SIM		1			552604	10/25/18 15:04	T1C	TAL NSH
Total/NA	Prep	8011			35 mL	2 mL	549329	10/11/18 14:51	ZXS	TAL NSH
Total/NA	Analysis	8011		1			549199	10/11/18 22:02	ZXS	TAL NSH

Client Sample ID: MW12-ROX-101018-EB

Date Collected: 10/10/18 10:00
Date Received: 10/11/18 10:15

Lab Sample ID: 490-160957-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	549419	10/12/18 09:08	S1S	TAL NSH
Total/NA	Prep	3510C			1053.5 mL	1 mL	549362	10/12/18 09:33	MCO	TAL NSH
Total/NA	Analysis	8270D		1			551996	10/23/18 17:47	T1C	TAL NSH
Total/NA	Prep	3510C			1053.5 mL	1 mL	549362	10/12/18 09:33	MCO	TAL NSH
Total/NA	Analysis	8270D		1			552289	10/24/18 13:07	T1C	TAL NSH
Total/NA	Prep	3510C			1053.9 mL	1 mL	549784	10/13/18 09:44	MCO	TAL NSH
Total/NA	Analysis	8270D SIM		1			552604	10/25/18 15:24	T1C	TAL NSH
Total/NA	Prep	8011			35.4 mL	2 mL	549329	10/11/18 14:51	ZXS	TAL NSH
Total/NA	Analysis	8011		1			549199	10/11/18 22:18	ZXS	TAL NSH

Client Sample ID: MW12-ROX-101018

Lab Sample ID: 490-160957-5
Matrix: Water

Date Collected: 10/10/18 10:40
Date Received: 10/11/18 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	549419	10/12/18 09:35	S1S	TAL NSH
Total/NA	Prep	3510C			1052.4 mL	1 mL	549362	10/12/18 09:33	MCO	TAL NSH
Total/NA	Analysis	8270D		1			551996	10/23/18 18:06	T1C	TAL NSH
Total/NA	Prep	3510C			1052.4 mL	1 mL	549362	10/12/18 09:33	MCO	TAL NSH
Total/NA	Analysis	8270D		1			552289	10/24/18 13:27	T1C	TAL NSH
Total/NA	Prep	3510C			1048.9 mL	1 mL	549784	10/13/18 09:44	MCO	TAL NSH
Total/NA	Analysis	8270D SIM		1			552604	10/25/18 15:44	T1C	TAL NSH
Total/NA	Prep	8011			35 mL	2 mL	549329	10/11/18 14:51	ZXS	TAL NSH
Total/NA	Analysis	8011		1			549199	10/11/18 22:33	ZXS	TAL NSH

Client Sample ID: MW10-ROX-101018

Lab Sample ID: 490-160957-6
Matrix: Water

Date Collected: 10/10/18 12:00
Date Received: 10/11/18 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	549419	10/12/18 10:02	S1S	TAL NSH
Total/NA	Prep	3510C			1054 mL	1 mL	549362	10/12/18 09:33	MCO	TAL NSH
Total/NA	Analysis	8270D		1			551996	10/23/18 18:26	T1C	TAL NSH
Total/NA	Prep	3510C			1054 mL	1 mL	549362	10/12/18 09:33	MCO	TAL NSH
Total/NA	Analysis	8270D		1			552289	10/24/18 13:46	T1C	TAL NSH
Total/NA	Prep	3510C			1053.4 mL	1 mL	549784	10/13/18 09:44	MCO	TAL NSH
Total/NA	Analysis	8270D SIM		1			552604	10/25/18 16:05	T1C	TAL NSH
Total/NA	Prep	8011			35.1 mL	2 mL	549329	10/11/18 14:51	ZXS	TAL NSH
Total/NA	Analysis	8011		1			549199	10/11/18 22:48	ZXS	TAL NSH

Client Sample ID: MW9-ROX-101018

Lab Sample ID: 490-160957-7
Matrix: Water

Date Collected: 10/10/18 12:55
Date Received: 10/11/18 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	549419	10/12/18 10:28	S1S	TAL NSH
Total/NA	Prep	3510C			1051.4 mL	1 mL	549362	10/12/18 09:33	MCO	TAL NSH
Total/NA	Analysis	8270D		1			551996	10/23/18 18:46	T1C	TAL NSH
Total/NA	Prep	3510C			1051.4 mL	1 mL	549362	10/12/18 09:33	MCO	TAL NSH
Total/NA	Analysis	8270D		1			552289	10/24/18 14:06	T1C	TAL NSH
Total/NA	Prep	3510C			1049.1 mL	1 mL	549784	10/13/18 09:44	MCO	TAL NSH
Total/NA	Analysis	8270D SIM		1			552604	10/25/18 16:25	T1C	TAL NSH
Total/NA	Prep	8011			35.3 mL	2 mL	549329	10/11/18 14:51	ZXS	TAL NSH
Total/NA	Analysis	8011		1			549199	10/11/18 23:19	ZXS	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

GC/MS VOA

Analysis Batch: 549419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160957-2	TB-ROX-101018-8260	Total/NA	Water	8260B	
490-160957-3	MW1-ROX-101018	Total/NA	Water	8260B	
490-160957-4	MW12-ROX-101018-EB	Total/NA	Water	8260B	
490-160957-5	MW12-ROX-101018	Total/NA	Water	8260B	
490-160957-6	MW10-ROX-101018	Total/NA	Water	8260B	
490-160957-7	MW9-ROX-101018	Total/NA	Water	8260B	
MB 490-549419/6	Method Blank	Total/NA	Water	8260B	
LCS 490-549419/4	Lab Control Sample	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 549362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160957-3	MW1-ROX-101018	Total/NA	Water	3510C	
490-160957-4	MW12-ROX-101018-EB	Total/NA	Water	3510C	
490-160957-5	MW12-ROX-101018	Total/NA	Water	3510C	
490-160957-6	MW10-ROX-101018	Total/NA	Water	3510C	
490-160957-7	MW9-ROX-101018	Total/NA	Water	3510C	
MB 490-549362/1-A	Method Blank	Total/NA	Water	3510C	
LCS 490-549362/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 490-549362/7-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 490-549362/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Prep Batch: 549784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160957-3	MW1-ROX-101018	Total/NA	Water	3510C	
490-160957-4	MW12-ROX-101018-EB	Total/NA	Water	3510C	
490-160957-5	MW12-ROX-101018	Total/NA	Water	3510C	
490-160957-6	MW10-ROX-101018	Total/NA	Water	3510C	
490-160957-7	MW9-ROX-101018	Total/NA	Water	3510C	
MB 490-549784/1-A	Method Blank	Total/NA	Water	3510C	
LCS 490-549784/2-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 550858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 490-549362/2-A	Lab Control Sample	Total/NA	Water	8270D	549362
LCS 490-549362/7-A	Lab Control Sample	Total/NA	Water	8270D	549362
LCSD 490-549362/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	549362

Analysis Batch: 551996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160957-3	MW1-ROX-101018	Total/NA	Water	8270D	549362
490-160957-4	MW12-ROX-101018-EB	Total/NA	Water	8270D	549362
490-160957-5	MW12-ROX-101018	Total/NA	Water	8270D	549362
490-160957-6	MW10-ROX-101018	Total/NA	Water	8270D	549362
490-160957-7	MW9-ROX-101018	Total/NA	Water	8270D	549362

Analysis Batch: 552289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160957-3	MW1-ROX-101018	Total/NA	Water	8270D	549362

GC/MS Semi VOA (Continued)

Analysis Batch: 552289 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160957-4	MW12-ROX-101018-EB	Total/NA	Water	8270D	549362
490-160957-5	MW12-ROX-101018	Total/NA	Water	8270D	549362
490-160957-6	MW10-ROX-101018	Total/NA	Water	8270D	549362
490-160957-7	MW9-ROX-101018	Total/NA	Water	8270D	549362
MB 490-549362/1-A	Method Blank	Total/NA	Water	8270D	549362

Analysis Batch: 552604

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160957-3	MW1-ROX-101018	Total/NA	Water	8270D SIM	549784
490-160957-4	MW12-ROX-101018-EB	Total/NA	Water	8270D SIM	549784
490-160957-5	MW12-ROX-101018	Total/NA	Water	8270D SIM	549784
490-160957-6	MW10-ROX-101018	Total/NA	Water	8270D SIM	549784
490-160957-7	MW9-ROX-101018	Total/NA	Water	8270D SIM	549784
MB 490-549784/1-A	Method Blank	Total/NA	Water	8270D SIM	549784
LCS 490-549784/2-A	Lab Control Sample	Total/NA	Water	8270D SIM	549784

GC Semi VOA

Analysis Batch: 549199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160957-1	TB-ROX-101018-8011	Total/NA	Water	8011	549329
490-160957-3	MW1-ROX-101018	Total/NA	Water	8011	549329
490-160957-4	MW12-ROX-101018-EB	Total/NA	Water	8011	549329
490-160957-5	MW12-ROX-101018	Total/NA	Water	8011	549329
490-160957-6	MW10-ROX-101018	Total/NA	Water	8011	549329
490-160957-7	MW9-ROX-101018	Total/NA	Water	8011	549329
MB 490-549329/3-A	Method Blank	Total/NA	Water	8011	549329
LCS 490-549329/4-A	Lab Control Sample	Total/NA	Water	8011	549329
LCSD 490-549329/5-A	Lab Control Sample Dup	Total/NA	Water	8011	549329

Prep Batch: 549329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160957-1	TB-ROX-101018-8011	Total/NA	Water	8011	
490-160957-3	MW1-ROX-101018	Total/NA	Water	8011	
490-160957-4	MW12-ROX-101018-EB	Total/NA	Water	8011	
490-160957-5	MW12-ROX-101018	Total/NA	Water	8011	
490-160957-6	MW10-ROX-101018	Total/NA	Water	8011	
490-160957-7	MW9-ROX-101018	Total/NA	Water	8011	
MB 490-549329/3-A	Method Blank	Total/NA	Water	8011	
LCS 490-549329/4-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 490-549329/5-A	Lab Control Sample Dup	Total/NA	Water	8011	

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 490-549419/6
Matrix: Water
Analysis Batch: 549419

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	2.7	ug/L			10/12/18 06:56	1
Acrolein	ND		50	4.1	ug/L			10/12/18 06:56	1
Acrylonitrile	ND		10	0.50	ug/L			10/12/18 06:56	1
Benzene	ND		1.0	0.20	ug/L			10/12/18 06:56	1
Bromobenzene	ND		1.0	0.21	ug/L			10/12/18 06:56	1
Bromochloromethane	ND		1.0	0.15	ug/L			10/12/18 06:56	1
Bromodichloromethane	ND		1.0	0.17	ug/L			10/12/18 06:56	1
Bromoform	ND		1.0	0.29	ug/L			10/12/18 06:56	1
Bromomethane	ND		1.0	0.35	ug/L			10/12/18 06:56	1
2-Butanone (MEK)	ND		50	2.6	ug/L			10/12/18 06:56	1
Carbon disulfide	ND		1.0	0.22	ug/L			10/12/18 06:56	1
Carbon tetrachloride	ND		1.0	0.18	ug/L			10/12/18 06:56	1
Chlorobenzene	ND		1.0	0.18	ug/L			10/12/18 06:56	1
Chloroethane	ND		1.0	0.36	ug/L			10/12/18 06:56	1
2-Chloroethyl vinyl ether	ND		10	0.67	ug/L			10/12/18 06:56	1
Chloroform	ND		1.0	0.23	ug/L			10/12/18 06:56	1
1-Chlorohexane	ND		2.0	0.30	ug/L			10/12/18 06:56	1
Chloromethane	ND		1.0	0.36	ug/L			10/12/18 06:56	1
cis-1,2-Dichloroethene	ND		1.0	0.21	ug/L			10/12/18 06:56	1
cis-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/12/18 06:56	1
Dibromochloromethane	ND		1.0	0.25	ug/L			10/12/18 06:56	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			10/12/18 06:56	1
1,3-Dichlorobenzene	ND		1.0	0.18	ug/L			10/12/18 06:56	1
1,4-Dichlorobenzene	ND		1.0	0.17	ug/L			10/12/18 06:56	1
Dichlorodifluoromethane	ND		1.0	0.17	ug/L			10/12/18 06:56	1
1,1-Dichloroethane	ND		1.0	0.24	ug/L			10/12/18 06:56	1
1,2-Dichloroethane	ND		1.0	0.20	ug/L			10/12/18 06:56	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			10/12/18 06:56	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			10/12/18 06:56	1
1,3-Dichloropropane	ND		1.0	0.19	ug/L			10/12/18 06:56	1
2,2-Dichloropropane	ND		1.0	0.16	ug/L			10/12/18 06:56	1
1,1-Dichloropropene	ND		1.0	0.20	ug/L			10/12/18 06:56	1
Ethylbenzene	ND		1.0	0.19	ug/L			10/12/18 06:56	1
Ethyl methacrylate	ND		10	0.68	ug/L			10/12/18 06:56	1
Hexachlorobutadiene	ND		2.0	0.38	ug/L			10/12/18 06:56	1
2-Hexanone	ND		10	1.3	ug/L			10/12/18 06:56	1
Isopropylbenzene	ND		1.0	0.33	ug/L			10/12/18 06:56	1
Methylene bromide	ND		1.0	0.45	ug/L			10/12/18 06:56	1
Methylene Chloride	ND		5.0	1.0	ug/L			10/12/18 06:56	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.81	ug/L			10/12/18 06:56	1
Methyl tert-butyl ether	ND		1.0	0.17	ug/L			10/12/18 06:56	1
m-Xylene & p-Xylene	ND		2.0	0.38	ug/L			10/12/18 06:56	1
Naphthalene	ND		5.0	0.21	ug/L			10/12/18 06:56	1
n-Butylbenzene	ND		1.0	0.24	ug/L			10/12/18 06:56	1
N-Propylbenzene	ND		1.0	0.17	ug/L			10/12/18 06:56	1
o-Chlorotoluene	ND		1.0	0.18	ug/L			10/12/18 06:56	1
o-Xylene	ND		1.0	0.20	ug/L			10/12/18 06:56	1
p-Chlorotoluene	ND		1.0	0.17	ug/L			10/12/18 06:56	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-549419/6
Matrix: Water
Analysis Batch: 549419

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	ND		1.0	0.17	ug/L			10/12/18 06:56	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			10/12/18 06:56	1
Styrene	ND		1.0	0.28	ug/L			10/12/18 06:56	1
tert-Butylbenzene	ND		1.0	0.17	ug/L			10/12/18 06:56	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.15	ug/L			10/12/18 06:56	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.19	ug/L			10/12/18 06:56	1
Tetrachloroethene	ND		1.0	0.14	ug/L			10/12/18 06:56	1
Toluene	ND		1.0	0.17	ug/L			10/12/18 06:56	1
trans-1,2-Dichloroethene	ND		1.0	0.23	ug/L			10/12/18 06:56	1
trans-1,3-Dichloropropene	ND		1.0	0.17	ug/L			10/12/18 06:56	1
1,2,3-Trichlorobenzene	ND		1.0	0.23	ug/L			10/12/18 06:56	1
1,2,4-Trichlorobenzene	ND		1.0	0.20	ug/L			10/12/18 06:56	1
1,1,1-Trichloroethane	ND		1.0	0.19	ug/L			10/12/18 06:56	1
1,1,2-Trichloroethane	ND		1.0	0.19	ug/L			10/12/18 06:56	1
Trichloroethene	ND		1.0	0.20	ug/L			10/12/18 06:56	1
Trichlorofluoromethane	ND		1.0	0.21	ug/L			10/12/18 06:56	1
1,2,3-Trichloropropane	ND		1.0	0.23	ug/L			10/12/18 06:56	1
1,2,4-Trimethylbenzene	ND		1.0	0.17	ug/L			10/12/18 06:56	1
1,3,5-Trimethylbenzene	ND		1.0	0.17	ug/L			10/12/18 06:56	1
Vinyl acetate	ND		10	1.7	ug/L			10/12/18 06:56	1
Vinyl chloride	ND		1.0	0.18	ug/L			10/12/18 06:56	1
Xylenes, Total	ND		3.0	0.58	ug/L			10/12/18 06:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*110*		*70 - 130*		*10/12/18 06:56*	*1*
Dibromofluoromethane (Surr)	*93*		*70 - 130*		*10/12/18 06:56*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 130*		*10/12/18 06:56*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*10/12/18 06:56*	*1*

Lab Sample ID: LCS 490-549419/4
Matrix: Water
Analysis Batch: 549419

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	113		ug/L		113	39 - 150
Acrolein	49.4	44.6	J	ug/L		90	10 - 150
Acrylonitrile	200	213		ug/L		107	63 - 135
Benzene	20.0	19.4		ug/L		97	70 - 130
Bromobenzene	20.0	20.2		ug/L		101	70 - 130
Bromochloromethane	20.0	21.7		ug/L		108	70 - 130
Bromodichloromethane	20.0	19.9		ug/L		100	70 - 130
Bromoform	20.0	18.6		ug/L		93	70 - 137
Bromomethane	20.0	28.4		ug/L		142	53 - 150
2-Butanone (MEK)	100	107		ug/L		107	55 - 143
Carbon disulfide	20.0	20.1		ug/L		101	64 - 135
Carbon tetrachloride	20.0	18.8		ug/L		94	70 - 147
Chlorobenzene	20.0	21.8		ug/L		109	70 - 130
Chloroethane	20.0	20.5		ug/L		102	60 - 138

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-549419/4
Matrix: Water
Analysis Batch: 549419

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloroethyl vinyl ether	20.0	21.6		ug/L		108	50 - 139
Chloroform	20.0	20.8		ug/L		104	70 - 130
1-Chlorohexane	20.0	17.9		ug/L		90	69 - 140
Chloromethane	20.0	20.4		ug/L		102	33 - 150
cis-1,2-Dichloroethene	20.0	21.6		ug/L		108	70 - 130
cis-1,3-Dichloropropene	20.0	22.0		ug/L		110	70 - 133
Dibromochloromethane	20.0	21.3		ug/L		106	70 - 133
1,2-Dichlorobenzene	20.0	21.6		ug/L		108	70 - 130
1,3-Dichlorobenzene	20.0	21.7		ug/L		109	70 - 130
1,4-Dichlorobenzene	20.0	21.0		ug/L		105	70 - 130
Dichlorodifluoromethane	20.0	17.9		ug/L		89	48 - 150
1,1-Dichloroethane	20.0	21.1		ug/L		106	70 - 130
1,2-Dichloroethane	20.0	18.4		ug/L		92	70 - 130
1,1-Dichloroethene	20.0	21.2		ug/L		106	70 - 132
1,2-Dichloropropane	20.0	20.2		ug/L		101	70 - 130
1,3-Dichloropropane	20.0	21.8		ug/L		109	70 - 130
2,2-Dichloropropane	20.0	16.3		ug/L		81	60 - 143
1,1-Dichloropropene	20.0	19.8		ug/L		99	70 - 130
Ethylbenzene	20.0	20.4		ug/L		102	70 - 130
Ethyl methacrylate	20.0	20.4		ug/L		102	60 - 136
Hexachlorobutadiene	20.0	18.9		ug/L		95	70 - 138
2-Hexanone	100	103		ug/L		103	54 - 142
Isopropylbenzene	20.0	20.5		ug/L		103	70 - 131
Methylene bromide	20.0	19.9		ug/L		100	70 - 130
Methylene Chloride	20.0	21.5		ug/L		107	70 - 130
4-Methyl-2-pentanone (MIBK)	100	106		ug/L		106	60 - 137
Methyl tert-butyl ether	20.0	21.7		ug/L		109	70 - 130
m-Xylene & p-Xylene	20.0	21.2		ug/L		106	70 - 130
Naphthalene	20.0	20.9		ug/L		105	54 - 150
n-Butylbenzene	20.0	20.1		ug/L		101	68 - 137
N-Propylbenzene	20.0	21.3		ug/L		106	70 - 134
o-Chlorotoluene	20.0	20.8		ug/L		104	70 - 130
o-Xylene	20.0	20.8		ug/L		104	70 - 130
p-Chlorotoluene	20.0	20.7		ug/L		103	70 - 130
p-Isopropyltoluene	20.0	21.0		ug/L		105	66 - 130
sec-Butylbenzene	20.0	21.1		ug/L		106	70 - 135
Styrene	20.0	20.4		ug/L		102	70 - 130
tert-Butylbenzene	20.0	20.9		ug/L		105	70 - 130
1,1,1,2-Tetrachloroethane	20.0	21.1		ug/L		106	70 - 130
1,1,2,2-Tetrachloroethane	20.0	21.6		ug/L		108	69 - 131
Tetrachloroethene	20.0	21.3		ug/L		107	70 - 130
Toluene	20.0	22.4		ug/L		112	70 - 130
trans-1,2-Dichloroethene	20.0	21.5		ug/L		108	70 - 130
trans-1,3-Dichloropropene	20.0	20.5		ug/L		103	63 - 142
1,2,3-Trichlorobenzene	20.0	21.3		ug/L		106	46 - 150
1,2,4-Trichlorobenzene	20.0	20.4		ug/L		102	58 - 147
1,1,1-Trichloroethane	20.0	18.9		ug/L		95	70 - 135
1,1,2-Trichloroethane	20.0	21.9		ug/L		109	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-549419/4
Matrix: Water
Analysis Batch: 549419

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichloroethene	20.0	20.6		ug/L		103	70 - 130
Trichlorofluoromethane	20.0	20.0		ug/L		100	59 - 150
1,2,3-Trichloropropane	20.0	22.4		ug/L		112	70 - 131
1,2,4-Trimethylbenzene	20.0	20.8		ug/L		104	70 - 130
1,3,5-Trimethylbenzene	20.0	21.8		ug/L		109	70 - 130
Vinyl acetate	40.0	43.3		ug/L		108	54 - 146
Vinyl chloride	20.0	20.9		ug/L		105	57 - 137
Xylenes, Total	40.0	42.0		ug/L		105	70 - 132

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*106*		*70 - 130*
Dibromofluoromethane (Surr)	*95*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*90*		*70 - 130*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 490-549362/1-A
Matrix: Water
Analysis Batch: 552289

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549362

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		25	2.1	ug/L		10/11/18 17:09	10/24/18 11:29	1
Benzenethiol	ND		100	25	ug/L		10/11/18 17:09	10/24/18 11:29	1
Benzoic acid	ND		50	17	ug/L		10/11/18 17:09	10/24/18 11:29	1
Benzyl alcohol	ND		50	1.5	ug/L		10/11/18 17:09	10/24/18 11:29	1
Bis(2-chloroethoxy)methane	ND		10	2.1	ug/L		10/11/18 17:09	10/24/18 11:29	1
Bis(2-chloroethyl)ether	ND		10	1.9	ug/L		10/11/18 17:09	10/24/18 11:29	1
bis (2-chloroisopropyl) ether	ND		10	1.8	ug/L		10/11/18 17:09	10/24/18 11:29	1
Bis(2-ethylhexyl) phthalate	ND		10	2.6	ug/L		10/11/18 17:09	10/24/18 11:29	1
4-Bromophenyl phenyl ether	ND		10	1.9	ug/L		10/11/18 17:09	10/24/18 11:29	1
Butyl benzyl phthalate	ND		10	2.1	ug/L		10/11/18 17:09	10/24/18 11:29	1
4-Chloroaniline	ND		10	2.7	ug/L		10/11/18 17:09	10/24/18 11:29	1
4-Chloro-3-methylphenol	ND		10	1.7	ug/L		10/11/18 17:09	10/24/18 11:29	1
2-Chloronaphthalene	ND		10	2.3	ug/L		10/11/18 17:09	10/24/18 11:29	1
2-Chlorophenol	ND		10	1.6	ug/L		10/11/18 17:09	10/24/18 11:29	1
4-Chlorophenyl phenyl ether	ND		10	1.9	ug/L		10/11/18 17:09	10/24/18 11:29	1
Dibenz[a,h]acridine	ND		10	1.4	ug/L		10/11/18 17:09	10/24/18 11:29	1
Dibenzofuran	ND		10	2.0	ug/L		10/11/18 17:09	10/24/18 11:29	1
3,3'-Dichlorobenzidine	ND		10	1.7	ug/L		10/11/18 17:09	10/24/18 11:29	1
2,4-Dichlorophenol	ND		10	2.0	ug/L		10/11/18 17:09	10/24/18 11:29	1
Diethyl phthalate	ND		10	1.9	ug/L		10/11/18 17:09	10/24/18 11:29	1
2,4-Dimethylphenol	ND		10	1.8	ug/L		10/11/18 17:09	10/24/18 11:29	1
Dimethyl phthalate	ND		10	1.7	ug/L		10/11/18 17:09	10/24/18 11:29	1
Di-n-butyl phthalate	ND		10	2.0	ug/L		10/11/18 17:09	10/24/18 11:29	1
4,6-Dinitro-ortho-cresol	ND		25	2.6	ug/L		10/11/18 17:09	10/24/18 11:29	1
2,4-Dinitrophenol	ND		25	7.0	ug/L		10/11/18 17:09	10/24/18 11:29	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		10/11/18 17:09	10/24/18 11:29	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-549362/1-A
Matrix: Water
Analysis Batch: 552289

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549362

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	ND		10	1.9	ug/L		10/11/18 17:09	10/24/18 11:29	1
Di-n-octyl phthalate	ND		10	2.0	ug/L		10/11/18 17:09	10/24/18 11:29	1
1,4-Dioxane	ND		10	1.2	ug/L		10/11/18 17:09	10/24/18 11:29	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.8	ug/L		10/11/18 17:09	10/24/18 11:29	1
Hexachlorobenzene	ND		10	1.8	ug/L		10/11/18 17:09	10/24/18 11:29	1
Hexachlorocyclopentadiene	ND		10	2.6	ug/L		10/11/18 17:09	10/24/18 11:29	1
Hexachloroethane	ND		10	3.2	ug/L		10/11/18 17:09	10/24/18 11:29	1
Indene	ND		10	2.4	ug/L		10/11/18 17:09	10/24/18 11:29	1
Isophorone	ND		10	1.9	ug/L		10/11/18 17:09	10/24/18 11:29	1
2-Methylphenol	ND		10	1.6	ug/L		10/11/18 17:09	10/24/18 11:29	1
3 & 4 Methylphenol	ND		10	1.2	ug/L		10/11/18 17:09	10/24/18 11:29	1
2-Nitroaniline	ND		25	1.5	ug/L		10/11/18 17:09	10/24/18 11:29	1
3-Nitroaniline	ND		25	1.6	ug/L		10/11/18 17:09	10/24/18 11:29	1
4-Nitroaniline	ND		25	1.7	ug/L		10/11/18 17:09	10/24/18 11:29	1
Nitrobenzene	ND		10	1.9	ug/L		10/11/18 17:09	10/24/18 11:29	1
2-Nitrophenol	ND		10	2.0	ug/L		10/11/18 17:09	10/24/18 11:29	1
4-Nitrophenol	ND		25	2.4	ug/L		10/11/18 17:09	10/24/18 11:29	1
N-Nitrosodimethylamine	ND		10	3.3	ug/L		10/11/18 17:09	10/24/18 11:29	1
N-Nitrosodi-n-propylamine	ND		10	2.0	ug/L		10/11/18 17:09	10/24/18 11:29	1
N-Nitrosodiphenylamine	ND		10	1.4	ug/L		10/11/18 17:09	10/24/18 11:29	1
Pentachlorophenol	ND		25	3.5	ug/L		10/11/18 17:09	10/24/18 11:29	1
Phenol	ND		10	3.3	ug/L		10/11/18 17:09	10/24/18 11:29	1
Pyridine	ND		10	1.8	ug/L		10/11/18 17:09	10/24/18 11:29	1
Quinoline	ND		10	2.8	ug/L		10/11/18 17:09	10/24/18 11:29	1
2,4,5-Trichlorophenol	ND		10	1.9	ug/L		10/11/18 17:09	10/24/18 11:29	1
2,4,6-Trichlorophenol	ND		10	1.6	ug/L		10/11/18 17:09	10/24/18 11:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*53*		*10 - 120*	*10/11/18 17:09*	*10/24/18 11:29*	*1*
Nitrobenzene-d5	*63*		*27 - 120*	*10/11/18 17:09*	*10/24/18 11:29*	*1*
Phenol-d5	*34*		*10 - 120*	*10/11/18 17:09*	*10/24/18 11:29*	*1*
Terphenyl-d14	*93*		*13 - 120*	*10/11/18 17:09*	*10/24/18 11:29*	*1*
2,4,6-Tribromophenol	*64*		*10 - 120*	*10/11/18 17:09*	*10/24/18 11:29*	*1*

Lab Sample ID: LCS 490-549362/2-A
Matrix: Water
Analysis Batch: 550858

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549362

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aniline	50.0	24.7	J	ug/L		49	17 - 108
Benzoic acid	50.0	ND	*	ug/L		9	10 - 110
Benzyl alcohol	50.0	28.3	J	ug/L		57	21 - 120
Bis(2-chloroethoxy)methane	50.0	34.4		ug/L		69	35 - 127
Bis(2-chloroethyl)ether	50.0	32.2		ug/L		64	27 - 132
bis (2-chloroisopropyl) ether	50.0	28.7		ug/L		57	24 - 136
Bis(2-ethylhexyl) phthalate	50.0	58.0		ug/L		116	41 - 147
4-Bromophenyl phenyl ether	50.0	47.8		ug/L		96	36 - 135

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-549362/2-A
Matrix: Water
Analysis Batch: 550858

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549362

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Butyl benzyl phthalate	50.0	52.7		ug/L		105	34 - 146
4-Chloroaniline	50.0	35.2		ug/L		70	27 - 131
4-Chloro-3-methylphenol	50.0	40.0		ug/L		80	10 - 150
2-Chloronaphthalene	50.0	38.7		ug/L		77	32 - 127
2-Chlorophenol	50.0	34.5		ug/L		69	10 - 150
4-Chlorophenyl phenyl ether	50.0	47.1		ug/L		94	36 - 131
Dibenzofuran	50.0	45.2		ug/L		90	35 - 127
3,3'-Dichlorobenzidine	50.0	49.9		ug/L		100	46 - 143
2,4-Dichlorophenol	50.0	36.5		ug/L		73	10 - 150
Diethyl phthalate	50.0	48.6		ug/L		97	31 - 136
2,4-Dimethylphenol	50.0	31.5		ug/L		63	10 - 150
Dimethyl phthalate	50.0	47.8		ug/L		96	34 - 134
Di-n-butyl phthalate	50.0	50.1		ug/L		100	42 - 140
4,6-Dinitro-ortho-cresol	100	107		ug/L		107	10 - 150
2,4-Dinitrophenol	100	77.0		ug/L		77	10 - 150
2,4-Dinitrotoluene	50.0	49.9		ug/L		100	36 - 138
2,6-Dinitrotoluene	50.0	50.2		ug/L		100	41 - 137
Di-n-octyl phthalate	50.0	58.4		ug/L		117	42 - 142
1,4-Dioxane	50.0	19.2		ug/L		38	10 - 110
1,2-Diphenylhydrazine (as Azobenzene)	50.0	46.3		ug/L		93	38 - 142
Hexachlorobenzene	50.0	50.3		ug/L		101	36 - 140
Hexachlorocyclopentadiene	50.0	26.8		ug/L		54	17 - 128
Hexachloroethane	50.0	30.3		ug/L		61	23 - 120
Indene	50.0	32.0		ug/L		64	30 - 118
Isophorone	50.0	33.1		ug/L		66	39 - 120
2-Methylphenol	50.0	33.3		ug/L		67	10 - 133
3 & 4 Methylphenol	50.0	32.4		ug/L		65	10 - 135
2-Nitroaniline	50.0	43.1		ug/L		86	35 - 147
3-Nitroaniline	50.0	47.6		ug/L		95	36 - 128
4-Nitroaniline	50.0	50.9		ug/L		102	38 - 139
Nitrobenzene	50.0	31.4		ug/L		63	10 - 150
2-Nitrophenol	50.0	35.7		ug/L		71	10 - 150
4-Nitrophenol	100	50.8		ug/L		51	10 - 110
N-Nitrosodimethylamine	50.0	19.9		ug/L		40	10 - 110
N-Nitrosodi-n-propylamine	50.0	33.6		ug/L		67	32 - 136
N-Nitrosodiphenylamine	42.5	50.7		ug/L		119	44 - 123
Pentachlorophenol	100	76.4		ug/L		76	10 - 150
Phenol	50.0	22.5		ug/L		45	10 - 110
Pyridine	50.0	14.1		ug/L		28	10 - 110
2,4,5-Trichlorophenol	50.0	42.7		ug/L		85	10 - 150
2,4,6-Trichlorophenol	50.0	41.8		ug/L		84	10 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorophenol	*45*		*10 - 120*
Nitrobenzene-d5	*56*		*27 - 120*
Phenol-d5	*35*		*10 - 120*
Terphenyl-d14	*89*		*13 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-549362/2-A
Matrix: Water
Analysis Batch: 550858

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549362

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol	*75*		*10 - 120*

Lab Sample ID: LCS 490-549362/7-A
Matrix: Water
Analysis Batch: 550858

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549362

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dibenz[a,h]acridine	50.0	62.1		ug/L		124	10 - 150
Quinoline	50.0	37.8		ug/L		76	10 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorophenol	*84*		*10 - 120*
Nitrobenzene-d5	*79*		*27 - 120*
Phenol-d5	*60*		*10 - 120*
Terphenyl-d14	*126*	*X*	*13 - 120*
2,4,6-Tribromophenol	*111*		*10 - 120*

Lab Sample ID: LCSD 490-549362/3-A
Matrix: Water
Analysis Batch: 550858

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 549362

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aniline	50.0	35.7		ug/L		71	17 - 108	36	50
Benzoic acid	50.0	ND	*	ug/L		16	10 - 110	55	50
Benzyl alcohol	50.0	40.1	J	ug/L		80	21 - 120	34	50
Bis(2-chloroethoxy)methane	50.0	47.8		ug/L		96	35 - 127	32	50
Bis(2-chloroethyl)ether	50.0	45.8		ug/L		92	27 - 132	35	50
bis (2-chloroisopropyl) ether	50.0	40.8		ug/L		82	24 - 136	35	50
Bis(2-ethylhexyl) phthalate	50.0	62.7		ug/L		125	41 - 147	8	47
4-Bromophenyl phenyl ether	50.0	52.6		ug/L		105	36 - 135	10	50
Butyl benzyl phthalate	50.0	56.6		ug/L		113	34 - 146	7	50
4-Chloroaniline	50.0	46.6		ug/L		93	27 - 131	28	34
4-Chloro-3-methylphenol	50.0	49.9		ug/L		100	10 - 150	22	50
2-Chloronaphthalene	50.0	50.3		ug/L		101	32 - 127	26	50
2-Chlorophenol	50.0	49.6		ug/L		99	10 - 150	36	49
4-Chlorophenyl phenyl ether	50.0	54.5		ug/L		109	36 - 131	15	50
Dibenzofuran	50.0	52.8		ug/L		106	35 - 127	16	50
3,3'-Dichlorobenzidine	50.0	50.0		ug/L		100	46 - 143	0	50
2,4-Dichlorophenol	50.0	50.8		ug/L		102	10 - 150	33	50
Diethyl phthalate	50.0	52.4		ug/L		105	31 - 136	8	50
2,4-Dimethylphenol	50.0	42.4		ug/L		85	10 - 150	30	50
Dimethyl phthalate	50.0	52.1		ug/L		104	34 - 134	9	50
Di-n-butyl phthalate	50.0	55.2		ug/L		110	42 - 140	10	50
4,6-Dinitro-ortho-cresol	100	114		ug/L		114	10 - 150	6	50
2,4-Dinitrophenol	100	82.5		ug/L		82	10 - 150	7	50
2,4-Dinitrotoluene	50.0	53.6		ug/L		107	36 - 138	7	50
2,6-Dinitrotoluene	50.0	54.2		ug/L		108	41 - 137	8	50
Di-n-octyl phthalate	50.0	63.7		ug/L		127	42 - 142	9	49

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 490-549362/3-A
Matrix: Water
Analysis Batch: 550858

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 549362

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	50.0	28.5	*	ug/L		57	10 - 110	39	33
1,2-Diphenylhydrazine (as Azobenzene)	50.0	50.9		ug/L		102	38 - 142	10	50
Hexachlorobenzene	50.0	54.4		ug/L		109	36 - 140	8	50
Hexachlorocyclopentadiene	50.0	39.2		ug/L		78	17 - 128	38	50
Hexachloroethane	50.0	42.0		ug/L		84	23 - 120	32	50
Indene	50.0	46.0		ug/L		92	30 - 118	36	50
Isophorone	50.0	45.2		ug/L		90	39 - 120	31	50
2-Methylphenol	50.0	46.8		ug/L		94	10 - 133	34	45
3 & 4 Methylphenol	50.0	45.2		ug/L		90	10 - 135	33	46
2-Nitroaniline	50.0	48.5		ug/L		97	35 - 147	12	50
3-Nitroaniline	50.0	51.2		ug/L		102	36 - 128	7	27
4-Nitroaniline	50.0	53.8		ug/L		108	38 - 139	6	42
Nitrobenzene	50.0	44.0		ug/L		88	10 - 150	33	50
2-Nitrophenol	50.0	48.9		ug/L		98	10 - 150	31	50
4-Nitrophenol	100	55.9		ug/L		56	10 - 110	10	40
N-Nitrosodimethylamine	50.0	28.2		ug/L		56	10 - 110	35	38
N-Nitrosodi-n-propylamine	50.0	47.4		ug/L		95	32 - 136	34	50
N-Nitrosodiphenylamine	42.5	54.4	*	ug/L		128	44 - 123	7	50
Pentachlorophenol	100	81.5		ug/L		81	10 - 150	6	50
Phenol	50.0	31.3		ug/L		63	10 - 110	33	36
Pyridine	50.0	19.1		ug/L		38	10 - 110	30	50
2,4,5-Trichlorophenol	50.0	52.4		ug/L		105	10 - 150	20	50
2,4,6-Trichlorophenol	50.0	51.9		ug/L		104	10 - 150	22	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorophenol	*66*		*10 - 120*
Nitrobenzene-d5	*77*		*27 - 120*
Phenol-d5	*51*		*10 - 120*
Terphenyl-d14	*97*		*13 - 120*
2,4,6-Tribromophenol	*84*		*10 - 120*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 490-549784/1-A
Matrix: Water
Analysis Batch: 552604

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549784

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.10	0.020	ug/L		10/13/18 09:44	10/25/18 10:20	1
Acenaphthylene	ND		0.10	0.030	ug/L		10/13/18 09:44	10/25/18 10:20	1
Anthracene	ND		0.10	0.030	ug/L		10/13/18 09:44	10/25/18 10:20	1
Benzo[a]anthracene	ND		0.10	0.020	ug/L		10/13/18 09:44	10/25/18 10:20	1
Benzo[a]pyrene	ND		0.10	0.020	ug/L		10/13/18 09:44	10/25/18 10:20	1
Benzo[b]fluoranthene	ND		0.10	0.020	ug/L		10/13/18 09:44	10/25/18 10:20	1
Benzo[g,h,i]perylene	ND		0.10	0.020	ug/L		10/13/18 09:44	10/25/18 10:20	1
Benzo[k]fluoranthene	ND		0.10	0.020	ug/L		10/13/18 09:44	10/25/18 10:20	1
Chrysene	ND		0.10	0.020	ug/L		10/13/18 09:44	10/25/18 10:20	1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: MB 490-549784/1-A
Matrix: Water
Analysis Batch: 552604

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549784

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	ND		0.10	0.020	ug/L		10/13/18 09:44	10/25/18 10:20	1
Fluoranthene	ND		0.10	0.030	ug/L		10/13/18 09:44	10/25/18 10:20	1
Fluorene	ND		0.10	0.020	ug/L		10/13/18 09:44	10/25/18 10:20	1
Indeno[1,2,3-cd]pyrene	ND		0.10	0.020	ug/L		10/13/18 09:44	10/25/18 10:20	1
1-Methylnaphthalene	ND		0.10	0.020	ug/L		10/13/18 09:44	10/25/18 10:20	1
2-Methylnaphthalene	ND		0.10	0.030	ug/L		10/13/18 09:44	10/25/18 10:20	1
Phenanthrene	ND		0.10	0.030	ug/L		10/13/18 09:44	10/25/18 10:20	1
Pyrene	ND		0.10	0.020	ug/L		10/13/18 09:44	10/25/18 10:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*63*		*27 - 120*	*10/13/18 09:44*	*10/25/18 10:20*	*1*
Terphenyl-d14	*74*		*13 - 120*	*10/13/18 09:44*	*10/25/18 10:20*	*1*

Lab Sample ID: LCS 490-549784/2-A
Matrix: Water
Analysis Batch: 552604

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549784

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	2.00	1.24		ug/L		62	46 - 120
Acenaphthylene	2.00	1.30		ug/L		65	48 - 120
Anthracene	2.00	1.38		ug/L		69	58 - 130
Benzo[a]anthracene	2.00	1.44		ug/L		72	57 - 120
Benzo[a]pyrene	2.00	1.75		ug/L		88	57 - 124
Benzo[b]fluoranthene	2.00	1.58		ug/L		79	51 - 125
Benzo[g,h,i]perylene	2.00	1.44		ug/L		72	51 - 123
Benzo[k]fluoranthene	2.00	1.58		ug/L		79	51 - 120
Chrysene	2.00	1.34		ug/L		67	55 - 120
Dibenz(a,h)anthracene	2.00	1.55		ug/L		78	50 - 125
Fluoranthene	2.00	1.33		ug/L		66	56 - 120
Fluorene	2.00	1.30		ug/L		65	52 - 120
Indeno[1,2,3-cd]pyrene	2.00	1.61		ug/L		80	54 - 125
1-Methylnaphthalene	2.00	1.24		ug/L		62	36 - 120
2-Methylnaphthalene	2.00	1.26		ug/L		63	31 - 120
Phenanthrene	2.00	1.38		ug/L		69	56 - 120
Pyrene	2.00	1.41		ug/L		71	53 - 129

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5	*65*		*27 - 120*
Terphenyl-d14	*72*		*13 - 120*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 490-549329/3-A
Matrix: Water
Analysis Batch: 549199

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549329

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.10	0.028	ug/L		10/11/18 14:51	10/11/18 21:01	1
1,2-Dibromoethane	ND		0.020	0.0060	ug/L		10/11/18 14:51	10/11/18 21:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*129*		*50 - 150*	*10/11/18 14:51*	*10/11/18 21:01*	*1*

Lab Sample ID: LCS 490-549329/4-A
Matrix: Water
Analysis Batch: 549199

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549329

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	0.286	0.288		ug/L		101	70 - 130
1,2-Dibromoethane	0.286	0.308		ug/L		108	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,3-Dichlorobenzene	*119*		*50 - 150*

Lab Sample ID: LCSD 490-549329/5-A
Matrix: Water
Analysis Batch: 549199

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 549329

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane	0.286	0.288		ug/L		101	70 - 130	0	34
1,2-Dibromoethane	0.286	0.301		ug/L		105	70 - 130	2	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,3-Dichlorobenzene	*121*		*50 - 150*

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

490-160957 Chain of Custody

COOLER RECEIPT FORM

Cooler Received/Opened On 10/11/2018 @ 1015

Time Samples Removed From Cooler 1324 Time Samples Placed In Storage 1337 (2 Hour Window)

1. Tracking # 9224 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 31470368 pH Strip Lot NA Chlorine Strip Lot NA

2. Temperature of rep. sample or temp blank when opened: 3.1 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 (Front) 1 (Back)

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) 2.2

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

● ⬅ Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) GH

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) GH

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) GH

I certify that I attached a label with the unique LIMS number to each container (intial) GH

21. Were there Non-Conformance Issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8/23/17

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

Loc: 490
160957

COOLER RECEIPT FORM

Cooler Received/Opened On 10/11/2018 @ 10:15 1337

Time Samples Removed From Cooler 1324 Time Samples Placed In Storage _____ (2 Hour Window)

1. Tracking # 8718 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 17960357 pH Strip Lot NA Chlorine Strip Lot NA

2. Temperature of rep. sample or temp blank when opened: 1.1 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...(NA)

4. Were custody seals on outside of cooler? (YES)..NO...NA

If yes, how many and where: 1 Front / 1 Back

5. Were the seals intact, signed, and dated correctly? (YES)..NO...NA

6. Were custody papers inside cooler? (YES)...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) GH

7. Were custody seals on containers: YES (NO) and Intact YES...NO...(NA)

Were these signed and dated correctly? YES...NO...(NA)

8. Packing mat'l used? (Bubblewrap) Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)..NO...NA

12. Did all container labels and tags agree with custody papers? (YES)..NO...NA

13a. Were VOA vials received? YES...(NO)..NA

b. Was there any observable headspace present in any VOA vial? YES...NO...(NA)

 Larger than this.

14. Was there a Trip Blank in this cooler? YES...(NO)..NA If multiple coolers, sequence # _____

I certify that I unloaded the cooler and answered questions 7-14 (intial) GH

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...(NA)

b. Did the bottle labels indicate that the correct preservatives were used (YES)...NO...NA

16. Was residual chlorine present? YES...NO...(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) GH

17. Were custody papers properly filled out (ink, signed, etc)? (YES)..NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)..NO...NA

19. Were correct containers used for the analysis requested? (YES)..NO...NA

20. Was sufficient amount of sample sent in each container? (YES)..NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) GH

I certify that I attached a label with the unique LIMS number to each container (intial) GH

21. Were there Non-Conformance issues at login? YES...(NO) Was a NCM generated? YES...(NO)...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8/23/17

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

Loc: 490
160957
#1
B

COOLER RECEIPT FORM

Cooler Received/Opened On 10/11/2018 @ 1015

Time Samples Removed From Cooler 1324 Time Samples Placed In Storage 1337 (2 Hour Window)

1. Tracking # 8642 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 31470368 pH Strip Lot NA Chlorine Strip Lot NA

2. Temperature of rep. sample or temp blank when opened: 1.5 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO (NA)

4. Were custody seals on outside of cooler? (YES)...NO...NA

If yes, how many and where: 1 (Front)

5. Were the seals intact, signed, and dated correctly? (YES)...NO...NA

6. Were custody papers inside cooler? (YES)...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) 2.2

7. Were custody seals on containers: YES (NO) and Intact YES...NO...(NA)

Were these signed and dated correctly? YES...NO...(NA)

8. Packing mat'l used? (Bubblewrap) Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)...NO...NA

12. Did all container labels and tags agree with custody papers? (YES)...NO...NA

13a. Were VOA vials received? YES...(NO)...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...(NA)

● ⬅ Larger than this.

14. Was there a Trip Blank in this cooler? YES...(NO)...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) GH

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...(NA)

b. Did the bottle labels indicate that the correct preservatives were used (YES)...NO...NA

16. Was residual chlorine present? YES...NO...(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) GH

17. Were custody papers properly filled out (ink, signed, etc)? (YES)...NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)...NO...NA

19. Were correct containers used for the analysis requested? (YES)...NO...NA

20. Was sufficient amount of sample sent in each container? (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) GH

I certify that I attached a label with the unique LIMS number to each container (intial) GH

21. Were there Non-Conformance issues at login? YES.(NO) Was a NCM generated? YES.(NO).#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8/23/17

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

Loc: 490
160957
#2
B

COOLER RECEIPT FORM

Cooler Received/Opened On 10/11/2018 @ 10:15

Time Samples Removed From Cooler 1324 Time Samples Placed In Storage 1337 (2 Hour Window)

1. Tracking # 9202 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 31470366 pH Strip Lot NA Chlorine Strip Lot NA

2. Temperature of rep. sample or temp blank when opened: 1.1 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...(NA)

4. Were custody seals on outside of cooler? (YES)...NO...NA

If yes, how many and where: 1 front 1 back

5. Were the seals intact, signed, and dated correctly? (YES)..NO...NA

6. Were custody papers inside cooler? (YES)...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) _____

7. Were custody seals on containers: YES (NO) and Intact YES...NO...(NA)

Were these signed and dated correctly? YES...NO...(NA)

8. Packing mat'l used? (Bubblewrap) Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)...NO...NA

12. Did all container labels and tags agree with custody papers? (YES)...NO...NA

13a. Were VOA vials received? YES...(NO)...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...(NA)

● ⬅ Larger than this.

14. Was there a Trip Blank in this cooler? YES...(NO)...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) GH

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...(NA)

b. Did the bottle labels indicate that the correct preservatives were used (YES)...NO...NA

16. Was residual chlorine present? YES...NO...(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) GH

17. Were custody papers properly filled out (ink, signed, etc)? (YES)...NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)...NO...NA

19. Were correct containers used for the analysis requested? (YES)...NO...NA

20. Was sufficient amount of sample sent in each container? (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) GH

I certify that I attached a label with the unique LIMS number to each container (intial) GH

21. Were there Non-Conformance Issues at login? YES...(NO) Was a NCM generated? YES...(NO)...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8/23/17

Shell Oil Products US Chain Of Custody Record

AECOM

LAB (LOCATION)

- ☐ ACCUTEST (_____)
- ☐ CALSCIENCE (_____)
- ☑ TESTAMERICA (2960, FOSTER CREIGHTON DR. NASHVILLE, TN 37204)
- ☐ OTHER (_____)

Please Check Appropriate Box:

☐ SGW FDG	☐ PIPELINE	☐ RETAIL
☐ CHEMICALS	☐ CONSULTANT	☐ LUBES
☐ TRANSPORTATION	☑ OTHER _ENV. SERVICES	

Print Bill To Contact Name: Bob Billman

PO #: 60527968 - 01.03.004 | 60527968 - 01.03.0044

PlaNet Site or Project ID: 25278

GSAP Project ID: USPC/00114/R/02

☐ CHECK IF NO INCIDENT APPLIES

DATE: 10/10/18

PAGE: 1 of 1

SAMPLING COMPANY: AECOM

LOG CODE:

SITE ADDRESS: Street and City: 900 South Central Ave; ROXANA

State: IL

AECOM Project / Task Number: Roxana Quarterly GW 60527968 - 01.03.004 60527968 - 01.03.0044

ADDRESS: 100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA

EDF DELIVERABLE TO (Name, Company, Office Location):

PHONE NO.:

E-MAIL:

AECOM Dept ID:

PROJECT CONTACT (Hardcopy or PDF Report to): Elizabeth Kunkel, Bob Billman, Melissa Remiger

SAMPLER NAME(S) (Print): B. Howell M. Kamik

LAB USE ONLY

TELEPHONE: 314-429-0100

FAX: 314-429-0462

Bill To Contact E-MAIL: bob.billman@aecom.com; elizabeth.kunkel@aecom.com; melissa.remiger@aecom.com

TURNAROUND TIME (CALENDAR DAYS):

☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAY ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - SWOCB REPORT FORMAT

DELIVERABLES: ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) _EDD_____

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
* Please include "J" values on Reports
* Please provide sample receipt upon login

- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ EDD NOT NEEDED
- ☑ RECEIPT VERIFICATION REQUESTED
- ☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

NON-UNIT COST 60527968 - 01.03.004: VOC 8260; SVOC 8270

UNIT COST 60527968 - 01.03.0044: VOC 8011; PAH 8270LL

Loc: 490
160957

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

Container PID Readings or Laboratory Notes

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VOC 8260	SVOC 8270	VOC 8011	PAH 8270LL
	TB-ROX-101018-8011	10/10/18	0000	Water	2					2			✓	
	TB-ROX-101018-8260		0000		2					2	✓			
	MW1-ROX-101018-MK		0905		4			2		6	✓	✓	✓	✓
	MW12-ROX-101018-FB		1000		4			2		6	✓	✓	✓	✓
	MW12-ROX-101018-MK		1040		4			2		6	✓	✓	✓	✓
	MW10-ROX-101018		1200		4			2		6	✓	✓	✓	✓
	MW9-ROX-101018		1256		4			2		6	✓	✓	✓	✓
				M. Kamik										

Relinquished by: (Signature) Megan Kamp	Received by: (Signature) Fedex: 7908 8375 9202; 7908 8375 9224; 7908 8437 8692; 7908 8437 8718	Date: 10/10/18	Time: 1500
Relinquished by: (Signature)	Received by: (Signature) TA-NAS / 3.1°C / 1.1°C / 1.5°C / 1.1°C	Date: 10-11-18	Time: 1015
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Version: 14Dec15

Custody Seals: 572486, 572487, 572488, 572489, 572490, 572491, 572492, 572493

Accreditation/Certification Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY

TestAmerica Job ID: 490-160957-1

Laboratory: TestAmerica Nashville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	ISO/IEC 17025		0453.07	12-31-19
Alaska (UST)	State Program	10	UST-087	06-30-19
Arizona	State Program	9	AZ0473	05-05-19
Arkansas DEQ	State Program	6	88-0737	04-25-19
California	State Program	9	2938	10-31-18 *
Connecticut	State Program	1	PH-0220	12-31-19
Florida	NELAP	4	E87358	06-30-19
Georgia	State Program	4	NA: NELAP & A2LA	12-31-19
Illinois	NELAP	5	200010	12-09-18
Iowa	State Program	7	131	04-01-20
Kansas	NELAP	7	E-10229	10-31-18 *
Kentucky (UST)	State Program	4	19	06-30-19
Kentucky (WW)	State Program	4	90038	12-31-18
Louisiana	NELAP	6	30613	06-30-19
Maine	State Program	1	TN00032	11-03-19
Maryland	State Program	3	316	03-31-19
Massachusetts	State Program	1	M-TN032	06-30-19
Minnesota	NELAP	5	047-999-345	12-31-18
Mississippi	State Program	4	N/A	06-30-19
Montana (UST)	State Program	8	NA	02-24-20
Nevada	State Program	9	TN00032	07-31-19
New Hampshire	NELAP	1	2963	10-09-18 *
New Jersey	NELAP	2	TN965	06-30-19
New York	NELAP	2	11342	03-31-19
North Carolina (WW/SW)	State Program	4	387	12-31-18
North Dakota	State Program	8	R-146	06-30-19
Ohio VAP	State Program	5	CL0033	07-06-19
Oklahoma	State Program	6	9412	08-31-19
Oregon	NELAP	10	TN200001	04-26-19
Pennsylvania	NELAP	3	68-00585	07-31-19
Rhode Island	State Program	1	LAO00268	12-30-18
South Carolina	State Program	4	84009 (001)	02-28-19
Tennessee	State Program	4	2008	02-23-20
Texas	NELAP	6	T104704077	08-31-19
USDA	Federal		P330-13-00306	12-01-19
Utah	NELAP	8	TN00032	07-31-19
Virginia	NELAP	3	460152	06-14-19
Washington	State Program	10	C789	07-19-19
West Virginia DEP	State Program	3	219	02-28-19
Wisconsin	State Program	5	998020430	08-31-19
Wyoming (UST)	A2LA	8	453.07	12-31-19

Laboratory: TestAmerica Pensacola

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	200041	10-09-19

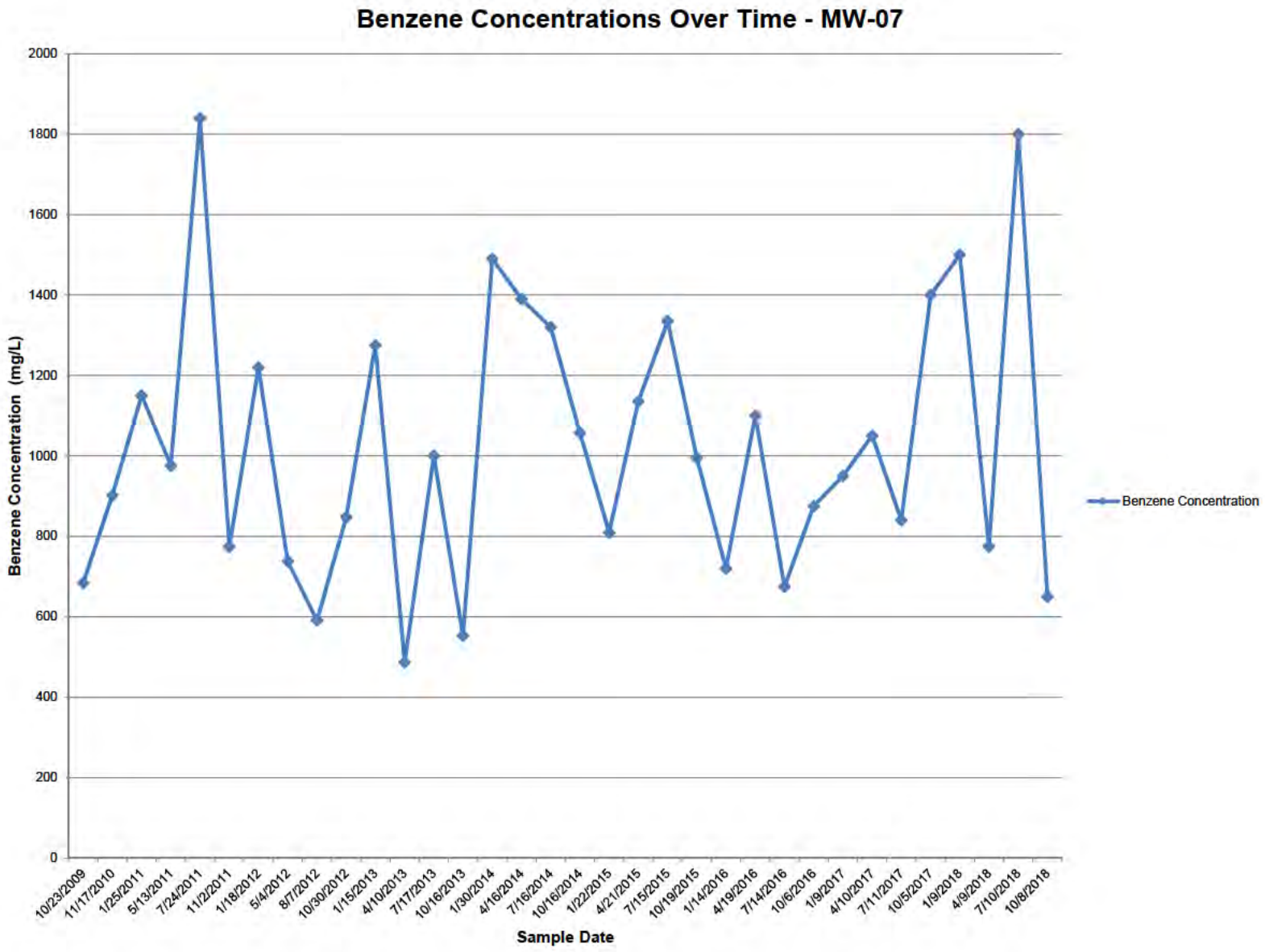
* Accreditation/Certification renewal pending - accreditation/certification considered valid.

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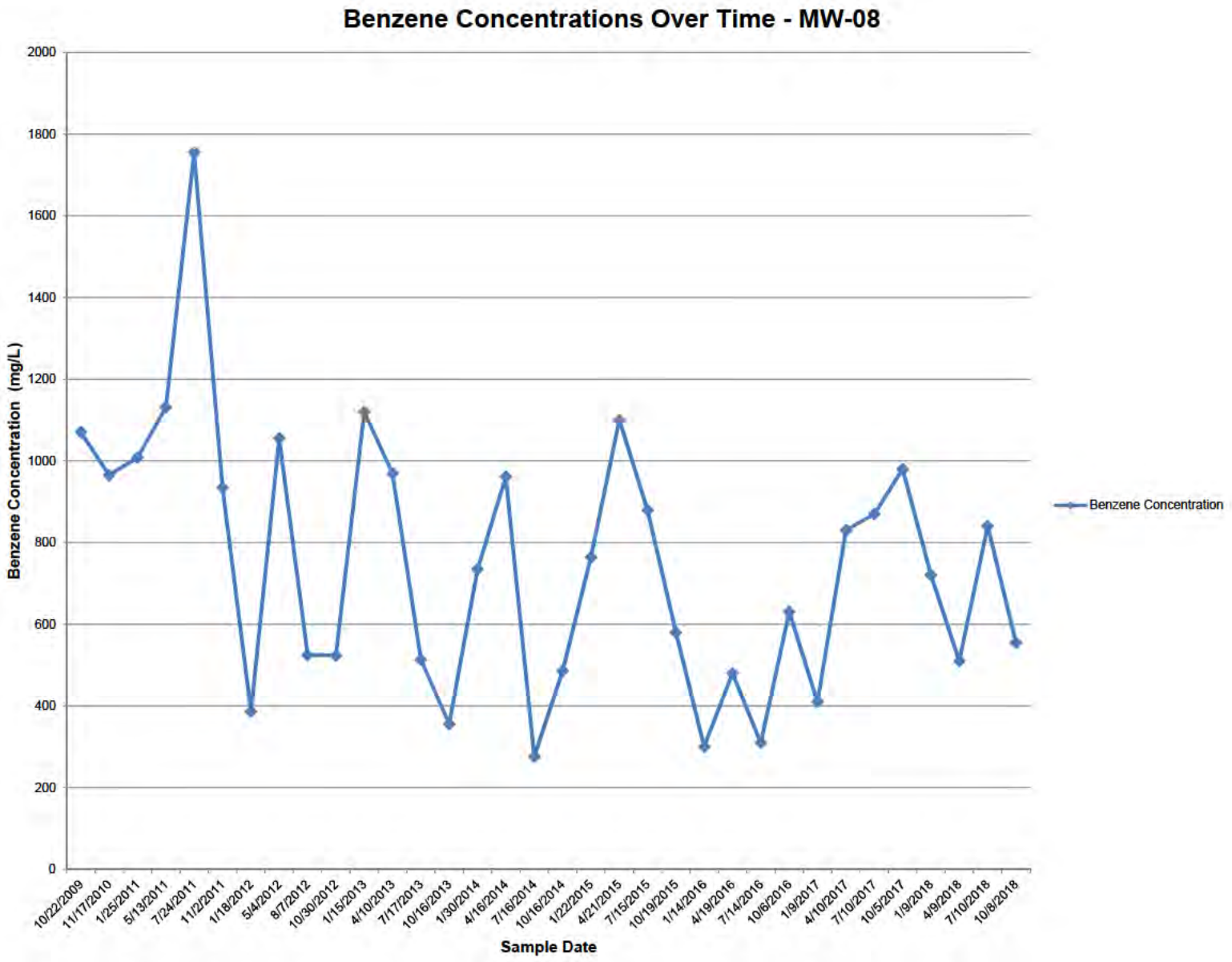
Appendix C

Charts – Benzene Concentrations Over Time – MW-7, MW-8, MW-22, MW-25, P-57, P-59, ROST-4-PZ(C), T-12

Table C1 - Historical Benzene Analytical Data for Select Groundwater Monitoring Wells

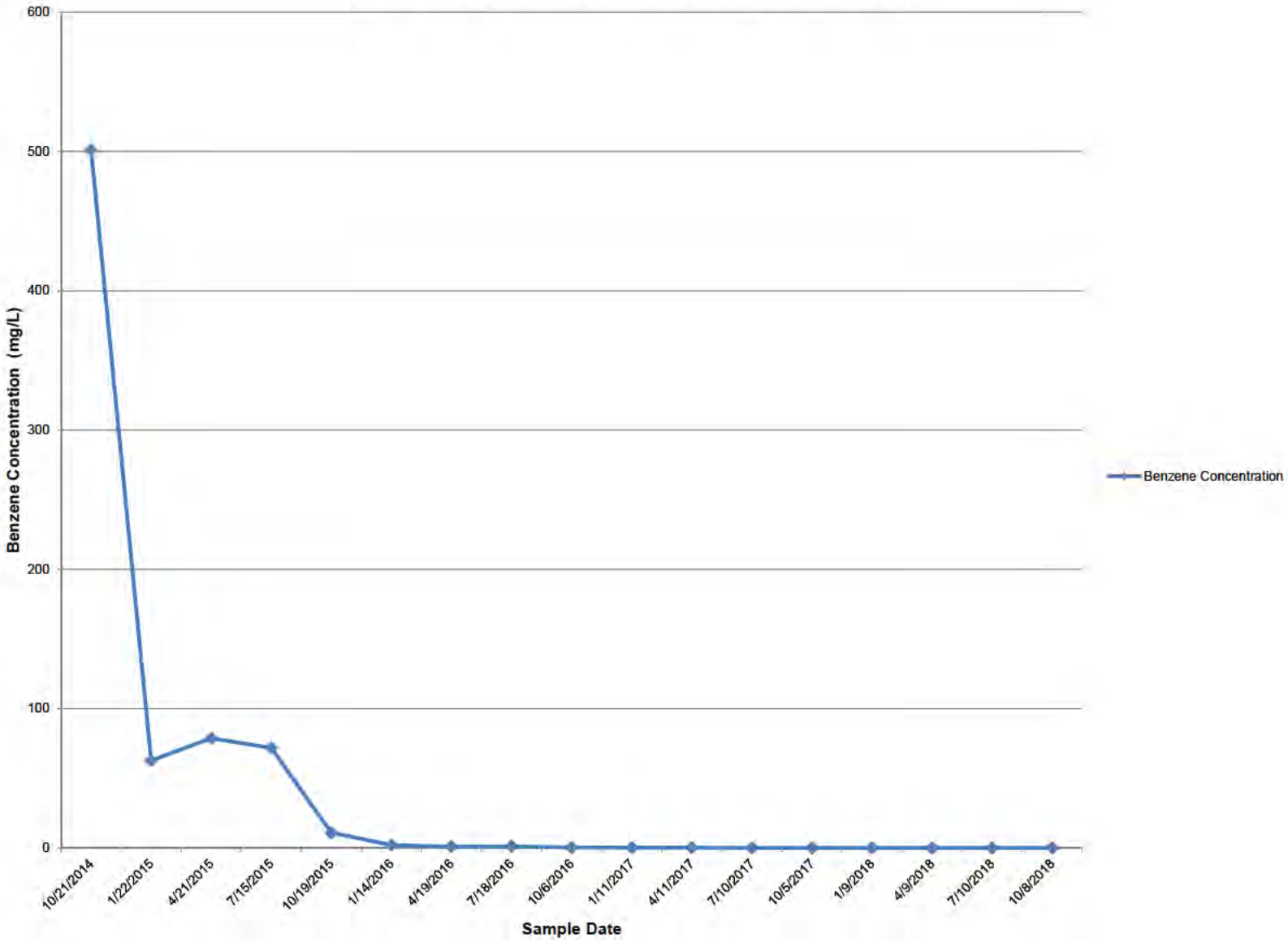


Notes:
mg/L = milligrams per liter
Duplicate values were averaged.
Timeframe specific to available data.



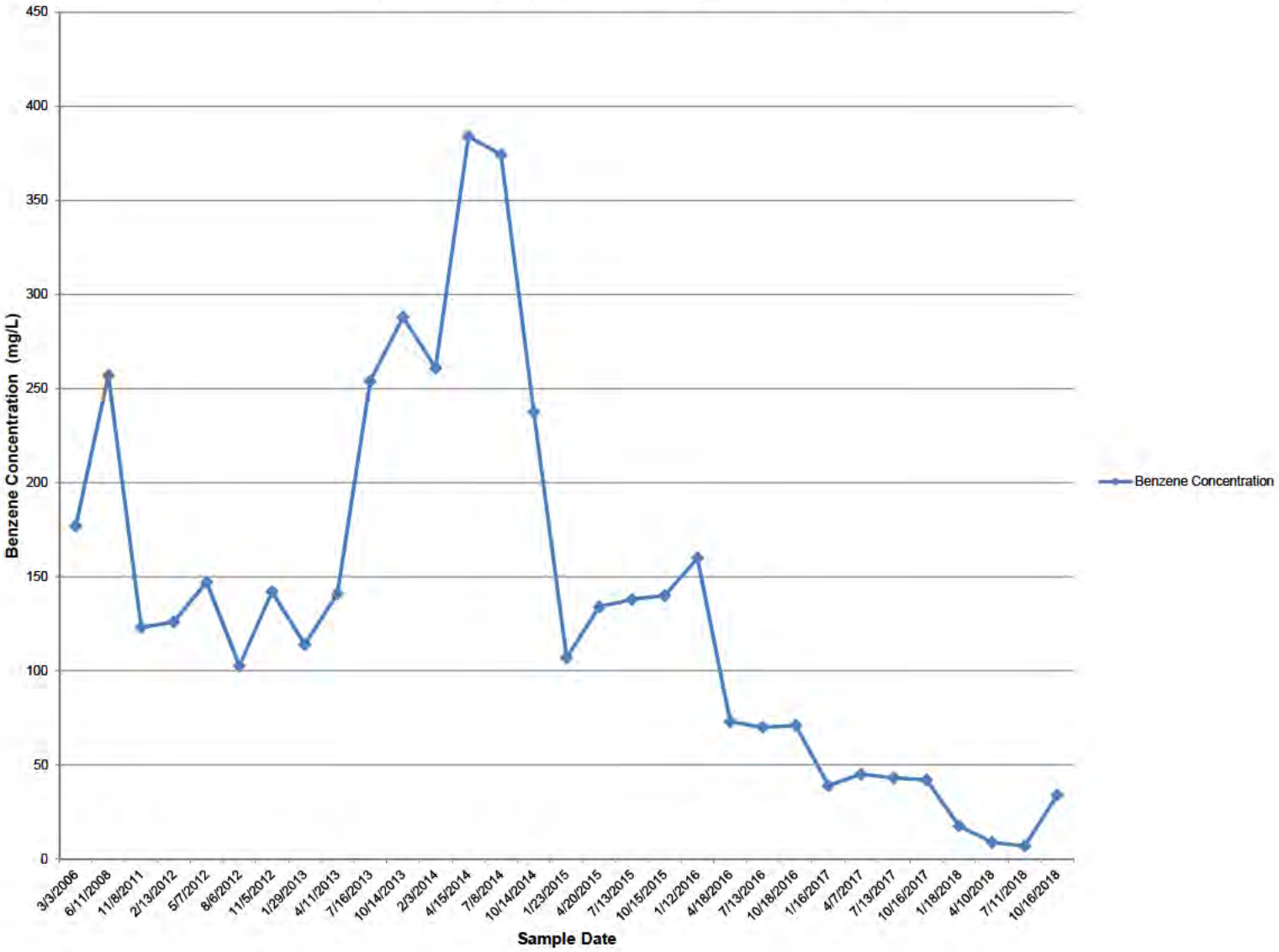
Notes:
mg/L = milligrams per liter
Duplicate values were averaged.
Timeframe specific to available data.

Benzene Concentrations Over Time - MW-25



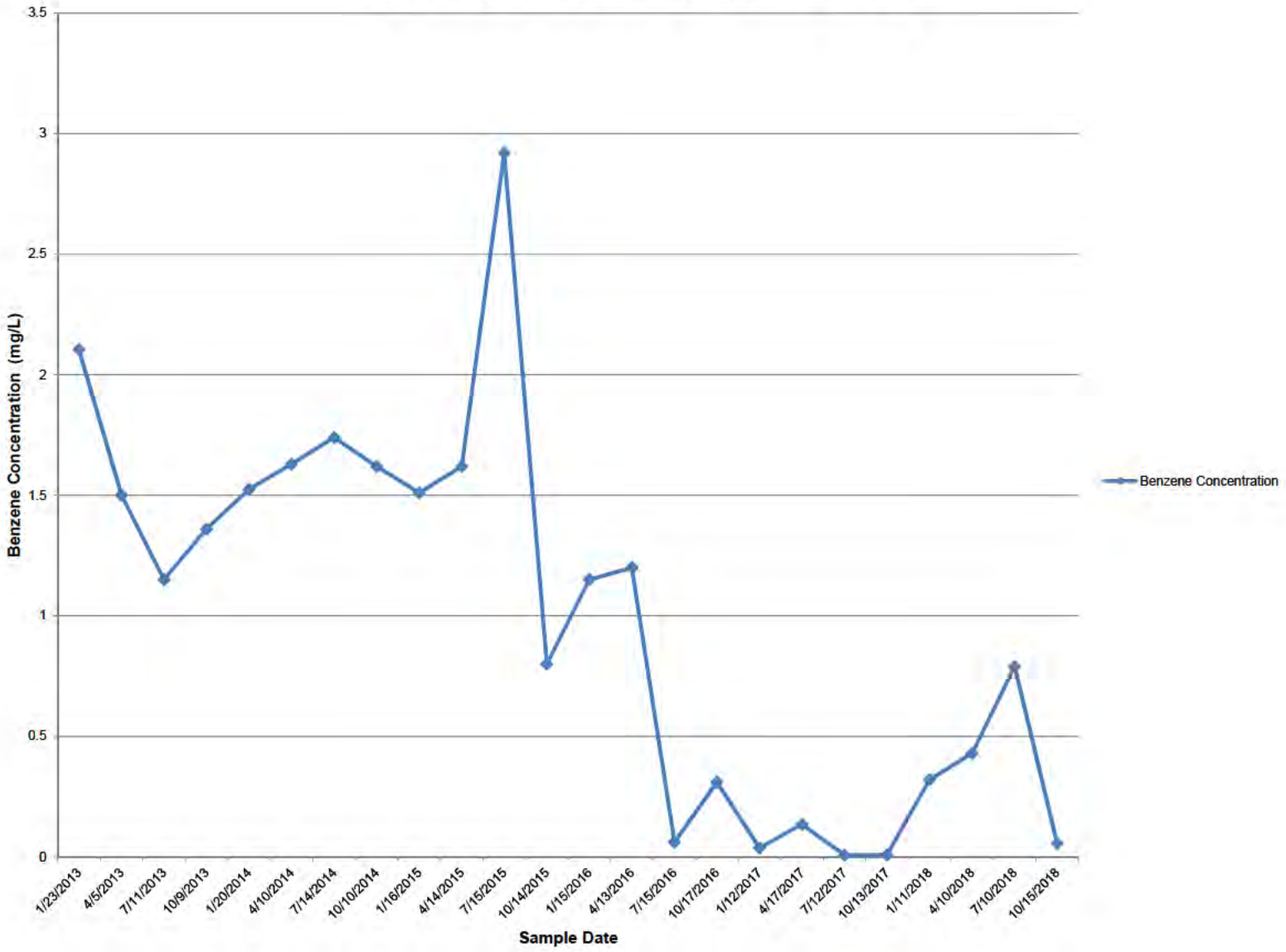
Notes:
mg/L = milligrams per liter
Timeframe specific to available data.

Benzene Concentrations Over Time - P-57



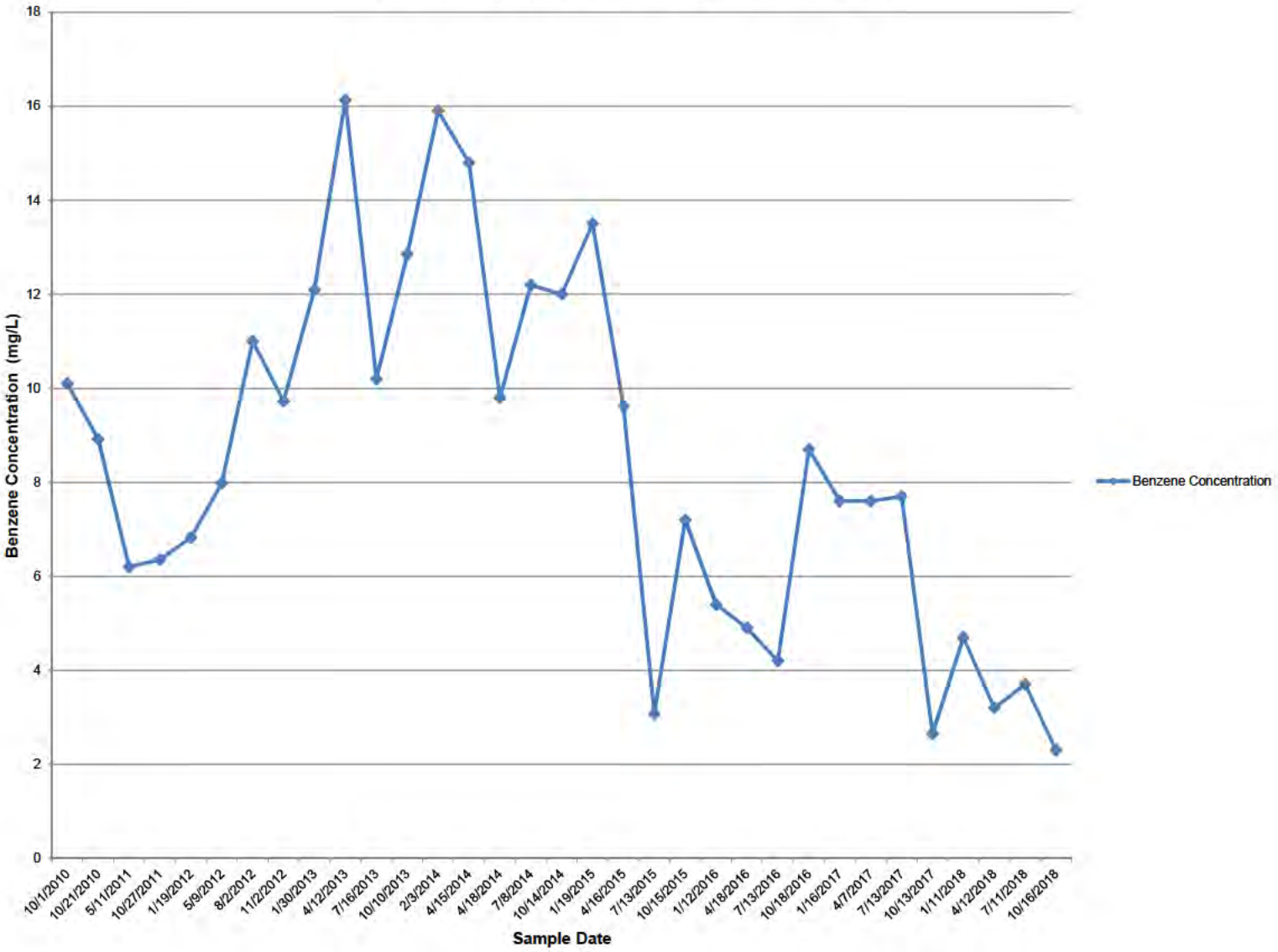
Notes:
mg/L = milligrams per liter
Duplicate values were averaged.
Timeframe specific to available data.

Benzene Concentrations Over Time - MW-22

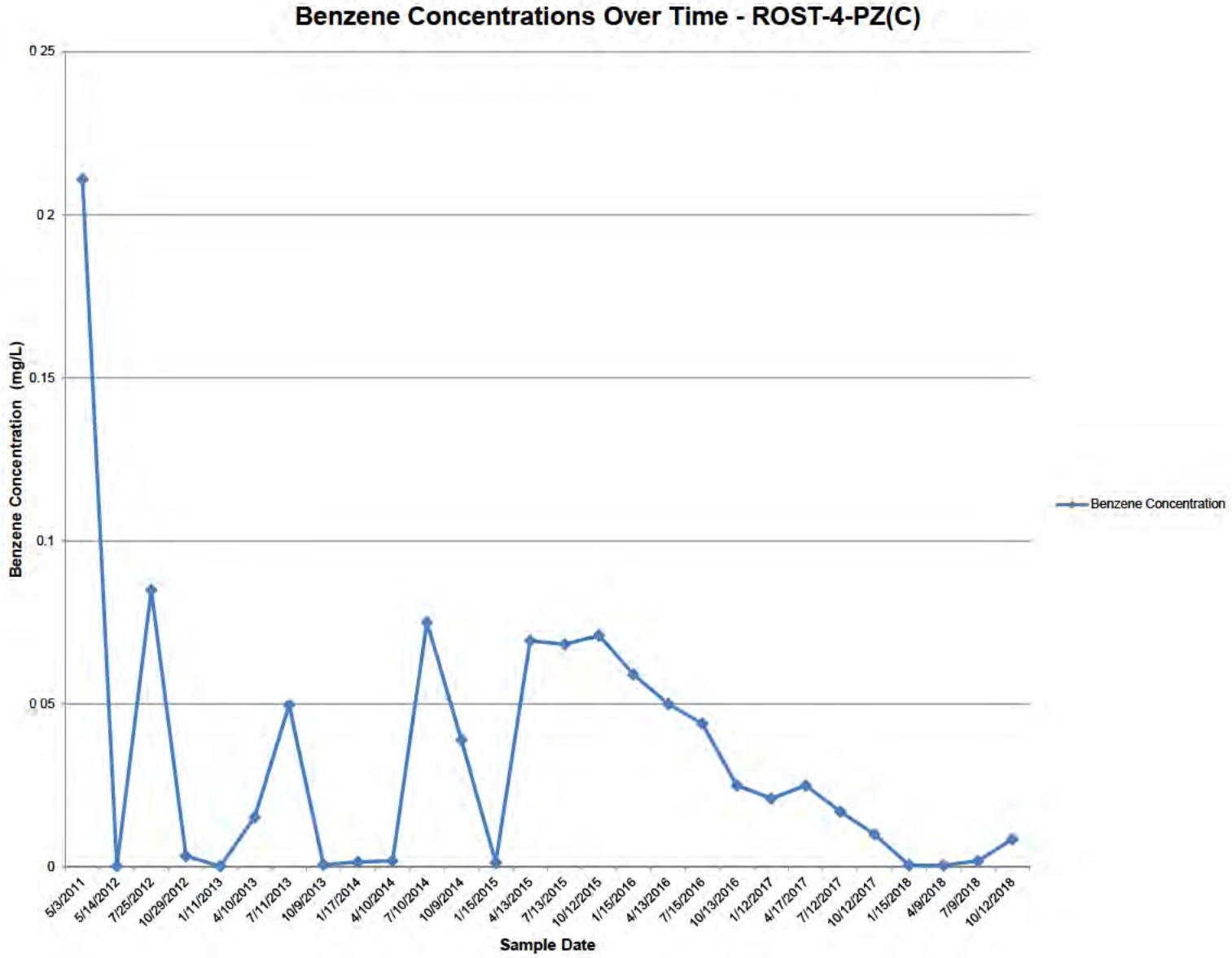


Notes:
mg/L = milligrams per liter
Duplicate values were averaged.
Timeframe specific to available data.

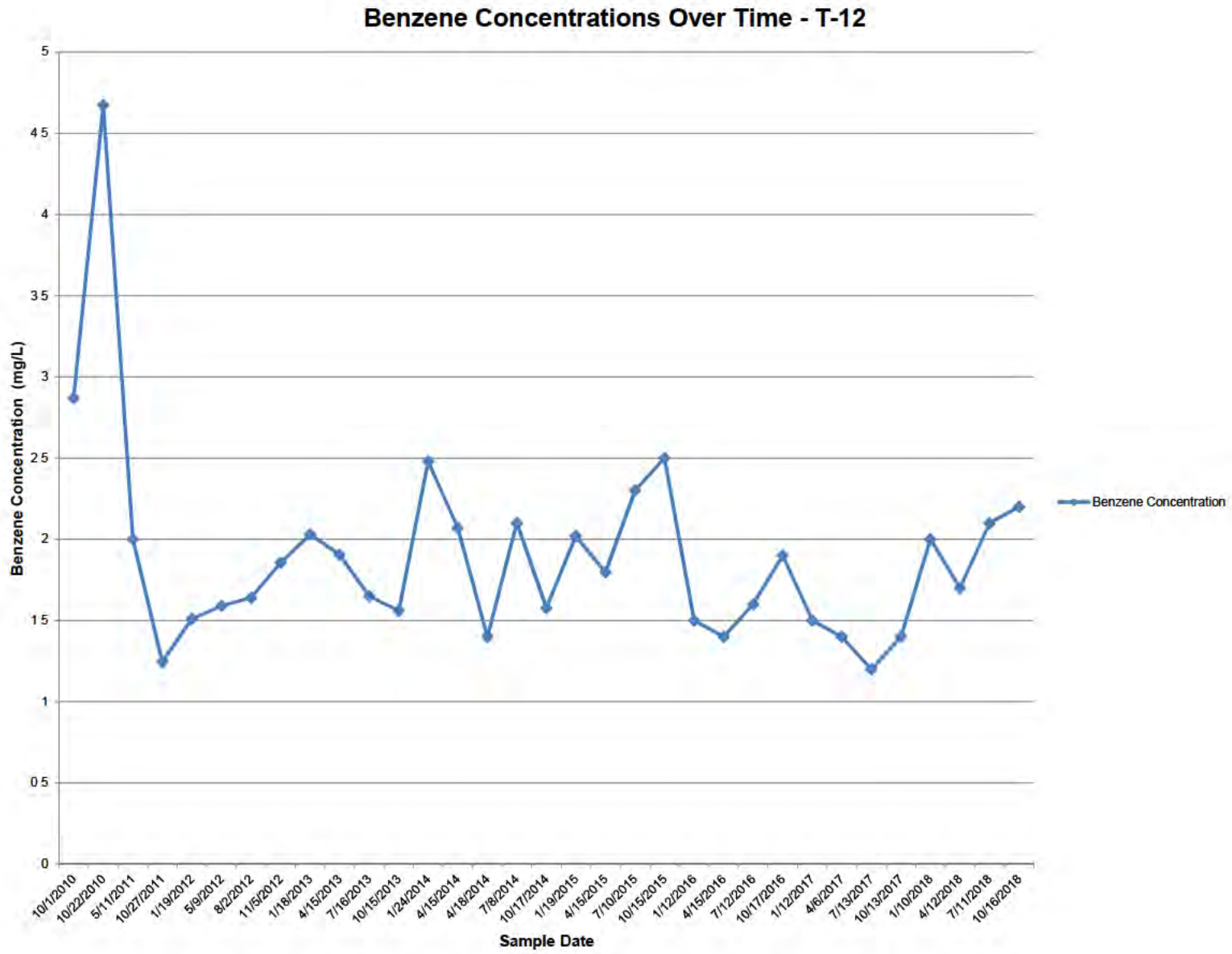
Benzene Concentrations Over Time - P-59



Notes:
mg/L = milligrams per liter
Duplicate values were averaged.
Timeframe specific to available data.



Notes:
mg/L = milligrams per liter
Timeframe specific to available data.
Non-detect values are shown at half the reporting limit.



Notes:
mg/L = milligrams per liter
Duplicate values were averaged.
Timeframe specific to available data.

TABLE C-1
HISTORICAL BENZENE ANALYTICAL DATA FOR SELECT GROUNDWATER MONITORING WELLS

Location	Sample Date	Result (ug/L)
MW-07	10/23/2009	684
	11/17/2010	876
	11/17/2010	928
	1/25/2011	1,150
	5/13/2011	1,030
	5/13/2011	922
	7/24/2011	1,840
	11/2/2011	774
	1/18/2012	1,330
	1/18/2012	1,110
	5/4/2012	738
	8/7/2012	591
	10/30/2012	863
	10/30/2012	833
	1/15/2013	1,320
	1/15/2013	1,230
	4/10/2013	499
	4/10/2013	475
	7/17/2013	1,000
	10/16/2013	553
	1/30/2014	1,490
	4/16/2014	1,390
	7/16/2014	1,270
	7/16/2014	1,370
	10/16/2014	1,130
	10/16/2014	984
	1/22/2015	799
	1/22/2015	821
	4/21/2015	1,110
	4/21/2015	1,160
	7/15/2015	1,370
	7/15/2015	1,300
	10/19/2015	1,000
	10/19/2015	990
	1/14/2016	740
	1/14/2016	700
	4/19/2016	1,100
	4/19/2016	1,100
	7/14/2016	670
	7/14/2016	680
	10/6/2016	910
	10/6/2016	840
	1/9/2017	950
	4/10/2017	1,000
	4/10/2017	1,100
	7/11/2017	870
	7/11/2017	810
	10/5/2017	1,400
	1/9/2018	1,500
	4/9/2018	770
	4/9/2018	780
	7/10/2018	1,900
	7/10/2018	1,700
	10/8/2018	650

TABLE C-1
HISTORICAL BENZENE ANALYTICAL DATA FOR SELECT GROUNDWATER MONITORING WELLS

Location	Sample Date	Result (ug/L)
MW-08	10/22/2009	1,010
	10/22/2009	1,130
	11/17/2010	965
	1/25/2011	1,030
	1/25/2011	986
	5/13/2011	1,310
	5/13/2011	952
	7/24/2011	1,650
	7/24/2011	1,860
	11/2/2011	934
	1/18/2012	386
	5/4/2012	1,070
	5/4/2012	1,040
	8/7/2012	653
	8/7/2012	397
	10/30/2012	523
	1/15/2013	1,120
	4/10/2013	969
	7/17/2013	494
	7/17/2013	532
	10/16/2013	360
	10/16/2013	351
	1/30/2014	748
	1/30/2014	721
	4/16/2014	862
	4/16/2014	1,060
	7/16/2014	276
	10/16/2014	486
	1/22/2015	764
	4/21/2015	1,100
	7/15/2015	879
	10/19/2015	580
	1/14/2016	300
	4/19/2016	480
	7/14/2016	310
	10/6/2016	630
	1/9/2017	410
	4/10/2017	830
	7/10/2017	870
	10/5/2017	970
	10/5/2017	990
	1/9/2018	720
	4/9/2018	510
	7/10/2018	840
	10/8/2018	550
	10/8/2018	560

TABLE C-1
HISTORICAL BENZENE ANALYTICAL DATA FOR SELECT GROUNDWATER MONITORING WELLS

Location	Sample Date	Result (ug/L)
MW-22	1/23/2013	2.12
	1/23/2013	2.09
	4/5/2013	1.5
	7/11/2013	1.11
	7/11/2013	1.19
	10/9/2013	1.33
	10/9/2013	1.39
	1/20/2014	1.47
	1/20/2014	1.58
	4/10/2014	1.56
	4/10/2014	1.7
	7/14/2014	1.74
	10/10/2014	1.62
	1/16/2015	1.51
	4/14/2015	1.62
	7/15/2015	2.92
	10/14/2015	0.8
	1/15/2016	1.1
	1/15/2016	1.2
	4/13/2016	1.2
	4/13/2016	1.2
	7/15/2016	0.062
	7/15/2016	0.061
	10/17/2016	0.31
	10/17/2016	0.31
	1/12/2017	0.036
	1/12/2017	0.039
	4/17/2017	0.14
	4/17/2017	0.13
	7/12/2017	0.0068
	7/12/2017	0.0079
	10/13/2017	0.0089
	10/13/2017	0.0086
	1/11/2018	0.32
	1/11/2018	0.32
	4/10/2018	0.43
	7/10/2018	0.79
	10/15/2018	0.056

TABLE C-1
HISTORICAL BENZENE ANALYTICAL DATA FOR SELECT GROUNDWATER MONITORING WELLS

Location	Sample Date	Result (ug/L)
MW-25	10/21/2014	501
	1/22/2015	62.8
	4/21/2015	78.7
	7/15/2015	71.9
	10/19/2015	11
	1/14/2016	2.2
	4/19/2016	0.99
	7/18/2016	1.2
	10/6/2016	0.37
	1/11/2017	0.28
	4/11/2017	0.19
	7/10/2017	0.056
	10/5/2017	0.065
	1/9/2018	0.028
	4/9/2018	0.02
	7/10/2018	0.005
	10/8/2018	0.0071
P-57	3/3/2006	177
	6/11/2008	257
	11/8/2011	123
	2/13/2012	126
	5/7/2012	147
	8/6/2012	106
	8/6/2012	99.4
	11/5/2012	142
	1/29/2013	114
	4/11/2013	141
	7/16/2013	254
	10/14/2013	288
	2/3/2014	261
	4/15/2014	384
	7/8/2014	371
	7/8/2014	378
	10/14/2014	220
	10/14/2014	255
	1/23/2015	107
	4/20/2015	134
	7/13/2015	138
	10/15/2015	140
	1/12/2016	160
	4/18/2016	73
	7/13/2016	70
	10/18/2016	71
	1/16/2017	39
	4/7/2017	45
	7/13/2017	43
	10/16/2017	42
	1/18/2018	15
	1/18/2018	20
	4/10/2018	8.8
	7/11/2018	5
	7/11/2018	8.8
	10/16/2018	34
	10/16/2018	34

TABLE C-1
HISTORICAL BENZENE ANALYTICAL DATA FOR SELECT GROUNDWATER MONITORING WELLS

Location	Sample Date	Result (ug/L)
P-59	10/1/2010	10.1
	10/21/2010	8.637
	10/21/2010	9.201
	5/11/2011	6.2
	10/27/2011	6.01
	10/27/2011	6.7
	1/19/2012	7.04
	1/19/2012	6.61
	5/9/2012	8.1
	5/9/2012	7.86
	8/2/2012	11
	11/2/2012	9.8
	11/2/2012	8.3
	11/2/2012	10.3
	11/2/2012	10.5
	1/30/2013	12.1
	4/12/2013	20
	4/12/2013	13.4
	4/12/2013	15
	7/16/2013	10.2
	10/10/2013	11
	10/10/2013	14.7
	2/3/2014	15.9
	4/15/2014	14.8
	4/18/2014	9.8
	7/8/2014	12.2
	10/14/2014	12
	10/14/2014	12
	1/19/2015	13.5
	4/16/2015	9.8
	4/16/2015	9.43
	7/13/2015	3.08
	10/15/2015	7.2
	1/12/2016	5.4
	4/18/2016	4.9
	7/13/2016	4.2
	10/18/2016	8.7
	1/16/2017	7.6
	4/7/2017	7.6
	7/13/2017	7.7
	10/13/2017	2.7
	10/13/2017	2.6
	1/11/2018	4.7
	4/12/2018	3.2
	7/11/2018	3.7
	10/16/2018	2.3

TABLE C-1
HISTORICAL BENZENE ANALYTICAL DATA FOR SELECT GROUNDWATER MONITORING WELLS

Location	Sample Date	Result (ug/L)
ROST-4-PZ(C)	5/3/2011	0.211
	5/14/2012	ND (<0.0005)
	7/25/2012	0.0849
	10/29/2012	0.0033
	1/11/2013	ND (<0.0005)
	4/10/2013	0.0153
	7/11/2013	0.0497
	10/9/2013	0.00066
	1/17/2014	0.0015
	4/10/2014	0.0019
	7/10/2014	0.0751
	10/9/2014	0.039
	1/15/2015	0.0013
	4/13/2015	0.0694
	7/13/2015	0.0683
	10/12/2015	0.071
	1/15/2016	0.059
	4/13/2016	0.05
	7/15/2016	0.044
	10/13/2016	0.025
	1/12/2017	0.021
	4/17/2017	0.025
	7/12/2017	0.017
	10/12/2017	0.01
	1/15/2018	0.00054
	4/9/2018	ND (<0.001)
	7/9/2018	0.0018
	10/12/2018	0.0085

TABLE C-1
HISTORICAL BENZENE ANALYTICAL DATA FOR SELECT GROUNDWATER MONITORING WELLS

Location	Sample Date	Result (ug/L)
T-12	10/1/2010	2.87
	10/22/2010	4.674
	5/11/2011	2
	10/27/2011	1.09
	10/27/2011	1.4
	1/19/2012	1.51
	5/9/2012	1.7
	5/9/2012	1.48
	8/2/2012	1.64
	11/5/2012	2
	11/5/2012	2
	11/5/2012	1.71
	1/18/2013	2.03
	4/15/2013	2.2
	4/15/2013	2.2
	4/15/2013	1.61
	7/16/2013	1.65
	10/15/2013	1.1
	10/15/2013	2.02
	1/24/2014	2.48
	4/15/2014	2.07
	4/18/2014	1.4
	7/8/2014	2.1
	10/17/2014	1.5
	10/17/2014	1.4
	10/17/2014	1.83
	1/19/2015	2.02
	4/15/2015	2
	4/15/2015	1.7
	4/15/2015	1.69
	7/10/2015	2.3
	10/15/2015	2.5
	1/12/2016	1.5
	4/15/2016	1.4
	7/12/2016	1.6
	10/17/2016	1.7
	10/17/2016	2.1
	1/12/2017	1.5
	4/6/2017	1.4
	7/13/2017	1.2
	10/13/2017	1.4
	1/10/2018	2
	4/12/2018	1.7
	7/11/2018	2.1
	10/16/2018	2.2

Notes
mg/L = milligrams per liter
ND = non-detect
Dates specific to available data.

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