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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)

1 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)

Original copy submitted to Springfield. Electronic copies submitted separately directly to Collinsville FOS (Ali Al-Janabi) and Amy Butler.

AECOM

1st Quarter 2023 Report

Roxana Interim Groundwater Monitoring Program

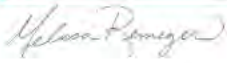
Prepared for:
Equilon Enterprises LLC dba Shell Oil Products US
Roxana, Illinois

Project number: 60697537

April 2023

Delivering a better world

Quality information

Prepared by	Prepared by	Checked by	Verified by	Approved by
				
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Revision History

Revision	Revision date	Details	Authorized	Name	Position

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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 (Shell) for the 1st Quarter 2023 (1Q23) groundwater monitoring well gauging and sampling conducted in the Village of Roxana, Illinois (**Figure 1**). The Interim Groundwater Monitoring Program (Program) was established based on direction from Illinois Environmental Protection Agency (IEPA) dated August 5, 2010 (IEPA, 2010a), 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."

The bulleted list below summarizes current regulatory-related correspondence between AECOM, on behalf of Shell, and the IEPA during this reporting period (January 2023 through March 2023); prior regulatory-related correspondence which has not yet been addressed by IEPA can be found in **Appendix A**.

- On October 12, 2022, AECOM, on behalf of Shell, requested the due date for the 4th Quarter 2022 (4Q22) Report for the Roxana Interim Groundwater Monitoring Program be pushed back approximately two weeks to January 30, 2023 from January 15, 2023. The modified due date was proposed to allow for a two-week delayed start to sampling during the 4Q22 groundwater event to avoid simultaneous operations at the WRR. The 4Q22 Roxana Interim Groundwater Monitoring Report hardcopy was mailed to IEPA on January 27, 2023, and was submitted electronically on January 30, 2023.

- On January 30, 2023, AECOM, on behalf of Shell, submitted Additional Information to Log No. B-43R-CA-109 (PWY SEE – Response to 8/22/22 Letter & FDRCWP) (AECOM, 2023) in response to questions and specific requests by IEPA during a virtual discussion on January 5, 2023, to help facilitate IEPA review and respond to the Roxana Public Works Yard (PWY) Steam Enhanced Extraction (SEE) – Final Design Report and Construction Work Plan (FDRCWP) (AECOM, 2022d). The PWY SEE FDRCWP was submitted to IEPA by AECOM, on behalf of Shell, on December 16, 2022 to satisfy Phase II of the Corrective Measures Program (CMP) and respond to conditions in IEPA's August 22, 2022 letter. The IEPA August 22, 2022 letter approved, with conditions, the PWY SEE Workplan, which was submitted to IEPA by AECOM, on behalf of Shell, on January 31, 2022. A meeting on September 21, 2022 was held with AECOM, Shell, McMillan-McGee and IEPA to discuss comments pertaining to IEPA's August 22, 2022 letter, including additional PWY sampling.

- On January 30, 2023, AECOM, on behalf of Shell, also submitted the Application for Water Pollution Control Permit to IEPA for the PWY SEE system. This was submitted after receipt of IEPA's July 11, 2022 contained-in concurrence letter. On March 2, 2022, AECOM, on behalf of Shell, submitted the Contained-In Determination Request Form to IEPA that was inadvertently left out of the Contained-In Determination submitted February 21, 2022. The February 21, 2022 Contained-In Determination stated groundwater generated during operation of the proposed SEE system is expected to no longer contain hazardous waste after treatment.

Groundwater samples were collected and analyzed during 1Q23 to meet the requirements of the Interim Groundwater Monitoring Program, as specified in the guidance presented in **Appendix A**. **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) described in **Section 1**, and as modified based on other correspondence described in **Appendix A**. Groundwater samples and gauging data were collected using the most current AECOM standard operating procedures (SOPs) for the project.

2.1 Health & Safety

The quarterly sampling activities were performed in general accordance with the project-specific Health and Safety Plan (HASP), dated February 2, 2022 (AECOM, 2022c).

In addition to HASP guidance, quarterly activities were performed in accordance with federal, state, AECOM, and site-specific COVID-19 procedures, following safe working precautions and social distancing recommendations.

2.2 Additional Activities or Modifications

The following additional work activities were conducted during 1Q23:

- Depth to bottom measurements were collected from the groundwater monitoring wells in the Interim Groundwater Monitoring Program and compared to corresponding well construction information. Although depth to bottom measurements in wells P-81C, P-81D, and P83D were above redevelopment criteria in the SOP (10% screen occlusion for sampled wells, and 75% screen occlusion for gauged-only wells), the measurement discrepancies were consistent with Well Wizard® groundwater sampling pump (Well Wizard®) screen lengths, indicating the Well Wizard® screens were sitting at the bottom of the wells and were not occluded; no well redevelopment was required.
- Well MW-8 was abandoned on January 10, 2023 after 1Q23 quarterly sampling in accordance with Public Health Water Well Construction Code for Abandonment of Wells (77 IAC 920, Section 120) by Roberts Environmental Drilling, Inc. (REDI), as specified in the Water Well Sealing Form in **Appendix B**. Abandonment of MW-8 was approved with conditions in the August 22, 2022 IEPA letter (IEPA 2022) in response to the PWY SEE Work Plan (AECOM 2022a); installation of MW-8A and MW-8B is planned as part of the post-SEE system activities.

2.3 Groundwater Monitoring Well Gauging and Sampling

Groundwater Monitoring Well Gauging

The comprehensive quarterly groundwater monitoring well gauging event was conducted between January 3rd and 4th, 2023. The gauging activities were conducted in conjunction with the 1Q23 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 recorded. Quarterly groundwater monitoring well gauging results can be found in **Table 1**. The groundwater gauging data table also includes well-head PID (photoionization detector) results.

Low-Flow Groundwater Purging and Sampling

Groundwater samples were collected from groundwater monitoring wells between January 5th and January 13th, 2023. Groundwater samples were collected using the most current low-flow groundwater purging and sampling related SOPs, which have previously been provided to IEPA. Data are included in this report and discussed in **Section 3**.

Groundwater monitoring wells MW-1 through MW-14; MW-16; MW-22 through MW-28; P-54; P-56; P-57; P-59; P-74; P-93A, B, and C; 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 stainless-steel submersible pump (pump), low-flow controller, and designated[1] polyethylene tubing.

Groundwater monitoring well P-93D was purged and sampled using a dedicated stainless-steel QED Environmental Systems (QED) Well Wizard® groundwater sampling pump and dedicated bonded polyethylene tubing.

For both sampling methods pumping was performed at a low flow rate (≤ 300 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 after every flow-through cell volume. Once stabilization was achieved or a maximum purge time of two hours was reached, 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, P-58, P-66, 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 C**.

2.4 Decontamination and Investigation-Derived Waste

Decontamination

Field personnel and equipment underwent decontamination procedures in accordance with project SOPs previously provided to IEPA 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 using the most current decontamination SOPs.

Investigation-Derived Waste

Investigation-derived waste (IDW), such as purge water and decontamination fluid generated during groundwater sampling activities, was collected, staged, 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 are managed as hazardous waste based on prior characterization in conjunction with generator knowledge, and decontamination fluid and purge water from other groundwater monitoring wells in the Village are managed as non-hazardous waste based on prior characterization in conjunction with generator knowledge; both hazardous and non-hazardous waste were 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).

2.5 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 D**.

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

[1] All designated tubing is stored in a sealed bag designated for a particular groundwater monitoring well between sampling events; designated tubing used with stainless steel submers ble pumps is replaced annually prior to the first quarter sampling event.

then delivered via overnight courier, under the proper COC documentation, to Eurofins Environment Testing America Southeast, LLC (EETA Southeast) in Pensacola, Florida for analysis.

Samples were analyzed by EETA Southeast 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.

2.6 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 and ten percent of the data were further subjected to Level 4 data validation. Evaluation of the data followed procedures outlined in the USEPA National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2020). Data qualifiers were also added by AECOM, as appropriate, and are included on **Table 3**, and in the laboratory results in **Appendix D**. 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.

3 Groundwater Sampling Results

This section presents the results of the 1Q23 groundwater gauging and sampling event.

3.1 Groundwater Monitoring Well Gauging Results

The comprehensive quarterly groundwater monitoring well gauging for the 1Q23 event was conducted between January 3rd and January 4th, 2023. 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 fallen approximately 0.75 feet since the 4Q22 gauging event. Groundwater levels in most wells in the central and eastern portions of the WRR have fallen approximately 0.5 feet since the 4Q22 gauging event. Water levels are above the top of the screens in the majority of the wells gauged during the 1Q23 event. The potentiometric surface observed during the 1Q23 groundwater monitoring well gauging (**Figures 3a** and **3b**) illustrates an inward gradient with groundwater flow toward the WRR groundwater production wells.

During the 1Q23 quarterly groundwater monitoring well gauging event, LNAPL was detected in four Interim Groundwater Monitoring Program groundwater monitoring wells (P-55R, P-58, P-66, and P-68) (**Table 1**). These monitoring wells are located in the WRR. In these wells, LNAPL thicknesses ranged from 0.01 to 1.52 feet. Measured LNAPL thickness and the number of locations where it was observed during the 1Q23 quarterly gauging events was generally comparable to that observed in 4Q22.

The Illinois Emergency Management Agency (IEMA) was notified on November 22, 2020 of a release of gasoline from a Buckeye Partners (Wood River Pipeline, LLC) pipeline located to the south of well P-58 along the WRR West Fenceline, and to the north of well P-66 on WRR Main Property as indicated on **Figures 2, 3b, 4a,** and **5**. The release is associated with IEPA Violation Notice L-2021-00084, LPC #1190905036 – Madison County. Groundwater monitoring wells P-58 and P-66 have yielded some anomalous observations/detections since the reported release; LNAPL has recently been detected in P-66 since 2Q22, however LNAPL was previously last detected in P-66 during 4Q12. These wells will be gauged, and sampled in the absence of LNAPL, during the quarterly Roxana Interim Groundwater Monitoring program.

During the 1Q23 quarterly groundwater gauging event, LNAPL was not observed in groundwater monitoring wells located in the Village (**Table 1**). **Figures 4a** and **4b** illustrate the measured LNAPL thickness observed along the West Fenceline and inside the refinery, respectively, during the 1Q23 gauging event.

During 1Q23, LNAPL was observed in groundwater monitoring well P-66 located on WRR property at a thickness greater than 0.10 feet and was removed using bailers[2]. The recovered LNAPL was placed in a metal drum and will be sent for reuse of in accordance with RCRA, Illinois and United States Department of Transportation (DOT) regulations.

3.2 Data Quality Review Results

A total of 8 sample delivery groups (SDGs) were prepared and sent to EETA Southeast for the 1Q23 event. Fifty-one different groundwater sample sets were prepared and analyzed for VOCs and SVOCs (including PAHs). The 51 samples included 40 different investigative sample sets, five field duplicate sets, and three matrix spike/matrix spike duplicate (MS/MSD) sets. SDGs for 1Q23 are presented in **Appendix D**.

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 13 TB sets were analyzed for groundwater VOCs. Laboratory method blanks were analyzed with every analytical batch.

[2] LNAPL > 0.10 feet is a project specific criterion for removal, based on practicality with the removal technique.

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.

- Due to anomalous Method 8270_LL PAH results, the laboratory re-analyzed and/or re-extracted and analyzed for PAHs in eleven (11) investigative samples (MW1-ROX-011323, MW3-ROX-011123, MW6C-ROX-011123, MW6D-ROX-011123, MW24-ROX-011223, P59-ROX-011123-DUP, P93A-ROX-010523, P93D-ROX-010523, P114R-ROX-010623, and field duplicate pair MW6B-ROX-011123/MW6B-ROX-011123-Dup). The extraction holding time was exceeded for the re-extracted samples; however, the results from these analyses were consistent with historical data. Based on professional judgement the results from the re-analysis were used for the purposes of this report, however both original and confirmation results can be found on **Table 3**.

- Due to Method 8270_LL PAH and/or Method 8270 SVOCs results outside historical range, EETA Southeast investigated established laboratory procedure and identified possible sources of latent laboratory contamination. In response to this discovery, EETA Southeast will implement supplemental protocols to monitor newly deemed sources of contamination to allow for preventative action prior to the analysis of samples.

- With regard to 1Q23 quarterly groundwater data, the laboratory issued a Corrective Action Report (CAR) stating that through confirmation analyses, many previous detections were not confirmed and were therefore deemed laboratory contamination. Applicable laboratory reports were revised to correct the reporting of detect and non-detect data.

Analytical results qualified by AECOM are specified in the data reviews presented in **Appendix D**.

3.3 Analytical Results and Discussion

Table 2 presents cumulative information on groundwater sampling field parameters for Main Sand aquifer wells. These results are consistent with those observed in the 4Q22 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)(1) of the Permit for the WRB Refining LP Wood River Refinery[3]. 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) (IEPA, 2018). 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**.

Using data from confirmation analyses, samples from 10 groundwater monitoring wells in the Interim Groundwater Monitoring Program (six in the Village, four in the WRR along the West Fenceline) exhibited exceedances of the groundwater screening criteria for one or more of the following constituents:

- Benzene
- 1,2,4-Trimethylbenzene
- Benzo(a)anthracene
- Hexachlorobenzene
- 2-Methylnaphthalene
- Phenol

Figure 5 presents concentrations of analytes that exceeded the indicated screening criteria for 1Q23. These findings are generally consistent with the results from previous sampling events.

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

[3] IEPA requested that the Interim Groundwater Monitoring Program be consistent with the RCRA Part B Permit.

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 E-1 contains benzene concentration trend plots for selected monitoring wells[4] 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

Beginning in 2Q21, a Mann-Kendall analysis of the analytical benzene results from the eight sampled groundwater wells in the 4th Street and Public Works Yard areas was conducted. The Mann-Kendall analysis was performed using GWSDAT (GroundWater Spatio-Temporal Data Analysis Tool). As of 1Q23, statistically significant downward trends were displayed for seven wells, no wells displayed statistically significant increasing trends, and the remaining well displayed a trend that is not statistically significant[5]. Results from the Mann-Kendall analysis conducted via GWSDAT are presented in **Appendix E-2**.

[4] In a meeting with IEPA on April 5, 2018, the AECOM presentation included benzene concentration trend plots pertinent to GMZ discussion. IEPA verbally requested that benzene concentration trend plots for selected monitoring wells be incorporated into Roxana Program quarterly reports.
[5] Results are significant if p value is equal to or below 0.05.

4 Summary and Conclusions

AECOM conducted the 1Q23 Interim Groundwater Monitoring Program, and the following conclusions are based on the data and information collected as part of this program:

- During 1Q23, 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 fallen approximately 0.75 feet since the 4Q22 gauging event. Groundwater levels in most wells in the central and eastern portion of the WRR have fallen approximately 0.5 feet since the 4Q22 gauging event.
- Measured LNAPL thickness and the number of locations where it was observed during the 1Q23 quarterly gauging events was generally comparable to that observed in 4Q22. LNAPL has recently been detected in P-66 since 2Q22, however, LNAPL was previously last detected in P-66 during 4Q12. WRB/P66 notified IEMA on November 22, 2020 of a release of gasoline from a Buckeye Partners (Wood River Pipeline, LLC) pipeline located to the south of well P-58 along the WRR West Fenceline, and to the north of well P-66 on WRR Main Property. Wells P-58 and P-66 will be gauged and sampled in the absence of LNAPL during the 2Q23 Roxana Interim Groundwater Monitoring program.
- The analytical results from 1Q23 are generally consistent with the results from previous sampling events, with the exception of initial PAH results in several samples. The laboratory issued a Corrective Action Report (CAR) stating latent laboratory contamination sources had been identified; through confirmation analyses, many previous detections were not confirmed and were therefore deemed laboratory contamination. Re-extracted and re-analyzed PAH results were generally consistent with those from previous quarters.
- Benzene concentration plots presented in **Appendix E-1** continue to show stable or decreasing trends.
- GWSDAT charts presented in **Appendix E-2** show statistically significant downward trends displayed for seven wells, no wells displayed statistically significant increasing trends, and the remaining well displayed a trend that is not statistically significant.
- The data and observations presented in this groundwater monitoring report provide further support for the conclusions and requested course of action presented in the proposed Groundwater Management Zone (GMZ) (AECOM 2016b).

4.1 Limitations

Shell 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. Shell 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 Shell 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.

5 References

AECOM, 2015 (AECOM, 2015); *Demonstration to Verify the Extent of Groundwater Contamination Has Been Delineated Roxana, Illinois.* Prepared for Shell Oil Products US (Shell), dated April 16, 2015.

AECOM, 2016 (AECOM, 2016a); *Additional Information – Groundwater Management Zone*. Prepared for Shell Oil Products US (Shell), dated January 29, 2016.

AECOM, 2016 (AECOM, 2016b); *Proposed Groundwater Management Zone*. Prepared for Shell Oil Products US (Shell), dated May 19, 2016.

AECOM, 2016 (AECOM, 2016c); *Response to IEPA Letter dated July 27, 2016 – Groundwater Conditions near East 3rd and Chaffer Streets*. Prepared for Shell Oil Products US (Shell), dated October 14, 2016.

AECOM, 2018 (AECOM, 2018a); *Response to IEPA Emails dated October 4-23, 2017 – GMZ Response to Comments*. Prepared for Shell Oil Products US (Shell), dated January 2, 2018.

AECOM, 2018 (AECOM, 2018b); *Groundwater Management Zone – Additional Information*. Prepared for Shell Oil Products US (Shell), dated September 26, 2018.

AECOM, 2020 (AECOM, 2020a); *Response to IEPA Notice of Permit Renewal Application Incompleteness*. Prepared for Shell Oil Products US (Shell) and WRB Refining LP (WRB) Wood River Refinery (WRR), dated September 4, 2020.

AECOM, 2020 (AECOM, 2020b); *Class 1* Permit Modification – Response to Condition 4.b. in Attachment A and Condition V.D.3. of the 12/20/2019 IEPA Letter with Modified Permit*. Prepared for Shell Oil Products US (Shell), dated October 12, 2020.

AECOM, 2022 (AECOM, 2022a); *Public Works Yard (PWY) Steam Enhanced Extraction (SEE) Workplan*. Prepared for Shell Oil Products US (Shell), dated January 31, 2022.

AECOM, 2022 (AECOM, 2022b); *Additional Information Supplemental to the Proposed Groundwater Management Zone*. Prepared for Shell Oil Products US (Shell), dated March 18, 2022.

AECOM, 2022 (AECOM, 2022c); *Shell GESS Health and Safety Plan: Rand Avenue, Roxana / Route 111, and WRR Investigation and Remediation*. Prepared for Shell Oil Products US (Shell), dated February 2, 2022.

AECOM, 2022 (AECOM, 2022d); *Old Public Works Yard Steam Enhanced Extraction – Response to 8/22/22 Letter and Final Design Report & Construction Work Plan*. Prepared for Shell Oil Products US (Shell), dated December 16, 2022.

AECOM, 2023 (AECOM, 2023); Additional Information to Log No. B-43R-CA-109 (PWY SEE – Response to 8/22/22 Letter & FDRCWP). Prepared for Shell Oil Products US (Shell), dated January 30, 2023.

Illinois Environmental Protection Agency, 2007 (IEPA, 2007); 35 Illinois Administrative Code 742, Tiered Approach to Corrective Action Objectives. Appendix B. *Table E – Tier 1 Groundwater Remediation Objectives for the Groundwater Component of the Groundwater Ingestion Route*. Effective February 23, 2007; accessed on March 23, 2023.

Illinois Environmental Protection Agency, 2010 (IEPA, 2010a); *Letter providing approval with comments the SOPUS 2010 Delineation Report*. Issued to Shell Oil Products US (Shell), dated August 5, 2010.

Illinois Environmental Protection Agency, 2010 (IEPA, 2010b); *Hazardous Waste Management RCRA Post-Closure Permit.* Issued to Shell Oil Products US (Shell) at the WRB Refining LP Wood River Refinery (WRB WRR), issued September 23, 2010; effective October 28, 2010; modified April 2, 2013; modified June 13, 2014; modified November

25, 2014; modified July 29, 2015; modified December 20, 2019; modified March 28, 2022; modified October 31, 2022.

Illinois Environmental Protection Agency, 2011 (IEPA, 2011a); *Corrective Action Letter for the West Fenceline*. Issued to Shell Oil Products US (Shell) and WRB Refining LP (WRB) Wood River Refinery (WRR), dated June 16, 2011.

Illinois Environmental Protection Agency, 2011 (IEPA, 2011b); *RCRA Response to Groundwater for Second Quarter 2011*. Issued to Shell Oil Products US (Shell) and WRB Refining LP (WRB) Wood River Refinery (WRR), dated August 31, 2011.

Illinois Environmental Protection Agency, 2012 (IEPA, 2012a); *Letter (CA-24) in response to ROST-4-PZ Delineation and Sampling Report.* Issued to Shell Oil Products US (Shell), dated March 14, 2012.

Illinois Environmental Protection Agency, 2012 (IEPA, 2012b); *Letter (CA-25) in Response to Agency Comments Provided in June 16, 2011 Letter.* Issued to Shell Oil Products US (Shell), dated March 14, 2012.

Illinois Environmental Protection Agency, 2012 (IEPA, 2012c); 35 Illinois Administrative Code 620, Subpart D, Section 410. *Groundwater Quality Standards for Class 1: Potable Resource Groundwater (Part 620)*. Effective October 5, 2012; accessed on March 23, 2023.

Illinois Environmental Protection Agency, 2013 (IEPA, 2013a); *Approval with Conditions for the Roxana 4Q10 and 2Q12 Groundwater Monitoring Program Reports.* Issued to Shell Oil Products US (Shell) and WRB Refining LP (WRB) Wood River Refinery (WRR), dated April 8, 2013.

Illinois Environmental Protection Agency, 2013 (IEPA, 2013b); *Response to Submittals received February 8, 2012; November 14, 2012; January 25, 2013; and March 14, 2013*. Issued to Shell Oil Products US (Shell) and WRB Refining LP (WRB) Wood River Refinery (WRR), dated July 18, 2013.

Illinois Environmental Protection Agency, 2014 (IEPA, 2014a); *Response to Class I* Permit Modification Requests.* Issued to Shell Oil Products US (Shell) and WRB Refining LP (WRB) Wood River Refinery (WRR), dated June 13, 2014.

Illinois Environmental Protection Agency, 2014 (IEPA, 2014b); *Response to Groundwater Monitoring Well Installation Plan Location on BP Property.* Issued to Shell Oil Products US (Shell) and WRB Refining LP (WRB) Wood River Refinery (WRR), dated October 9, 2014.

Illinois Environmental Protection Agency, 2014 (IEPA, 2014c); *Response to the Groundwater Portions of the Two Subject Submittals (Proposed Plan for Groundwater Corrective Action and Request for a 60-day Extension for Submittal of the Plan).* Issued to Shell Oil Products US (Shell) and WRB Refining LP (WRB) Wood River Refinery (WRR), dated November 25, 2014.

Illinois Environmental Protection Agency, 2015 (IEPA, 2015); *Approval of an April 3, 2013, Submittal Made on Behalf of Equilon Enterprises LLC and WRB Refining LP by Robert Billman, URS Corporation.* Issued to Shell Oil Products (Shell) and WRB Refining LP (WRB) Wood River Refinery (WRR), dated May 22, 2015.

Illinois Environmental Protection Agency, 2016 (IEPA, 2016a); *IEPA Approval of Perched Groundwater Monitoring Location Abandonments*. Issued to Shell Oil Products (Shell) and WRB Refining LP (WRB) Wood River Refinery (WRR), dated July 27, 2016.

Illinois Environmental Protection Agency, 2016 (IEPA, 2016b); *IEPA Approval Conditions and Modifications for the Response to IEPA Letter Dated April 8, 2013, for Groundwater Conditions Near East 3rd and Chaffer Streets (which was dated July 29, 2013*. Issued to Shell Oil Products (Shell) and WRB Refining LP (WRB Wood River Refinery (WRR), dated July 27, 2016.

Illinois Environmental Protection Agency, 2016 (IEPA, 2016c); *Response to Two Subject Submittals Submitted on Behalf of Shell Oil Products US (SOPUS) by URS Corporation (URS), in Regards to the WRB Refining, LLC Wood*

River Refinery (WRR) in Roxana, IL. Issued to Shell Oil Products US (Shell) and WRB Refining LP (WRB) Wood River Refinery (WRR), dated February 23, 2016.

Illinois Environmental Protection Agency, 2017 (IEPA, 2017); *IEPA Approval to Reduce Gauging – Roxana Groundwater Monitoring Program*. Issued to Shell Oil Products US (Shell) and WRB Refining LP (WRB) Wood River Refinery (WRR), dated August 2, 2017.

Illinois Environmental Protection Agency Toxicity Assessment Unit; *Chemicals Not in TACO, Tier 1 Tables*, 2018 (IEPA, 2018). http://www.epa.state.il.us/land/taco/chemicals-not-in-taco-tier-1-tables.html. Accessed on March 23, 2023.

Illinois Environmental Protection Agency, 2019 (IEPA, 2019); *Groundwater Ordinances Reviewed for Use As Environmental Institutional Controls*. http://epadata.epa.state.il.us/land/gwordinance/municipality.asp?Municipality=Roxana. Emailed to Shell Oil Products US (Shell), dated November 7, 2019.

Illinois Environmental Protection Agency, 2020 (IEPA, 2020a); *Notice of Permit Renewal Application Incompleteness*. Issued to Shell Oil Products US (Shell) and WRB Refining LP (WRB) Wood River Refinery (WRR), dated June 30, 2020.

Illinois Environmental Protection Agency, 2020 (IEPA, 2020b); *Notice of Permit Completeness*. Issued to Shell Oil Products US (Shell) and WRB Refining LP (WRB) Wood River Refinery (WRR), dated October 30, 2020.

Illinois Environmental Protection Agency, 2020 (IEPA, 2020c); *RCRA Groundwater O&M Inspection*. Issued to Shell Oil Products US (Shell) and WRB Refining LP (WRB) Wood River Refinery (WRR), dated October 6, 2020.

Illinois Environmental Protection Agency, 2022 (IEPA, 2022); *Public Works Yard (PWY) Steam Enhanced Extraction (SEE) Workplan Approval with Conditions*. Issued to Shell Oil Products US (Shell), dated August 22, 2022.

URS Corporation, 2013 (URS, 2013a); *Roxana Perched Groundwater Monitoring Locations*; Prepared for Shell Oil Products US (Shell); dated August 16, 2013.

URS Corporation, 2013 (URS, 2013b); *Response to IEPA Letter April 8, 2013 – Groundwater Conditions near East 3rd and Chaffer Streets, Roxana, Illinois*; Prepared for Shell Oil Products US (Shell); dated July 29, 2013.

URS Corporation, 2013 (URS, 2013c); *Proposed Plan for Groundwater Corrective Action, Roxana, Illinois*; Prepared for Shell Oil Products US (Shell); dated November 14, 2013.

URS Corporation, 2014 (URS, 2014a); *Perched Groundwater Monitoring Locations*; Prepared for Shell Oil Products US (Shell); dated January 14, 2014.

URS Corporation, 2014 (URS, 2014b); *Perched Groundwater Monitoring Request for Abandonment*; Prepared for Shell Oil Products US (Shell); dated January 14, 2014.

URS Corporation, 2014 (URS, 2014c); *Request to Reduce Gauging – Roxana Groundwater Monitoring Program, Roxana IL*; Prepared for Shell Oil Products US (Shell); dated December 5, 2014.

U.S. Environmental Protection Agency, November 2020 (USEPA, 2020); *National Functional Guidelines for Organic Superfund Methods Data Review.*

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											
2Q2022	442.83	4/5/2022	NE	39.78	NA	NA	NA	403.05	394.03 - 384.03 (48.80 - 58.80)	0.0	*
3Q2022		7/5/2022	NE	38.89	NA	NA	NA	403.94		0.0	*
4Q2022		10/18/2022	NE	39.75	NA	NA	NA	403.08		0.0	*
1Q2023		1/3/2023	NE	40.50	NA	NA	NA	402.33		0.0	*
MW 02											
2Q2022	443.93	4/4/2022	NE	41.13	NA	NA	NA	402.80	394.06 - 384.06 (49.87 - 59.87)	161.2	*
3Q2022		7/5/2022	NE	40.28	NA	NA	NA	403.65		5.0	*
4Q2022		10/17/2022	NE	40.95	NA	NA	NA	402.98		146.7	*
1Q2023		1/3/2023	NE	41.74	NA	NA	NA	402.19		154.2	*
MW 03											
2Q2022	430.23	4/5/2022	NE	26.94	NA	NA	NA	403.29	395.56 - 385.56 (34.67 - 44.67)	0.0	*
3Q2022		7/5/2022	NE	25.89	NA	NA	NA	404.34		0.0	*
4Q2022		10/18/2022	NE	27.05	NA	NA	NA	403.18		0.0	*
1Q2023		1/3/2023	NE	27.80	NA	NA	NA	402.43		0.0	*
MW 04											
2Q2022	441.31	4/5/2022	NE	38.19	NA	NA	NA	403.12	396.25 - 386.25 (45.06 - 55.06)	0.0	*
3Q2022		7/5/2022	NE	37.29	NA	NA	NA	404.02		0.0	*
4Q2022		10/18/2022	NE	38.20	NA	NA	NA	403.11		0.0	*
1Q2023		1/3/2023	NE	38.95	NA	NA	NA	402.36		0.0	*
MW 05											
2Q2022	429.98	4/5/2022	NE	26.62	NA	NA	NA	403.36	396.01 - 386.01 (33.97 - 43.97)	0.0	*
3Q2022		7/6/2022	NE	25.68	NA	NA	NA	404.30		0.0	*
4Q2022		10/18/2022	NE	26.73	NA	NA	NA	403.25		0.0	*
1Q2023		1/3/2023	NE	27.48	NA	NA	NA	402.50		0.0	*
MW 06A											
2Q2022	432.33	4/5/2022	NE	28.70	NA	NA	NA	403.63	398.48 - 388.48 (33.85 - 43.85)	0.0	*
3Q2022		7/6/2022	NE	26.86	NA	NA	NA	405.47		0.0	*
4Q2022		10/18/2022	NE	28.94	NA	NA	NA	403.39		0.0	*
1Q2023		1/3/2023	NE	29.60	NA	NA	NA	402.73		0.0	*
MW 06B											
2Q2022	432.37	4/5/2022	NE	28.76	NA	NA	NA	403.61	368.32 - 363.32 (64.05 - 69.05)	0.0	*
3Q2022		7/6/2022	NE	27.91	NA	NA	NA	404.46		0.0	*
4Q2022		10/18/2022	NE	28.97	NA	NA	NA	403.40		0.0	*
1Q2023		1/3/2023	NE	29.65	NA	NA	NA	402.72		0.0	*
MW 06C											
2Q2022	432.18	4/5/2022	NE	28.53	NA	NA	NA	403.65	347.23 - 342.23 (84.95 - 89.95)	0.0	*
3Q2022		7/6/2022	NE	27.70	NA	NA	NA	404.48		0.0	*
4Q2022		10/18/2022	NE	28.76	NA	NA	NA	403.42		0.0	*
1Q2023		1/3/2023	NE	29.44	NA	NA	NA	402.74		0.0	*
MW 06D											
2Q2022	432.06	4/5/2022	NE	28.39	NA	NA	NA	403.67	327.34 - 322.34 (104.72 - 109.72)	0.0	*
3Q2022		7/6/2022	NE	27.54	NA	NA	NA	404.52		0.0	*
4Q2022		10/18/2022	NE	28.62	NA	NA	NA	403.44		0.0	*
1Q2023		1/3/2023	NE	29.31	NA	NA	NA	402.75		0.0	*
MW 07											
2Q2022	443.31	4/4/2022	NE	40.28	NA	NA	NA	403.03	400.39 - 390.39 (42.92 - 52.92)	2.6	*
3Q2022		7/5/2022	NE	39.37	NA	NA	NA	403.94		0.0	*
4Q2022		10/17/2022	NE	40.22	NA	NA	NA	403.09		0.0	*
1Q2023		1/3/2023	NE	40.98	NA	NA	NA	402.33		0.4	*
MW 08											
2Q2022	434.43	4/5/2022	NE	31.12	NA	NA	NA	403.31	400.83 - 390.83 (33.60 - 43.60)	0.5	*
3Q2022		7/6/2022	NE	30.22	NA	NA	NA	404.21		0.0	*
4Q2022		10/18/2022	NE	31.20	NA	NA	NA	403.23		0.0	*
1Q2023		1/3/2023	NE	31.94	NA	NA	NA	402.49		0.0	*
MW 09											
2Q2022	445.28	4/4/2022	NE	41.43	NA	NA	NA	403.85	399.24 - 389.24 (46.04 - 56.04)	0.0	*
3Q2022		7/5/2022	NE	40.73	NA	NA	NA	404.55		0.0	*
4Q2022		10/17/2022	NE	41.33	NA	NA	NA	403.95		0.0	*
1Q2023		1/3/2023	NE	42.16	NA	NA	NA	403.12		0.0	*

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MW 10											
2Q2022	445.06	4/4/2022	NE	41.30	NA	NA	NA	403.76	400.63 - 390.63 (44.43 - 54.43)	0.0	*
3Q2022		7/5/2022	NE	40.28	NA	NA	NA	404.78		0.0	*
4Q2022		10/17/2022	NE	41.26	NA	NA	NA	403.80		0.0	*
1Q2023		1/3/2023	NE	41.99	NA	NA	NA	403.07		0.0	*
MW 11											
2Q2022	442.38	4/5/2022	NE	39.04	NA	NA	NA	403.34	400.72 - 390.72 (41.66 - 51.66)	0.0	*
3Q2022		7/5/2022	NE	38.24	NA	NA	NA	404.14		0.0	*
4Q2022		10/17/2022	NE	38.91	NA	NA	NA	403.47		0.0	*
1Q2023		1/3/2023	NE	39.77	NA	NA	NA	402.61		0.1	*
MW 12											
2Q2022	442.64	4/5/2022	NE	39.54	NA	NA	NA	403.10	400.72 - 390.72 (41.92 - 51.92)	0.0	*
3Q2022		7/5/2022	NE	38.60	NA	NA	NA	404.04		0.0	*
4Q2022		10/17/2022	NE	39.36	NA	NA	NA	403.28		0.0	*
1Q2023		1/3/2023	NE	40.22	NA	NA	NA	402.42		0.0	*
MW 13											
2Q2022	430.30	4/5/2022	NE	26.43	NA	NA	NA	403.87	405.50 - 395.50 (24.80 - 34.80)	71.2	
3Q2022		7/6/2022	NE	25.50	NA	NA	NA	404.80		0.0	
4Q2022		10/18/2022	NE	26.78	NA	NA	NA	403.52		0.0	
1Q2023		1/4/2023	NE	27.80	NA	NA	NA	402.50		0.2	
MW 14											
2Q2022	434.61	4/6/2022	NE	30.85	NA	NA	NA	403.76	401.19 - 391.19 (33.42 - 43.42)	64.5	*
3Q2022		7/7/2022	NE	30.13	NA	NA	NA	404.48		16.6	*
4Q2022		10/19/2022	NE	30.96	NA	NA	NA	403.65		64.8	*
1Q2023		1/4/2023	NE	31.95	NA	NA	NA	402.66		57.6	*
MW 16											
2Q2022	443.60	4/5/2022	NE	40.70	NA	NA	NA	402.90	406.10 - 396.10 (37.50 - 47.50)	0.0	
3Q2022		7/5/2022	NE	39.85	NA	NA	NA	403.75		0.0	
4Q2022		10/17/2022	NE	40.46	NA	NA	NA	403.14		0.0	
1Q2023		1/3/2023	NE	41.27	NA	NA	NA	402.33		0.0	
MW 17											
2Q2022	441.78	4/4/2022	NE	39.09	NA	NA	NA	402.69	407.49 - 392.49 (34.29 - 49.29)	0.0	
3Q2022		7/5/2022	NE	38.39	NA	NA	NA	403.39		0.0	
4Q2022		10/17/2022	NE	38.74	NA	NA	NA	403.04		0.1	
1Q2023		1/3/2023	NE	39.44	NA	NA	NA	402.34		0.0	
MW 18											
2Q2022	442.24	4/4/2022	NE	39.77	NA	NA	NA	402.47	407.32 - 392.32 (34.92 - 49.92)	0.0	
3Q2022		7/5/2022	NE	38.87	NA	NA	NA	403.37		0.0	
4Q2022		10/17/2022	NE	39.33	NA	NA	NA	402.91		0.0	
1Q2023		1/3/2023	NE	40.03	NA	NA	NA	402.21		0.0	
MW 19											
2Q2022	442.98	4/4/2022	NE	40.41	NA	NA	NA	402.57	406.64 - 391.64 (36.34 - 51.34)	0.0	
3Q2022		7/5/2022	NE	39.54	NA	NA	NA	403.44		0.0	
4Q2022		10/17/2022	NE	40.01	NA	NA	NA	402.97		0.0	
1Q2023		1/3/2023	NE	40.77	NA	NA	NA	402.21		0.0	
MW 20											
2Q2022	443.86	4/4/2022	NE	41.22	NA	NA	NA	402.64	407.98 - 392.98 (35.88 - 50.88)	0.0	
3Q2022		7/5/2022	NE	40.36	NA	NA	NA	403.50		0.0	
4Q2022		10/17/2022	NE	40.92	NA	NA	NA	402.94		0.8	
1Q2023		1/3/2023	NE	41.70	NA	NA	NA	402.16		0.0	
MW 21											
2Q2022	444.01	4/4/2022	NE	41.22	NA	NA	NA	402.79	409.00 - 394.00 (35.01 - 50.01)	0.0	
3Q2022		7/5/2022	NE	40.31	NA	NA	NA	403.70		0.0	
4Q2022		10/17/2022	NE	41.04	NA	NA	NA	402.97		0.0	
1Q2023		1/3/2023	NE	41.80	NA	NA	NA	402.21		0.0	
MW 22											
2Q2022	442.38	4/5/2022	NE	39.36	NA	NA	NA	403.02	403.95 - 393.95 (38.43 - 48.43)	0.0	
3Q2022		7/5/2022	NE	38.56	NA	NA	NA	403.82		0.0	
4Q2022		10/17/2022	NE	39.12	NA	NA	NA	403.26		0.1	
1Q2023		1/3/2023	NE	39.93	NA	NA	NA	402.45		0.0	

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MW 23											
2Q2022	431.57	4/5/2022	NE	27.98	NA	NA	NA	403.59	402.55 - 392.55 (29.02 - 39.02)	20.0	*
3Q2022		7/6/2022	NE	26.94	NA	NA	NA	404.63		0.0	*
4Q2022		10/18/2022	NE	28.26	NA	NA	NA	403.31		0.0	*
1Q2023		1/3/2023	NE	29.06	NA	NA	NA	402.51		0.0	
MW 24											
2Q2022	443.65	4/5/2022	NE	40.34	NA	NA	NA	403.31	404.04 - 394.04 (39.61 - 49.61)	0.0	
3Q2022		7/7/2022	NE	39.55	NA	NA	NA	404.10		0.0	*
4Q2022		10/17/2022	NE	40.22	NA	NA	NA	403.43		0.0	
1Q2023		1/3/2023	NE	41.07	NA	NA	NA	402.58		0.0	
MW 25											
2Q2022	438.53	4/5/2022	NE	35.34	NA	NA	NA	403.19	402.94 - 392.94 (35.59 - 45.59)	94.1	*
3Q2022		7/5/2022	NE	34.41	NA	NA	NA	404.12		8.9	*
4Q2022		10/18/2022	NE	35.38	NA	NA	NA	403.15		93.3	*
1Q2023		1/3/2023	NE	36.12	NA	NA	NA	402.41		98.6	
MW 26											
2Q2022	441.23	4/5/2022	NE	38.15	NA	NA	NA	403.08	403.08 - 393.08 (38.15 - 48.15)	0.0	
3Q2022		NM	NM	NM	NA	NA	NA	NA		NM	Inaccessible due to parked vehicle.
4Q2022		10/18/2022	NE	38.13	NA	NA	NA	403.10		0.0	*
1Q2023		1/3/2023	NE	38.85	NA	NA	NA	402.38		0.0	
MW 27											
2Q2022	443.60	4/5/2022	NE	39.35	NA	NA	NA	404.25	403.81 - 393.81 (39.79 - 49.79)	0.0	*
3Q2022		7/5/2022	NE	39.08	NA	NA	NA	404.52		0.0	*
4Q2022		10/17/2022	NE	39.08	NA	NA	NA	404.52		0.0	*
1Q2023		1/3/2023	NE	39.86	NA	NA	NA	403.74		0.0	
MW 28											
2Q2022	443.55	4/5/2022	NE	38.45	NA	NA	NA	405.10	409.94 - 399.94 (33.61 - 43.61)	0.0	
3Q2022		7/5/2022	NE	38.27	NA	NA	NA	405.28		0.0	
4Q2022		10/17/2022	NE	38.32	NA	NA	NA	405.23		0.0	
1Q2023		1/3/2023	NE	39.08	NA	NA	NA	404.47		0.0	
P 01											
2Q2022	442.98	4/5/2022	NE	31.60	NA	NA	NA	411.38	380.76 - 375.76 (62.22 - 67.22)	0.0	*
3Q2022		7/7/2022	NE	32.02	NA	NA	NA	410.96		0.0	*
4Q2022		10/18/2022	NE	32.34	NA	NA	NA	410.64		0.0	*
1Q2023		1/3/2023	NE	32.68	NA	NA	NA	410.30		0.0	*
P 4U											
2Q2022	442.74	4/5/2022	NE	32.90	NA	NA	NA	409.84	361.59 - 359.59 (81.15 - 83.15)	0.0	*
3Q2022		7/6/2022	NE	33.35	NA	NA	NA	409.39		0.0	*
4Q2022		10/18/2022	NE	33.69	NA	NA	NA	409.05		0.0	*
1Q2023		1/3/2023	NE	34.09	NA	NA	NA	408.65		0.0	*
P 5L											
2Q2022	444.01	4/5/2022	NE	32.74	NA	NA	NA	411.27	303.61 - 301.61 (140.40 - 142.40)	0.0	*
3Q2022		7/6/2022	NE	33.06	NA	NA	NA	410.95		0.0	*
4Q2022		10/18/2022	NE	33.69	NA	NA	NA	410.32		0.0	*
1Q2023		1/3/2023	NE	34.28	NA	NA	NA	409.73		0.0	*
P 5U											
2Q2022	444.42	4/5/2022	NE	34.02	NA	NA	NA	410.40	313.79 - 311.79 (130.63 - 132.63)	0.0	*
3Q2022		7/6/2022	NE	34.61	NA	NA	NA	409.81		0.0	*
4Q2022		10/18/2022	NE	34.94	NA	NA	NA	409.48		0.0	*
1Q2023		1/3/2023	NE	35.25	NA	NA	NA	409.17		0.0	*
P 6U											
2Q2022	443.63	4/5/2022	NE	33.53	NA	NA	NA	410.10	363.13 - 361.13 (80.50 - 82.50)	0.0	*
3Q2022		7/6/2022	NE	34.00	NA	NA	NA	409.63		0.0	*
4Q2022		10/18/2022	NE	34.44	NA	NA	NA	409.19		0.3	*
1Q2023		1/3/2023	NE	35.02	NA	NA	NA	408.61		0.0	*
P 7U											
2Q2022	444.08	4/5/2022	NE	33.75	NA	NA	NA	410.33	383.00 - 381.00 (61.08 - 63.08)	0.0	*
3Q2022		7/6/2022	NE	34.21	NA	NA	NA	409.87		0.0	*
4Q2022		10/18/2022	NE	34.68	NA	NA	NA	409.40		0.0	*
1Q2023		1/3/2023	NE	35.31	NA	NA	NA	408.77		0.0	*

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 8U											
2Q2022	442.07	4/5/2022	NE	33.81	NA	NA	NA	408.26	382.72 - 380.72 (59.35 - 61.35)	0.0	*
3Q2022		7/6/2022	NE	34.55	NA	NA	NA	407.52		0.0	*
4Q2022		10/18/2022	NE	34.82	NA	NA	NA	407.25		0.5	*
1Q2023		1/3/2023	NE	35.33	NA	NA	NA	406.74		18.4	*
P 9U											
2Q2022	445.20	4/5/2022	NE	38.37	NA	NA	NA	406.83	344.61 - 342.61 (100.59 - 102.59)	0.0	*
3Q2022		7/6/2022	NE	39.36	NA	NA	NA	405.84		0.0	*
4Q2022		10/18/2022	NE	39.51	NA	NA	NA	405.69		0.0	*
1Q2023		1/3/2023	NE	40.14	NA	NA	NA	405.06		0.0	*
P 11L											
2Q2022	442.76	4/5/2022	NE	34.74	NA	NA	NA	408.02	332.55 - 330.55 (110.21 - 112.21)	0.0	*
3Q2022		7/6/2022	NE	35.42	NA	NA	NA	407.34		0.0	*
4Q2022		10/18/2022	NE	35.50	NA	NA	NA	407.26		0.0	*
1Q2023		1/3/2023	NE	35.88	NA	NA	NA	406.88		0.0	*
P 11U											
2Q2022	443.38	4/5/2022	NE	35.38	NA	NA	NA	408.00	343.46 - 341.46 (99.92 - 101.92)	0.0	*
3Q2022		7/6/2022	NE	36.02	NA	NA	NA	407.36		0.0	*
4Q2022		10/18/2022	NE	36.14	NA	NA	NA	407.24		0.0	*
1Q2023		1/3/2023	NE	36.51	NA	NA	NA	406.87		0.0	*
P 14											
2Q2022	443.01	4/5/2022	NE	31.69	NA	NA	NA	411.32	395.54 - 385.54 (47.47 - 57.47)	0.0	*
3Q2022		7/19/2022	NE	32.09	NA	NA	NA	410.92		0.0	*
4Q2022		10/18/2022	NE	32.41	NA	NA	NA	410.60		0.0	*
1Q2023		1/3/2023	NE	32.77	NA	NA	NA	410.24		0.0	*
P 15											
2Q2022	443.88	4/5/2022	NE	33.58	NA	NA	NA	410.30	398.43 - 388.43 (45.45 - 55.45)	0.0	*
3Q2022		7/6/2022	NE	33.98	NA	NA	NA	409.90		0.0	*
4Q2022		10/18/2022	NE	34.36	NA	NA	NA	409.52		0.0	*
1Q2023		1/3/2023	NE	34.73	NA	NA	NA	409.15		0.0	*
P 16											
2Q2022	442.84	4/5/2022	NE	32.77	NA	NA	NA	410.07	397.10 - 387.10 (45.74 - 55.74)	0.0	*
3Q2022		7/6/2022	NE	32.86	NA	NA	NA	409.98		0.0	*
4Q2022		10/18/2022	NE	33.33	NA	NA	NA	409.51		0.0	*
1Q2023		1/3/2023	NE	33.90	NA	NA	NA	408.94		0.0	*
P 43											
2Q2022	444.62	4/5/2022	NE	36.25	NA	NA	NA	408.37	381.06 - 371.06 (63.56 - 73.56)	0.0	*
3Q2022		7/6/2022	NE	36.81	NA	NA	NA	407.81		0.0	*
4Q2022		10/18/2022	NE	36.99	NA	NA	NA	407.63		0.0	*
1Q2023		1/3/2023	NE	37.37	NA	NA	NA	407.25		0.2	*
P 53											
2Q2022	446.57	4/4/2022	NE	40.63	NA	NA	NA	405.94	406.26 - 381.26 (40.31 - 65.31)	0.0	
3Q2022		7/6/2022	NE	38.27	NA	NA	NA	408.30		0.0	*
4Q2022		10/17/2022	NE	40.91	NA	NA	NA	405.66		0.0	
1Q2023		1/3/2023	NE	41.53	NA	NA	NA	405.04		0.0	
P 54											
2Q2022	442.52	4/5/2022	NE	39.06	NA	NA	NA	403.46	404.52 - 379.52 (38.00 - 63.00)	0.0	
3Q2022		7/5/2022	NE	38.19	NA	NA	NA	404.33		0.0	
4Q2022		10/17/2022	NE	38.98	NA	NA	NA	403.54		0.0	
1Q2023		1/3/2023	NE	39.87	NA	NA	NA	402.65		0.0	
P 55R											
2Q2022	444.01	4/4/2022	39.01	39.09	404.92	405.00	0.08	404.98	403.58 - 393.58 (40.43 - 50.43)	209.5	*
3Q2022		7/5/2022	38.60	38.69	405.32	405.41	0.09	405.39		197.6	*
4Q2022		10/17/2022	38.75	38.83	405.18	405.26	0.08	405.24		146.2	*
1Q2023		1/3/2023	39.47	39.55	404.46	404.54	0.08	404.52		112.9	*
P 56											
2Q2022	446.32	4/4/2022	NE	43.66	NA	NA	NA	402.66	405.50 - 380.50 (40.82 - 65.82)	4.8	
3Q2022		7/5/2022	NE	42.88	NA	NA	NA	403.44		258.7	
4Q2022		10/17/2022	NE	43.39	NA	NA	NA	402.93		123.9	
1Q2023		1/3/2023	NE	44.19	NA	NA	NA	402.13		9.0	

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											
2Q2022	447.15	4/4/2022	NE	44.30	NA	NA	NA	402.85	402.96 - 392.96 (44.19 - 54.19)	76.1	
3Q2022		7/5/2022	NE	43.53	NA	NA	NA	403.62		125.8	*
4Q2022		10/17/2022	NE	44.21	NA	NA	NA	402.94		113.2	
1Q2023		1/3/2023	NE	44.94	NA	NA	NA	402.21		72.7	
P 58											
2Q2022	445.16	4/4/2022	NE	42.10	NA	NA	NA	403.06	404.95 - 379.95 (40.21 - 65.21)	0.0	
3Q2022		7/5/2022	NE	41.33	NA	NA	NA	403.83		2.0	
4Q2022		10/17/2022	42.13	42.18	402.98	403.03	0.05	403.02		0.1	
1Q2023		1/3/2023	42.82	42.83	402.33	402.34	0.01	402.34		0.1	
P 59											
2Q2022	447.07	4/4/2022	NE	44.52	NA	NA	NA	402.55	399.16 - 374.16 (47.91 - 72.91)	275.2	*
3Q2022		7/5/2022	NE	43.73	NA	NA	NA	403.34		349.5	*
4Q2022		10/17/2022	NE	44.18	NA	NA	NA	402.89		182.8	*
1Q2023		1/3/2023	NE	44.96	NA	NA	NA	402.11		132.6	*
P 60											
2Q2022	446.88	4/4/2022	NE	44.52	NA	NA	NA	402.36	402.23 - 382.23 (44.65 - 64.65)	3.5	*
3Q2022		7/5/2022	NE	43.29	NA	NA	NA	403.59		0.5	*
4Q2022		10/17/2022	NE	43.68	NA	NA	NA	403.20		1.4	*
1Q2023		1/3/2023	NE	44.46	NA	NA	NA	402.42		5.1	*
P 61											
2Q2022	444.66	4/4/2022	NE	42.54	NA	NA	NA	402.12	398.98 - 373.98 (45.68 - 70.68)	74.6	*
3Q2022		7/6/2022	NE	41.94	NA	NA	NA	402.72		83.7	*
4Q2022		10/17/2022	NE	42.18	NA	NA	NA	402.48		113.9	*
1Q2023		1/3/2023	NE	43.06	NA	NA	NA	401.60		34.7	*
P 62											
2Q2022	442.60	4/4/2022	39.82	39.84	402.76	402.78	0.02	402.78	401.13 - 376.13 (41.47 - 66.47)	22.5	*
3Q2022		7/6/2022	39.53	39.55	403.05	403.07	0.02	403.07		40.9	*
4Q2022		10/17/2022	39.73	39.75	402.85	402.87	0.02	402.87		67.2	*
1Q2023		1/3/2023	40.27	41.33	401.27	402.33	1.06	402.12		118.4	*
P 63											
2Q2022	446.06	4/4/2022	43.38	43.39	402.67	402.68	0.01	402.68	398.77 - 373.77 (47.29 - 72.29)	126.1	*
3Q2022		7/8/2022	43.44	43.45	402.61	402.62	0.01	402.62		146.7	*
4Q2022		10/18/2022	43.41	43.42	402.64	402.65	0.01	402.65		38.8	*
1Q2023		1/3/2023	43.96	43.98	402.08	402.10	0.02	402.10		28.4	*
P 64											
2Q2022	446.78	4/4/2022	44.54	44.60	402.18	402.24	0.06	402.23	399.55 - 374.55 (47.23 - 72.23)	78.3	*
3Q2022		7/5/2022	44.72	44.77	402.01	402.06	0.05	402.05		134.2	*
4Q2022		10/17/2022	45.03	45.09	401.69	401.75	0.06	401.74		91.6	*
1Q2023		1/3/2023	45.09	45.18	401.60	401.69	0.09	401.67		12.8	*
P 65											
2Q2022	444.77	4/4/2022	NE	42.12	NA	NA	NA	402.65	397.75 - 372.75 (47.02 - 72.02)	1.6	*
3Q2022		7/6/2022	NE	42.12	NA	NA	NA	402.65		2.9	*
4Q2022		10/17/2022	NE	42.08	NA	NA	NA	402.69		10.5	*
1Q2023		1/3/2023	NE	42.76	NA	NA	NA	402.01		22.3	*
P 66											
2Q2022	437.00	4/6/2022	33.63	34.11	402.89	403.37	0.48	403.27	402.28 - 377.28 (34.72 - 59.72)	240.1	*
3Q2022		7/7/2022	33.00	33.01	403.99	404.00	0.01	404.00		42.6	*
4Q2022		10/19/2022	33.56	34.58	402.42	403.44	1.02	403.24		103.5	*
1Q2023		1/4/2023	34.39	35.91	401.09	402.61	1.52	402.31		159.8	*
P 67											
2Q2022	444.30	4/6/2022	39.93	39.94	404.36	404.37	0.01	404.37	402.32 - 377.32 (41.98 - 66.98)	3.5	*
3Q2022		7/7/2022	39.49	39.52	404.78	404.81	0.03	404.80		0.0	*
4Q2022		10/19/2022	40.11	40.12	404.18	404.19	0.01	404.19		0.9	*
1Q2023		1/4/2023	41.00	41.01	403.29	403.30	0.01	403.30		1.8	*
P 68											
2Q2022	445.38	4/4/2022	42.46	42.54	402.84	402.92	0.08	402.90	401.62 - 376.62 (43.76 - 68.76)	224.0	*
3Q2022		7/7/2022	41.93	42.05	403.33	403.45	0.12	403.43		396.7	*
4Q2022		10/17/2022	42.24	42.28	403.10	403.14	0.04	403.13		172.8	*
1Q2023		1/3/2023	42.97	43.03	402.35	402.41	0.06	402.40		86.2	*

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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 69											
2Q2022	443.77	4/4/2022	NE	41.32	NA	NA	NA	402.45	402.95 - 377.95 (40.82 - 65.82)	0.0	
3Q2022		7/6/2022	NE	40.79	NA	NA	NA	402.98		309.0	*
4Q2022		10/17/2022	NE	41.03	NA	NA	NA	402.74		0.0	
1Q2023		1/3/2023	NE	41.79	NA	NA	NA	401.98		1.9	
P 70											
2Q2022	443.11	4/4/2022	NE	40.55	NA	NA	NA	402.56	398.44 - 373.44 (44.67 - 69.67)	182.4	*
3Q2022		7/6/2022	NE	40.20	NA	NA	NA	402.91		302.8	*
4Q2022		10/17/2022	NE	40.39	NA	NA	NA	402.72		188.2	*
1Q2023		1/3/2023	NE	41.20	NA	NA	NA	401.91		113.2	*
P 71											
2Q2022	445.09	4/4/2022	NE	41.47	NA	NA	NA	403.62	402.48 - 377.48 (42.61 - 67.61)	1.4	*
3Q2022		7/6/2022	NE	41.51	NA	NA	NA	403.58		68.7	*
4Q2022		10/17/2022	NE	41.54	NA	NA	NA	403.55		71.9	*
1Q2023		1/3/2023	NE	42.25	NA	NA	NA	402.84		34.8	*
P 72											
2Q2022	444.70	4/4/2022	NE	41.22	NA	NA	NA	403.48	398.93 - 373.93 (45.77 - 70.77)	4.5	*
3Q2022		7/6/2022	NE	40.94	NA	NA	NA	403.76		6.5	*
4Q2022		10/17/2022	NE	41.21	NA	NA	NA	403.49		38.5	*
1Q2023		1/3/2023	NE	41.71	NA	NA	NA	402.99		11.1	*
P 73											
2Q2022	444.02	4/4/2022	NE	41.59	NA	NA	NA	402.43	402.42 - 377.42 (41.59 - 66.59)	72.5	
3Q2022		7/6/2022	NE	41.70	NA	NA	NA	402.32		149.4	
4Q2022		10/19/2022	NE	41.63	NA	NA	NA	402.39		150.0	
1Q2023		1/3/2023	NE	42.10	NA	NA	NA	401.92		29.4	
P 74											
2Q2022	442.93	4/4/2022	NE	40.12	NA	NA	NA	402.81	399.10 - 374.10 (43.83 - 68.83)	0.0	*
3Q2022		7/6/2022	NE	39.87	NA	NA	NA	403.06		0.3	*
4Q2022		10/17/2022	NE	40.19	NA	NA	NA	402.74		1.1	*
1Q2023		1/3/2023	NE	40.54	NA	NA	NA	402.39		0.0	*
P 75											
2Q2022	446.68	4/6/2022	NE	43.57	NA	NA	NA	403.11	403.55 - 378.55 (43.13 - 68.13)	0.0	
3Q2022		7/7/2022	NE	42.99	NA	NA	NA	403.69		38.5	*
4Q2022		10/19/2022	NE	43.62	NA	NA	NA	403.06		0.7	
1Q2023		1/4/2023	NE	44.53	NA	NA	NA	402.15		0.5	
P 82A											
2Q2022	434.94	4/6/2022	NE	27.64	NA	NA	NA	407.30	401.73 - 386.73 (33.21 - 48.21)	0.0	*
3Q2022		7/6/2022	NE	27.12	NA	NA	NA	407.82		0.0	*
4Q2022		10/18/2022	NE	28.10	NA	NA	NA	406.84		0.0	*
1Q2023		1/4/2023	NE	28.92	NA	NA	NA	406.02		0.5	*
P 82B											
2Q2022	434.68	4/6/2022	NE	27.36	NA	NA	NA	407.32	371.88 - 369.88 (62.80 - 64.80)	0.0	*
3Q2022		7/6/2022	NE	26.83	NA	NA	NA	407.85		0.0	*
4Q2022		10/18/2022	NE	27.82	NA	NA	NA	406.86		0.0	*
1Q2023		1/4/2023	NE	28.65	NA	NA	NA	406.03		0.0	*
P 82C											
2Q2022	434.41	4/6/2022	NE	27.06	NA	NA	NA	407.35	351.64 - 349.64 (82.77 - 84.77)	0.0	*
3Q2022		7/6/2022	NE	26.53	NA	NA	NA	407.88		0.0	*
4Q2022		10/18/2022	NE	27.55	NA	NA	NA	406.86		0.0	*
1Q2023		1/4/2023	NE	28.34	NA	NA	NA	406.07		0.0	*
P 82D											
2Q2022	435.09	4/6/2022	NE	27.82	NA	NA	NA	407.27	323.55 - 321.55 (111.54 - 113.54)	0.0	*
3Q2022		7/6/2022	NE	27.30	NA	NA	NA	407.79		0.0	*
4Q2022		10/18/2022	NE	28.32	NA	NA	NA	406.77			*
1Q2023		1/4/2023	NE	29.11	NA	NA	NA	405.98		0.0	*
P 83A											
2Q2022	445.54	4/4/2022	NE	40.93	NA	NA	NA	404.61	398.14 - 383.14 (47.40 - 62.40)	0.0	*
3Q2022		7/5/2022	NE	41.42	NA	NA	NA	404.12		0.0	*
4Q2022		10/18/2022	NE	41.46	NA	NA	NA	404.08		0.0	*
1Q2023		1/3/2023	NE	41.92	NA	NA	NA	403.62		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 83B											
2Q2022	445.77	4/4/2022	NE	41.17	NA	NA	NA	404.60	371.97 - 369.97 (73.80 - 75.80)	0.0	*
3Q2022		7/5/2022	NE	41.70	NA	NA	NA	404.07		0.0	*
4Q2022		10/18/2022	NE	41.57	NA	NA	NA	404.20		0.0	*
1Q2023		1/3/2023	NE	42.17	NA	NA	NA	403.60		0.0	*
P 83C											
2Q2022	445.95	4/4/2022	NE	41.32	NA	NA	NA	404.63	353.56 - 351.56 (92.39 - 94.39)	0.0	*
3Q2022		7/5/2022	NE	41.84	NA	NA	NA	404.11		0.6	*
4Q2022		10/18/2022	NE	41.76	NA	NA	NA	404.19		0.0	*
1Q2023		1/3/2023	NE	42.31	NA	NA	NA	403.64		0.0	*
P 83D											
2Q2022	445.86	4/4/2022	NE	41.30	NA	NA	NA	404.56	312.06 - 310.06 (133.80 - 135.80)	0.0	*
3Q2022		7/5/2022	NE	41.80	NA	NA	NA	404.06		0.0	*
4Q2022		10/18/2022	NE	41.83	NA	NA	NA	404.03		0.0	*
1Q2023		1/3/2023	NE	42.28	NA	NA	NA	403.58		0.0	*
P 84A											
2Q2022	446.63	4/4/2022	NE	41.60	NA	NA	NA	405.03	397.71 - 382.71 (48.92 - 63.92)	0.0	*
3Q2022		7/7/2022	NE	41.62	NA	NA	NA	405.01		0.0	*
4Q2022		10/18/2022	NE	41.83	NA	NA	NA	404.80		0.0	*
1Q2023		1/4/2023	NE	42.57	NA	NA	NA	404.06		0.0	*
P 84B											
2Q2022	446.35	4/5/2022	NE	41.32	NA	NA	NA	405.03	372.85 - 370.85 (73.50 - 75.50)	0.0	*
3Q2022		7/7/2022	NE	41.36	NA	NA	NA	404.99		0.0	*
4Q2022		10/18/2022	NE	41.57	NA	NA	NA	404.78		0.0	*
1Q2023		1/4/2023	NE	42.30	NA	NA	NA	404.05		0.0	*
P 84C											
2Q2022	446.37	4/5/2022	NE	41.28	NA	NA	NA	405.09	352.32 - 350.32 (94.05 - 96.05)	0.0	*
3Q2022		7/7/2022	NE	41.36	NA	NA	NA	405.01		0.0	*
4Q2022		10/18/2022	NE	41.58	NA	NA	NA	404.79		0.0	*
1Q2023		1/4/2023	NE	42.32	NA	NA	NA	404.05		0.0	*
P 84D											
2Q2022	446.38	4/5/2022	NE	41.27	NA	NA	NA	405.11	325.55 - 323.55 (120.83 - 122.83)	0.0	*
3Q2022		7/7/2022	NE	41.38	NA	NA	NA	405.00		0.0	*
4Q2022		10/18/2022	NE	41.57	NA	NA	NA	404.81		0.0	*
1Q2023		1/4/2023	NE	42.31	NA	NA	NA	404.07		0.0	*
P 88A											
2Q2022	443.27	4/6/2022	NE	33.57	NA	NA	NA	409.70	404.87 - 389.87 (38.40 - 53.40)	0.0	*
3Q2022		7/7/2022	NE	33.11	NA	NA	NA	410.16		0.0	*
4Q2022		10/19/2022	NE	33.61	NA	NA	NA	409.66		0.0	*
1Q2023		1/4/2023	NE	34.35	NA	NA	NA	408.92		0.0	*
P 88B											
2Q2022	443.35	4/6/2022	NE	33.62	NA	NA	NA	409.73	371.70 - 369.70 (71.65 - 73.65)	0.0	*
3Q2022		7/7/2022	NE	33.16	NA	NA	NA	410.19		0.0	*
4Q2022		10/19/2022	NE	33.66	NA	NA	NA	409.69		0.0	*
1Q2023		1/4/2023	NE	34.40	NA	NA	NA	408.95		0.0	*
P 88C											
2Q2022	443.31	4/6/2022	NE	33.56	NA	NA	NA	409.75	351.01 - 349.01 (92.30 - 94.30)	0.0	*
3Q2022		7/7/2022	NE	33.13	NA	NA	NA	410.18		0.0	*
4Q2022		10/19/2022	NE	33.61	NA	NA	NA	409.70		0.0	*
1Q2023		1/4/2023	NE	34.34	NA	NA	NA	408.97		0.0	*
P 88D											
2Q2022	443.38	4/6/2022	NE	33.69	NA	NA	NA	409.69	331.21 - 329.21 (112.17 - 114.17)	0.0	*
3Q2022		7/7/2022	NE	33.23	NA	NA	NA	410.15		0.0	*
4Q2022		10/19/2022	NE	33.74	NA	NA	NA	409.64		0.0	*
1Q2023		1/4/2023	NE	34.50	NA	NA	NA	408.88		0.0	*
P 89B											
2Q2022	447.64	4/5/2022	NE	41.28	NA	NA	NA	406.36	370.28 - 368.28 (77.36 - 79.36)	0.0	*
3Q2022		7/6/2022	NE	42.29	NA	NA	NA	405.35		0.0	*
4Q2022		10/18/2022	NE	42.33	NA	NA	NA	405.31		0.0	*
1Q2023		1/3/2023	NE	42.76	NA	NA	NA	404.88		0.0	*

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 89C											
2Q2022	447.96	4/5/2022	NE	41.61	NA	NA	NA	406.35	351.56 - 349.56 (96.40 - 98.40)	0.0	*
3Q2022		7/6/2022	NE	42.72	NA	NA	NA	405.24		0.0	*
4Q2022		10/18/2022	NE	42.68	NA	NA	NA	405.28		0.0	*
1Q2023		1/3/2023	NE	43.12	NA	NA	NA	404.84		0.0	*
P 89D											
2Q2022	447.83	4/5/2022	NE	41.58	NA	NA	NA	406.25	309.33 - 307.33 (138.50 - 140.50)	0.0	*
3Q2022		7/6/2022	NE	42.84	NA	NA	NA	404.99		0.0	*
4Q2022		10/18/2022	NE	42.78	NA	NA	NA	405.05		0.0	*
1Q2023		1/3/2023	NE	43.22	NA	NA	NA	404.61		0.0	*
P 91A											
2Q2022	447.43	4/5/2022	NE	45.85	NA	NA	NA	401.58	395.92 - 380.92 (51.51 - 66.51)	177.6	*
3Q2022		7/5/2022	NE	46.26	NA	NA	NA	401.17		6.6	*
4Q2022		10/18/2022	NE	45.72	NA	NA	NA	401.71		16.3	*
1Q2023		1/3/2023	NE	46.31	NA	NA	NA	401.12		37.4	*
P 91B											
2Q2022	447.47	4/5/2022	NE	45.97	NA	NA	NA	401.50	372.78 - 370.78 (74.69 - 76.69)	6.0	*
3Q2022		7/5/2022	NE	46.35	NA	NA	NA	401.12		1.8	*
4Q2022		10/18/2022	NE	45.77	NA	NA	NA	401.70		10.0	*
1Q2023		1/3/2023	NE	46.32	NA	NA	NA	401.15		0.3	*
P 91C											
2Q2022	447.27	4/5/2022	NE	45.71	NA	NA	NA	401.56	352.54 - 350.54 (94.73 - 96.73)	0.7	*
3Q2022		7/5/2022	NE	46.11	NA	NA	NA	401.16		0.0	*
4Q2022		10/18/2022	NE	45.54	NA	NA	NA	401.73		0.0	*
1Q2023		1/3/2023	NE	46.12	NA	NA	NA	401.15		0.0	*
P 91D											
2Q2022	447.26	4/5/2022	NE	45.71	NA	NA	NA	401.55	278.94 - 276.94 (168.32 - 170.32)	8.2	*
3Q2022		7/5/2022	NE	46.12	NA	NA	NA	401.14		0.0	*
4Q2022		10/18/2022	NE	45.56	NA	NA	NA	401.70		0.0	*
1Q2023		1/3/2023	NE	46.15	NA	NA	NA	401.11		0.0	*
P 92A											
2Q2022	446.39	4/4/2022	NE	44.08	NA	NA	NA	402.31	398.82 - 383.82 (47.57 - 62.57)	28.0	*
3Q2022		7/5/2022	42.21	42.22	404.17	404.18	0.01	404.18		72.0	*
4Q2022		10/17/2022	44.04	44.20	402.19	402.35	0.16	402.32		64.1	*
1Q2023		1/3/2023	44.75	44.76	401.63	401.64	0.01	401.64		124.6	*
P 92B											
2Q2022	446.33	4/4/2022	NE	44.01	NA	NA	NA	402.32	371.92 - 369.92 (74.41 - 76.41)	0.0	*
3Q2022		7/5/2022	NE	44.11	NA	NA	NA	402.22		0.0	*
4Q2022		10/17/2022	NE	43.98	NA	NA	NA	402.35		0.0	*
1Q2023		1/3/2023	NE	44.47	NA	NA	NA	401.86		0.9	*
P 92C											
2Q2022	446.34	4/4/2022	NE	43.99	NA	NA	NA	402.35	353.38 - 348.38 (92.96 - 97.96)	0.0	*
3Q2022		7/5/2022	NE	42.88	NA	NA	NA	403.46		0.6	*
4Q2022		10/17/2022	NE	43.97	NA	NA	NA	402.37		0.0	*
1Q2023		1/3/2023	NE	44.70	NA	NA	NA	401.64		1.3	*
P 92D											
2Q2022	446.15	4/4/2022	NE	43.87	NA	NA	NA	402.28	305.15 - 303.15 (141.00 - 143.00)	0.0	*
3Q2022		7/5/2022	NE	44.03	NA	NA	NA	402.12		0.0	*
4Q2022		10/17/2022	NE	43.84	NA	NA	NA	402.31		0.0	*
1Q2023		1/3/2023	NE	44.58	NA	NA	NA	401.57		0.0	*
P 93A											
2Q2022	445.37	4/4/2022	NE	42.47	NA	NA	NA	402.90	402.30 - 392.30 (43.07 - 53.07)	0.0	*
3Q2022		7/5/2022	NE	41.68	NA	NA	NA	403.69		0.0	*
4Q2022		10/17/2022	NE	42.40	NA	NA	NA	402.97		0.0	*
1Q2023		1/3/2023	NE	43.13	NA	NA	NA	402.24		0.0	
P 93B											
2Q2022	446.70	4/4/2022	NE	43.80	NA	NA	NA	402.90	371.92 - 369.92 (74.78 - 76.78)	0.0	*
3Q2022		7/5/2022	NE	43.05	NA	NA	NA	403.65		0.0	*
4Q2022		10/17/2022	NE	43.75	NA	NA	NA	402.95		0.1	*
1Q2023		1/3/2023	NE	44.47	NA	NA	NA	402.23		0.0	*

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 93C											
2Q2022	446.55	4/4/2022	NE	43.83	NA	NA	NA	402.72	353.67 - 348.67 (92.88 - 97.88)	0.0	*
3Q2022		7/5/2022	NE	42.88	NA	NA	NA	403.67		0.0	*
4Q2022		10/17/2022	NE	43.58	NA	NA	NA	402.97		0.0	*
1Q2023		1/3/2023	NE	44.31	NA	NA	NA	402.24		0.0	*
P 93D											
2Q2022	446.97	4/4/2022	NE	44.03	NA	NA	NA	402.94	321.31 - 319.31 (125.66 - 127.66)	0.0	*
3Q2022		7/5/2022	NE	43.23	NA	NA	NA	403.74		0.0	*
4Q2022		10/17/2022	NE	43.93	NA	NA	NA	403.04		0.1	*
1Q2023		1/3/2023	NE	44.67	NA	NA	NA	402.30		0.0	*
P 94											
2Q2022	445.04	4/4/2022	NE	37.36	NA	NA	NA	407.68	398.80 - 383.80 (46.24 - 61.24)	0.0	*
3Q2022		7/5/2022	NE	38.02	NA	NA	NA	407.02		0.0	*
4Q2022		10/18/2022	NE	38.35	NA	NA	NA	406.69		0.0	*
1Q2023		1/3/2023	NE	38.95	NA	NA	NA	406.09		0.0	*
P 95											
2Q2022	443.95	4/6/2022	NE	31.64	NA	NA	NA	412.31	407.43 - 392.43 (36.52 - 51.52)	0.0	*
3Q2022		7/7/2022	NE	31.24	NA	NA	NA	412.71		0.0	*
4Q2022		10/19/2022	NE	31.61	NA	NA	NA	412.34		0.0	*
1Q2023		1/4/2023	NE	32.22	NA	NA	NA	411.73		0.0	*
P 102											
2Q2022	445.14	4/6/2022	NE	35.36	NA	NA	NA	409.78	402.39 - 382.39 (42.75 - 62.75)	1.7	*
3Q2022		7/7/2022	NE	35.20	NA	NA	NA	409.94		2.5	*
4Q2022		10/19/2022	NE	35.29	NA	NA	NA	409.85		10.0	*
1Q2023		1/4/2023	NE	35.81	NA	NA	NA	409.33		2.4	*
P 114R											
2Q2022	429.48	4/5/2022	NE	25.48	NA	NA	NA	404.00	406.47 - 396.47 (23.01 - 33.01)	48.4	
3Q2022		7/6/2022	NE	24.25	NA	NA	NA	405.23		6.2	
4Q2022		10/18/2022	NE	25.94	NA	NA	NA	403.54		0.0	
1Q2023		1/4/2023	NE	27.07	NA	NA	NA	402.41		0.0	
P 115											
2Q2022	433.54	4/5/2022	NE	29.41	NA	NA	NA	404.13	401.24 - 381.24 (32.30 - 52.30)	0.0	*
3Q2022		7/6/2022	NE	28.16	NA	NA	NA	405.38		0.0	*
4Q2022		10/18/2022	NE	29.96	NA	NA	NA	403.58		0.0	*
1Q2023		1/4/2023	NE	31.15	NA	NA	NA	402.39		0.0	*
P 116											
2Q2022	436.79	4/5/2022	NE	32.81	NA	NA	NA	403.98	399.35 - 379.35 (37.44 - 57.44)	0.0	*
3Q2022		7/6/2022	NE	31.51	NA	NA	NA	405.28		0.0	*
4Q2022		10/18/2022	NE	33.43	NA	NA	NA	403.36		0.0	*
1Q2023		1/4/2023	NE	34.63	NA	NA	NA	402.16		0.0	*
P 117											
2Q2022	432.87	4/5/2022	NE	29.03	NA	NA	NA	403.84	399.94 - 379.94 (32.93 - 52.93)	0.0	*
3Q2022		7/6/2022	NE	27.67	NA	NA	NA	405.20		0.0	*
4Q2022		10/18/2022	NE	29.68	NA	NA	NA	403.19		0.0	*
1Q2023		1/4/2023	NE	30.86	NA	NA	NA	402.01		0.0	*
P 118											
2Q2022	431.48	4/5/2022	NE	27.74	NA	NA	NA	403.74	400.36 - 384.43 (31.12 - 47.05)	0.0	*
3Q2022		7/6/2022	NE	26.39	NA	NA	NA	405.09		0.0	*
4Q2022		10/18/2022	NE	28.73	NA	NA	NA	402.75		0.0	*
1Q2023		1/4/2023	NE	29.95	NA	NA	NA	401.53		0.1	*
P 119											
2Q2022	432.11	4/5/2022	NE	27.78	NA	NA	NA	404.33	401.44 - 385.51 (30.67 - 46.60)	0.0	*
3Q2022		7/6/2022	NE	26.94	NA	NA	NA	405.17		0.0	*
4Q2022		10/18/2022	NE	28.20	NA	NA	NA	403.91		0.0	*
1Q2023		1/4/2023	NE	29.24	NA	NA	NA	402.87		0.0	*
P 120											
2Q2022	433.00	4/5/2022	NE	27.99	NA	NA	NA	405.01	401.62 - 385.69 (31.38 - 47.31)	0.0	*
3Q2022		7/6/2022	NE	27.09	NA	NA	NA	405.91		0.0	*
4Q2022		10/18/2022	NE	28.63	NA	NA	NA	404.37		0.0	*
1Q2023		1/4/2023	NE	29.72	NA	NA	NA	403.28		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 129											
2Q2022	432.66	4/5/2022	NE	29.36	NA	NA	NA	403.30	400.69 - 384.76 (31.97 - 47.90)	0.0	*
3Q2022		7/6/2022	NE	28.23	NA	NA	NA	404.43		0.0	*
4Q2022		10/18/2022	NE	31.28	NA	NA	NA	401.38		0.0	*
1Q2023		1/4/2023	NE	32.46	NA	NA	NA	400.20		17.2	
ROST 3 MW											
2Q2022	442.52	4/5/2022	NE	39.12	NA	NA	NA	403.40	404.71 - 394.71 (37.81 - 47.81)	31.5	
3Q2022		7/5/2022	NE	38.43	NA	NA	NA	404.09		75.6	
4Q2022		10/17/2022	NE	38.93	NA	NA	NA	403.59		8.8	
1Q2023		1/3/2023	NE	39.77	NA	NA	NA	402.75		361.7	
ROST 4 PZ											
2Q2022	442.15	4/4/2022	NE	38.21	NA	NA	NA	403.94	407.22 - 397.22 (34.93 - 44.93)	0.0	
3Q2022		7/5/2022	NE	37.93	NA	NA	NA	404.22		0.0	
4Q2022		10/17/2022	NE	37.93	NA	NA	NA	404.22		0.0	
1Q2023		1/3/2023	NE	38.58	NA	NA	NA	403.57		0.3	
ROST 4 PZ(A)											
2Q2022	442.15	4/4/2022	NE	37.36	NA	NA	NA	404.79	407.38 - 397.38 (34.77 - 44.77)	0.0	
3Q2022		7/5/2022	NE	36.96	NA	NA	NA	405.19		0.0	
4Q2022		10/17/2022	NE	36.75	NA	NA	NA	405.40		0.0	
1Q2023		1/3/2023	NE	37.89	NA	NA	NA	404.26		0.0	
ROST 4 PZ(B)											
2Q2022	442.40	4/4/2022	NE	38.22	NA	NA	NA	404.18	407.35 - 397.35 (35.05 - 45.05)	0.0	
3Q2022		7/5/2022	NE	37.89	NA	NA	NA	404.51		0.0	
4Q2022		10/17/2022	NE	37.75	NA	NA	NA	404.65		0.0	
1Q2023		1/3/2023	NE	38.54	NA	NA	NA	403.86		0.0	
ROST 4 PZ(C)											
2Q2022	442.97	4/5/2022	NE	39.17	NA	NA	NA	403.80	408.02 - 398.02 (34.95 - 44.95)	0.0	
3Q2022		7/5/2022	NE	38.81	NA	NA	NA	404.16		0.0	
4Q2022		10/18/2022	NE	39.03	NA	NA	NA	403.94		0.0	
1Q2023		1/3/2023	NE	39.65	NA	NA	NA	403.32		0.0	
ROST 4 PZ(D)											
2Q2022	442.92	4/5/2022	NE	38.96	NA	NA	NA	403.96	407.95 - 397.95 (34.97 - 44.97)	0.0	
3Q2022		7/5/2022	NE	38.65	NA	NA	NA	404.27		0.0	
4Q2022		10/17/2022	NE	38.77	NA	NA	NA	404.15		0.0	
1Q2023		1/3/2023	NE	39.44	NA	NA	NA	403.48		0.1	
ROST 4 PZ(E)											
2Q2022	441.98	4/4/2022	NE	38.19	NA	NA	NA	403.79	407.23 - 397.23 (34.75 - 44.75)	0.0	
3Q2022		7/5/2022	NE	37.82	NA	NA	NA	404.16		0.0	
4Q2022		10/17/2022	NE	37.95	NA	NA	NA	404.03		0.0	
1Q2023		1/3/2023	NE	38.51	NA	NA	NA	403.47		0.0	
ROST 4 PZ(F)											
2Q2022	442.12	4/4/2022	NE	39.41	NA	NA	NA	402.71	407.59 - 397.59 (34.53 - 44.53)	0.0	
3Q2022		7/5/2022	NE	38.09	NA	NA	NA	404.03		0.0	
4Q2022		10/17/2022	NE	38.09	NA	NA	NA	404.03		0.0	
1Q2023		1/3/2023	NE	38.73	NA	NA	NA	403.39		0.0	
ROST 4 PZ(G)											
2Q2022	442.20	4/5/2022	NE	39.16	NA	NA	NA	403.04	407.92 - 397.92 (34.28 - 44.28)	50.3	
3Q2022		7/5/2022	NE	38.46	NA	NA	NA	403.74		0.0	
4Q2022		10/17/2022	NE	38.68	NA	NA	NA	403.52		0.0	
1Q2023		1/3/2023	NE	39.74	NA	NA	NA	402.46		0.2	
S 1											
2Q2022	444.06	4/4/2022	41.24	41.25	402.81	402.82	0.01	402.82	Unknown	141.5	
3Q2022		7/6/2022	41.02	41.06	403.00	403.04	0.04	403.03		156.6	
4Q2022		10/17/2022	41.23	41.30	402.76	402.83	0.07	402.82		123.4	
1Q2023		1/3/2023	41.81	41.96	402.10	402.25	0.15	402.22		138.6	
T 1											
2Q2022	445.61	4/4/2022	NE	41.55	NA	NA	NA	404.06	398.61 - 388.61 (47.00 - 57.00)	0.0	
3Q2022		7/5/2022	NE	41.22	NA	NA	NA	404.39		0.3	
4Q2022		10/17/2022	NE	41.58	NA	NA	NA	404.03		0.1	
1Q2023		1/3/2023	NE	42.33	NA	NA	NA	403.28		0.0	

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 2											
2Q2022	443.40	4/4/2022	NE	39.61	NA	NA	NA	403.79	392.90 - 372.75 (50.49 - 70.64)	0.0	
3Q2022		7/5/2022	NE	39.63	NA	NA	NA	403.77		0.0	
4Q2022		10/17/2022	NE	39.73	NA	NA	NA	403.67		0.1	
1Q2023		1/3/2023	NE	40.40	NA	NA	NA	403.00		0.0	
T 3											
2Q2022	449.21	4/4/2022	NE	46.57	NA	NA	NA	402.64	403.99 - 388.99 (45.22 - 60.22)	0.0	
3Q2022		7/5/2022	NE	46.76	NA	NA	NA	402.45		0.0	
4Q2022		10/18/2022	NE	46.50	NA	NA	NA	402.71		0.1	
1Q2023		1/3/2023	NE	47.13	NA	NA	NA	402.08		0.0	
T 4											
2Q2022	446.82	4/5/2022	NE	44.70	NA	NA	NA	402.12	396.80 - 381.80 (50.02 - 65.02)	0.0	
3Q2022		7/5/2022	NE	46.23	NA	NA	NA	400.59		0.0	
4Q2022		10/18/2022	NE	45.82	NA	NA	NA	401.00		0.1	
1Q2023		1/3/2023	NE	46.45	NA	NA	NA	400.37		0.0	
T 5											
2Q2022	443.66	4/4/2022	NE	40.30	NA	NA	NA	403.36	395.33 - 378.78 (48.33 - 64.88)	2.5	
3Q2022		7/6/2022	NE	40.22	NA	NA	NA	403.44		16.8	
4Q2022		10/17/2022	NE	40.32	NA	NA	NA	403.34		0.0	
1Q2023		1/3/2023	NE	40.92	NA	NA	NA	402.74		6.0	
T 6											
2Q2022	446.78	4/4/2022	NE	43.97	NA	NA	NA	402.81	394.27 - 380.02 (52.51 - 66.76)	1.4	
3Q2022		7/5/2022	NE	43.23	NA	NA	NA	403.55		0.0	
4Q2022		10/17/2022	NE	43.87	NA	NA	NA	402.91		1.5	
1Q2023		1/3/2023	NE	44.59	NA	NA	NA	402.19		0.1	
T 7											
2Q2022	444.26	4/6/2022	NE	39.92	NA	NA	NA	404.34	395.54 - 380.54 (48.72 - 63.72)	2.1	
3Q2022		7/7/2022	NE	39.44	NA	NA	NA	404.82		0.0	
4Q2022		10/19/2022	NE	40.11	NA	NA	NA	404.15		2.3	
1Q2023		1/4/2023	NE	41.06	NA	NA	NA	403.20		16.5	
T 12											
2Q2022	444.99	4/4/2022	NE	42.39	NA	NA	NA	402.60	398.16 - 372.16 (46.83 - 72.83)	3.1	
3Q2022		7/5/2022	NE	41.64	NA	NA	NA	403.35		5.7	
4Q2022		10/17/2022	NE	42.03	NA	NA	NA	402.96		0.2	
1Q2023		1/3/2023	NE	42.75	NA	NA	NA	402.24		3.9	
T 13											
2Q2022	443.76	4/4/2022	NE	39.41	NA	NA	NA	404.35	399.95 - 373.95 (43.81 - 69.81)	0.0	
3Q2022		7/5/2022	NE	39.10	NA	NA	NA	404.66		0.0	
4Q2022		10/17/2022	NE	39.51	NA	NA	NA	404.25		0.0	
1Q2023		1/3/2023	NE	40.20	NA	NA	NA	403.56		0.0	
T 15											
2Q2022	445.35	4/4/2022	NE	41.35	NA	NA	NA	404.00	396.95 - 370.95 (48.40 - 74.40)	0.0	
3Q2022		7/5/2022	NE	41.55	NA	NA	NA	403.80		0.0	
4Q2022		10/18/2022	NE	41.64	NA	NA	NA	403.71		0.1	
1Q2023		1/3/2023	NE	42.13	NA	NA	NA	403.22		0.0	
T 17											
2Q2022	446.19	4/4/2022	NE	40.34	NA	NA	NA	405.85	401.72 - 375.72 (44.47 - 70.47)	0.0	
3Q2022		7/5/2022	NE	41.28	NA	NA	NA	404.91		0.0	
4Q2022		10/18/2022	NE	41.47	NA	NA	NA	404.72		0.4	
1Q2023		1/3/2023	NE	41.88	NA	NA	NA	404.31		0.0	
T 19											
2Q2022	446.99	4/5/2022	NE	44.74	NA	NA	NA	402.25	396.22 - 370.22 (50.77 - 76.77)	8.5	
3Q2022		7/5/2022	NE	46.22	NA	NA	NA	400.77		33.8	
4Q2022		10/18/2022	NE	45.82	NA	NA	NA	401.17		8.4	
1Q2023		1/3/2023	NE	46.50	NA	NA	NA	400.49		11.7	
T 21											
2Q2022	444.22	4/6/2022	NE	31.91	NA	NA	NA	412.31	412.26 - 386.26 (31.96 - 57.96)	0.0	
3Q2022		7/7/2022	NE	31.56	NA	NA	NA	412.66		0.0	
4Q2022		10/19/2022	NE	31.90	NA	NA	NA	412.32		0.0	
1Q2023		1/4/2023	NE	32.57	NA	NA	NA	411.65		0.0	

SEE LAST PAGE OF TABLE FOR NOTES

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 22											
2Q2022	442.37	4/6/2022	NE	33.47	NA	NA	NA	408.90	410.82 - 385.12 (31.55 - 57.25)	0.0	
3Q2022		7/7/2022	NE	32.87	NA	NA	NA	409.50		0.0	
4Q2022		10/19/2022	NE	33.62	NA	NA	NA	408.75		0.0	
1Q2023		1/4/2023	NE	34.43	NA	NA	NA	407.94		0.0	
T 23											
2Q2022	432.90	4/6/2022	NE	26.05	NA	NA	NA	406.85	405.67 - 379.67 (27.23 - 53.23)	0.0	
3Q2022		7/7/2022	NE	25.51	NA	NA	NA	407.39		0.0	
4Q2022		10/18/2022	NE	26.57	NA	NA	NA	406.33		0.0	
1Q2023		1/4/2023	NE	27.41	NA	NA	NA	405.49		0.0	
T 24											
2Q2022	444.00	4/4/2022	41.11	41.24	402.76	402.89	0.13	402.86	402.50 - 376.85 (41.50 - 67.15)	0.0	
3Q2022		7/6/2022	NE	40.93	NA	NA	NA	403.07		16.4	
4Q2022		10/17/2022	NE	41.13	NA	NA	NA	402.87		0.2	
1Q2023		1/3/2023	NE	41.90	NA	NA	NA	402.10		2.1	
T 28											
2Q2022	444.56	4/4/2022	NE	39.94	NA	NA	NA	404.62	Unknown	0.0	
3Q2022		7/5/2022	NE	40.64	NA	NA	NA	403.92		0.0	
4Q2022		10/18/2022	NE	40.66	NA	NA	NA	403.90		0.1	
1Q2023		1/3/2023	NE	41.11	NA	NA	NA	403.45		0.0	
T 37											
2Q2022	447.44	4/5/2022	NE	41.10	NA	NA	NA	406.34	398.58 - 378.58 (48.85 - 68.85)	0.0	
3Q2022		7/6/2022	NE	42.24	NA	NA	NA	405.20		0.0	
4Q2022		10/18/2022	NE	42.20	NA	NA	NA	405.24		0.0	
1Q2023		1/3/2023	NE	42.60	NA	NA	NA	404.84		0.0	
T 38											
2Q2022	445.89	4/5/2022	NE	38.39	NA	NA	NA	407.50	396.75 - 376.75 (49.14 - 69.14)	0.0	
3Q2022		7/6/2022	NE	38.67	NA	NA	NA	407.22		0.0	
4Q2022		10/18/2022	NE	38.49	NA	NA	NA	407.40		0.1	
1Q2023		1/3/2023	NE	38.83	NA	NA	NA	407.06		0.0	
T 62											
2Q2022	432.16	4/5/2022	NE	27.72	NA	NA	NA	404.44	412.45 - 382.45 (19.71 - 49.71)	0.0	
3Q2022		7/6/2022	NE	26.57	NA	NA	NA	405.59		0.0	
4Q2022		10/18/2022	NE	28.19	NA	NA	NA	403.97		0.0	
1Q2023		1/4/2023	NE	29.35	NA	NA	NA	402.81		0.0	
T 63											
2Q2022	431.55	4/5/2022	NE	27.32	NA	NA	NA	404.23	411.57 - 381.57 (19.98 - 49.98)	0.0	
3Q2022		7/6/2022	NE	26.02	NA	NA	NA	405.53		0.0	
4Q2022		10/18/2022	NE	27.88	NA	NA	NA	403.67		0.0	
1Q2023		1/4/2023	NE	29.07	NA	NA	NA	402.48		0.0	
T 64											
2Q2022	429.10	4/5/2022	NE	35.12	NA	NA	NA	393.98	409.29 - 379.29 (19.81 - 49.81)	0.0	
3Q2022		7/6/2022	NE	23.67	NA	NA	NA	405.43		0.0	
4Q2022		10/18/2022	NE	26.00	NA	NA	NA	403.10		0.0	
1Q2023		1/4/2023	NE	27.20	NA	NA	NA	401.90		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 grav ty 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 mil ion; NA Not App icable; 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 4 quarters from the combined Vi lage of Roxana Interim Groundwater Monitoring Program and the WRB Refining LP Wood River Refinery Program.

7) The screened interval for certain monitoring we ls was adjusted based on an evaluation of the results of annual bottom depth gauging conducted in the first quarter of each year.

8) Top of casing and screened interval for the groundwater monitoring wells in the Roxana Interim Groundwater Monitoring Program and the WRR Program were adjusted based on surveying conducted in 2Q19, in accordance with Perm t Condition IV.J.9, which requires we ls be surveyed every five (5) years.

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-01							
2Q22	6.78	17.10	1.013	24 80	0.37	58.20	
3Q22	6.98	21.61	1.042	30 53	0.51	20.50	
4Q22	6.90	18.15	0.966	4.54	0.63	45.45	
1Q23	6.99	15.65	0.901	10 09	0.88	159.41	
MW-02							
2Q22	7.15	16.37	1.021	4.61	0.20	-123.16	
3Q22	7.13	21.56	0.968	2.87	0.40	-140 56	
4Q22	7.16	18.23	0.824	6.14	0.64	-50.56	
1Q23	7.32	13.77	0.840	13.19	0.83	67.69	
MW-03							
2Q22	6.69	16.73	1.492	3.69	0.18	-56.84	
3Q22	6.68	20.37	1.461	3.56	0.34	-137.78	
4Q22	6.61	18.73	1.293	0.00	0.53	-72.66	
1Q23	6.80	17.70	1.595	5.82	0.55	-104 07	
MW-04							
2Q22	6.54	15.38	1.134	15 23	0.37	103.15	
3Q22	6.72	20.57	1.172	22.16	0.34	-103 54	
4Q22	6.86	18.56	1.116	2.82	0.49	-38.50	
1Q23	6.81	15.87	1.058	7.84	0.60	-78.06	
MW-05							
2Q22	6.67	17.80	1.134	5.26	0.28	35.70	
3Q22	6.70	20.59	1.126	9.98	1.01	-100 89	
4Q22	6.65	17.68	0.984	6.49	0.69	-72.15	
1Q23	6.72	16.17	1.237	3.28	0.63	-83.91	
MW-06A							
2Q22	6.52	18.20	1.189	29 00	0.16	-67.65	
3Q22	6.80	22.51	0.956	32 29	1.02	-72.90	
4Q22	6.78	20.87	1.066	40 67	0.35	-97.21	
1Q23	6.74	18.82	1.355	27.44	0.51	-81.76	
MW-06B							
2Q22	7.06	17.59	0.832	7.91	0.37	-61.84	
3Q22	7.14	21.72	0.763	8.30	0.91	-96.07	
4Q22	7.04	20.33	0.773	5.61	0.65	-76.49	
1Q23	7.09	18.41	0.841	4.23	0.76	-80.97	
MW-06C							
2Q22	7.08	17.24	0.761	3.11	0.37	-70.82	
3Q22	7.12	21.07	0.766	1.92	0.88	-111 88	
4Q22	7.01	19.10	0.779	0.00	0.59	-86.89	
1Q23	7.05	17.05	0.910	4.74	0.72	-88.42	
MW-06D							
2Q22	6.91	17.36	1.314	10 87	0.19	-62.08	
3Q22	7.00	20.22	0.993	33.11	0.84	-98.35	
4Q22	6.91	18.55	0.952	14 02	0.57	-60.22	
1Q23	7.04	18.12	1.424	34.42	0.68	-105 52	

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-07							
2Q22	6.78	17.66	1.470	5.16	0.27	15.97	
3Q22	6.78	22.51	1.296	7.48	0.32	-75.06	
4Q22	6.65	18.66	1.299	0.00	0.51	-29.52	
1Q23	6.73	17.29	1.130	2.66	0.59	-57.01	
MW-08							
2Q22	6.81	16.77	1.409	11 56	0.27	2 98	
3Q22	6.86	22.25	1.393	4.69	0.32	-145 30	
4Q22	6.74	18.47	1.433	15.48	0.51	-78.14	
1Q23	6.84	15.98	1.230	46.70	0.63	-132.72	
MW-09							
2Q22	6.71	17.31	1.300	18 85	2.58	84.94	
3Q22	6.58	20.08	1.102	6.32	0.44	-61.82	
4Q22	6.77	17.95	1.031	0.00	0.63	-49.17	
1Q23	6.86	14.64	0.936	22 21	0.71	-67.21	
MW-10							
2Q22	6.96	17.28	1.494	37 26	0.25	-83.61	
3Q22	6.94	21.40	2.106	31.71	0.45	-138 37	
4Q22	6.84	18.88	1.875	35 09	0.48	-23.18	
1Q23	6.98	15.18	1.445	41.18	0.65	-84.20	
MW-11							
2Q22	6.83	16.48	1.493	6.97	2.70	78.04	
3Q22	6.70	20.08	1.615	13 33	0.41	-91.02	
4Q22	6.54	16.18	1.328	13 53	0.66	-23.09	
1Q23	6.62	13.71	1.390	20 98	0.90	27.61	
MW-12							
2Q22	6.97	16.99	0.912	7.53	0.34	2 67	
3Q22	7.03	21.12	0.937	8.62	0.45	74.63	
4Q22	6.57	17.18	0.865	1.29	0.68	115 08	
1Q23	6.83	16.76	1.041	2.92	0.76	69.22	
MW-13							
2Q22	6.42	19.12	1.233	32.49	0.21	-19.73	
3Q22	6.59	23.85	1.009	19 63	0.14	-125.76	
4Q22	6.47	20.99	1.430	19.40	0.50	-92.33	
1Q23	6.59	18.95	1.080	28 30	0.49	-41.18	
MW-14							
2Q22	6.63	15.60	1.225	37.70	0.20	-33.82	
3Q22	6.67	20.80	1.197	36 29	0.66	-84.68	
4Q22	6.71	19.39	1.121	22.72	0.58	-56.63	
1Q23	6.70	17.87	1.186	14 20	0.62	-25.50	
MW-16							
2Q22	6.72	16.29	0.900	8.48	0.40	14.36	
3Q22	6.73	21.08	0.873	25 62	0.63	-14.60	
4Q22	6.72	17.28	0.861	19 96	0.66	43.10	
1Q23	6.70	15.80	0.847	12.13	0.94	40.20	

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-22							
2Q22	6.97	17.69	1.195	4.68	0.29	3.12	
3Q22	6.99	22.75	1.064	9.92	0.45	-104 09	
4Q22	6.77	18.11	0.938	12.41	0.64	-21.70	
1Q23	6.85	17.66	1.309	6.63	0.82	70.00	
MW-23							
2Q22	6.62	17.31	0.959	16 34	0.28	-22.28	
3Q22	6.53	21.70	1.057	11 65	0.36	-99.86	
4Q22	6.47	18.42	1.073	39 89	0.59	-39.10	
1Q23	6.50	16.82	1.225	23 58	0.61	-43.53	
MW-24							
2Q22	7.00	17.53	1.627	10 06	2.67	87.73	
3Q22	6.62	19.35	1.618	4.61	0.38	140 04	
4Q22	6.93	18.29	1.606	9.66	0.99	39.40	
1Q23	6.81	15.63	1.506	35.70	0.82	64.21	
MW-25							
2Q22	6.82	17.47	1.217	42 28	0.18	21.78	
3Q22	6.91	22.57	1.087	13 94	0.38	-129 92	
4Q22	6.88	19.14	1.040	11 01	0.56	-63.06	
1Q23	6.95	17.62	0.898	38.49	0.39	-120 56	
MW-26							
2Q22	6.76	16.94	1.580	23 64	0.41	19.46	
3Q22	6.58	20.50	1.311	1.06	0.93	127 26	
4Q22	6.73	18.53	1.217	7.84	0.72	23.86	
1Q23	6.68	15.75	1.417	11 85	0.68	164.45	
MW-27							
2Q22	6.87	15.29	0.933	14.72	0.80	25.59	
3Q22	6.77	19.72	0.857	11.48	1.72	38.15	
4Q22	6.78	17.67	0.784	46 38	1.07	53.80	
1Q23	6.81	16.50	0.807	14 57	0.68	65.12	
MW-28							
2Q22	6.65	17.30	1.129	20 21	0.28	48.40	
3Q22	6.73	21.17	1.124	29.48	0.34	-53.55	
4Q22	6.56	17.88	1.015	32.16	0.65	28.49	
1Q23	6.78	16.80	1.164	25 29	0.72	4 24	
P-114R							
2Q22	6.70	20.16	1.155	32 51	0.17	-80.19	
3Q22	6.51	25.54	0.893	39 65	0.40	-142.13	
4Q22	6.67	22.20	0.989	25 58	0.39	-99.55	
1Q23	6.74	21.34	0.865	36.19	0.39	-93.29	
P-54							
2Q22	6.85	13.38	1.367	6.22	2.03	65.18	
3Q22	6.75	21.62	1.067	9.35	2.31	81.89	
4Q22	6.60	16.71	1.022	12 21	5.08	151 35	
1Q23	6.76	15.82	1.268	11.44	4.51	150 86	

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-55R							
2Q22	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
3Q22	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
4Q22	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
1Q23	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
P-56							
2Q22	7.03	17.98	1.097	16.10	0.48	-140 91	
3Q22	7.12	23.09	1.053	9.59	0.28	-129 54	
4Q22	7.20	20.80	1.056	1.71	0.66	-56.35	
1Q23	7.22	18.01	1.097	6.91	0.61	-22.33	
P-57							
2Q22	6.88	18.30	1.067	2.39	0.27	-65.41	
3Q22	6.85	22.10	1.104	0.47	0.43	-134 50	
4Q22	6.96	19.30	0.936	1.02	0.31	-127.10	
1Q23	6.84	18.83	1.149	0.71	0.62	16.83	
P-58							
2Q22	6.68	18.82	1.434	16 04	0.23	-29.06	
3Q22	6.72	23.15	1.448	43 98	0.17	-148 08	
4Q22	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
1Q23	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
P-59							
2Q22	6.46	18.42	1.412	2.81	0.30	27.39	
3Q22	6.52	24.71	1.317	3.95	0.28	-111 30	
4Q22	6.51	22.21	1.538	2.65	0.49	-38.03	
1Q23	6.67	19.83	1.555	0.32	0.73	2 54	
P-66							
2Q22	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
3Q22	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
4Q22	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
1Q23	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
P-68							
2Q22	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
3Q22	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
4Q22	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
1Q23	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
P-74							
2Q22	6.69	15.17	0.194	9.89	1.35	106 37	
3Q22	6.38	22.48	0.187	7.58	0.33	-31.81	
4Q22	6.81	20.30	0.209	7.28	0.63	8 60	
1Q23	7.26	19.39	0.196	9.01	1.29	28.23	
P-93A							
2Q22	6.65	19.84	1.332	2.49	0.47	-51.28	
3Q22	6.43	21.50	1.272	0.00	0.68	114 90	
4Q22	6.50	19.20	1.299	0.00	0.67	50.44	
1Q23	6.31	16.43	1.225	0.00	0.82	93.44	

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-93B							
2Q22	6.58	15.20	1.302	2.78	0.31	46.93	
3Q22	6.59	19.72	1.302	3.18	0.46	-68.28	
4Q22	6.64	19.56	1.485	0.20	0.47	-38.51	
1Q23	6.76	18.29	1.454	2.18	0.46	4 29	
P-93C							
2Q22	7.06	17.80	1.033	5.23	0.56	-117 65	
3Q22	6.92	20.48	1.069	5.27	0.33	-105.41	
4Q22	6.72	17.75	1.056	0.00	0.73	15.79	
1Q23	6.92	15.15	1.044	0.00	0.78	-29.33	
P-93D							
2Q22	7.11	16.86	1.207	5.39	0.81	-104 23	
3Q22	6.97	19.27	1.110	3.28	0.32	-47.87	
4Q22	6.90	18.60	1.189	3.89	0.47	3 30	
1Q23	7.07	15.95	1.134	3.76	0.75	-21.56	
ROST-3-MW							
2Q22	6.74	16.26	1.273	42.45	0.20	-50.55	
3Q22	6.67	18.71	1.142	2.55	0.80	-99.94	
4Q22	6.67	17.49	1.124	2.78	0.62	-65.21	
1Q23	6.71	14.79	1.150	12.18	0.61	-97.69	
ROST-4-PZ(C)							
2Q22	6.76	16.50	1.393	7.99	0.23	-60.75	
3Q22	6.99	22.33	1.255	19 62	0.42	-108 20	
4Q22	6.94	17.58	1.169	7.60	0.63	-47.89	
1Q23	6.92	14.37	1.266	9.86	0.75	-0 84	
ROST-4-PZ(E)							
2Q22	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample collected.
3Q22	6.84	21.15	1.725	3.93	0.30	-110.72	
4Q22	6.88	18.70	1.164	13 99	0.48	-25.70	
1Q23	6.80	17.94	1.876	12 31	0.69	20.86	
ROST-4-PZ(G)							
2Q22	6.73	16.87	1.296	4.90	0.27	35.93	
3Q22	6.85	20.76	1.159	20 69	0.84	-143 21	
4Q22	6.83	18.69	1.144	28 04	0.59	-84.25	
1Q23	6.94	17.35	1.414	7.42	0.54	-49.84	
T-12							
2Q22	7.02	19.22	1.532	3.87	0.60	-142 30	
3Q22	6.83	22.65	1.570	4.86	0.30	-137.14	
4Q22	6.83	21.41	1.803	0.00	0.64	-65.45	
1Q23	6.74	18.43	1.958	0.00	0.72	29.57	

NOTES:

1) Field parameters were collected using a YSI ProDSS.

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 3a
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

			VOCs																		
			Acetone	Benzene	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Chloroform	1-Chlorohexane	Chloromethane	2-Chlorotoluene	Cymene (p-Isopropyltoluene)	1,2-Dibromo-3-chloropropane (DBCP)	cis-1,2-Dichloroethene	trans-1,3-Dichloropropene	Ethylbenzene	Isopropylbenzene (Cumene)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene
Screening Values (mg/L)			**6.3** [1]	**0.005** [1]	**4.2** [1]	**0.35** [3]	**0.7** [3]	**0.7** [3]	**0.7** [1]	**0.07** [1]			**0.14** [3]		**0.0002** [1]	**0.07** [1]		**0.7** [1]	**0.7** [1]	**0.07** [1]	**0.14** [1]	**0.7** [3]
Location	**Sample ID**	**Sample Date**	**Analytical Results (mg/L)**																			
MW-01	MW1-ROX-041322	4/13/2022	<0.025	<0 001	<0.025	<0 001	<0 001	0.0011	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000034	<0.001	<0.005	<0 001	<0 001	0.0039	<0 001	<0.001
	MW1-ROX-070822	7/8/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000031	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW1-ROX-102022	10/20/2022	<0.025	0.00066 J	<0.025	<0 001	<0 001	<0 001	<0.001 UJ	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW1-ROX-011323	1/13/2023	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000029	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW1-ROX-011323-PAH	1/13/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-02	MW2-ROX-041422	4/14/2022	<0.025	0.0013	<0.025	0.0013	0.0031	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	0 0028	<0.000031	<0.001	<0.005	0.072	0.032	<0 001	0.012	0.045
	MW2-ROX-041422-DUP	4/14/2022	<0.025	0.0013	<0.025	0.0017	0.0038	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	0 0039	<0.000033	<0.001	<0.005	0.082	0.036	<0 001	0.014	0.054
	MW2-ROX-071422	7/14/2022	<0.13	<0 005	<0.13	<0 005	0.0060	<0 005	<0 005	<0.005	<0.005	<0.005	<0.005	0 0075	<0.000032	<0.005	<0.025	0.42	0.069	<0 005	0.045	0.095
	MW2-ROX-102822	10/28/2022	<0.025	0.0014	0 021 J	0.006	0.0054	0.00066 J	<0.001 UJ	<0.001	<0.001	<0.001	<0.001	0.005	<0 00003	<0.001	<0.005	0 09	0.047	<0 001	0.022	0.076
	MW2-ROX-011323	1/13/2023	<0.025	0.0016	0.033	0.004	0.0046	0.00063 J	0.00063 J	<0.001	<0.001	<0.001	<0.001	0 0039	<0 00003	<0.001	<0.005	0.036	0.037	<0 001	0 01	0.058
MW-03	MW3-ROX-041222	4/12/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000034	<0.001	<0.005	<0.001	<0 001	0.0005 J	<0 005	<0.001
	MW3-ROX-071422	7/14/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000033	<0.001	<0.005	<0.001	<0 001	0.00085 J	<0 005	<0.001
	MW3-ROX-102522	10/25/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000034	<0.001	<0.005	<0.001	<0 001	0.001	<0 005	<0.001
	MW3-ROX-011123	1/11/2023	<0.025	0.00061 J	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000029	<0.001	<0.005	<0.001	<0 001	0.0017	<0 005	<0.001
	MW3-ROX-011123-PAH	1/11/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-04	MW4-ROX-041922	4/19/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000032	<0.001	<0.005	<0.001	<0 001	0.0009 J	<0 005	<0.001
	MW4-ROX-071822	7/18/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000032	<0.001	<0.005	<0.001	<0 001	0.00044 J	<0 005	<0.001
	MW4-ROX-103122	10/31/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	0.00084 J	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	0.00036 J	<0 005	<0.001
	MW4-ROX-010923	1/9/2023	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000029	<0.001	<0.005	<0.001	<0 001	0.00041 J	<0 005	<0.001
MW-05	MW5-ROX-041322	4/13/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000032	<0.001	<0.005	<0.001	<0 001	<0 001	<0 001	<0.001
	MW5-ROX-071122	7/11/2022	< 0.025	<0 001	<0.025	<0 001	<0 001	0.0022	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000031	<0.001	<0.005	<0.001	<0 001	0.003	<0 005	<0.001
	MW5-ROX-102722	10/27/2022	<0.025	<0 001	<0.025	<0 001	<0 001	0.0021	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000032	<0.001	<0.005	<0.001	<0 001	0.0027	<0 005	<0.001
	MW5-ROX-011023	1/10/2023	<0.025	<0 001	<0.025	<0 001	<0 001	0.0016	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	0.0026	<0 005	<0.001
MW-06A	MW6A-ROX-041122	4/11/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000033	<0.001	<0.005	<0.001	<0 001	0.00041 J	<0 001	<0.001
	MW6A-ROX-070822	7/8/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	0.00038 J	<0 005	<0.001
	MW6A-ROX-102122	10/21/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0.001 UJ	<0.001 UJ	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	0.00038 J	<0 005	<0.001
	MW6A-ROX-102122-PAH	10/21/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MW6A-ROX-011123	1/11/2023	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	0.00061 J	<0 005	<0.001
MW-06B	MW6B-ROX-041122	4/11/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000036	<0.001	<0.005	<0.001	<0 001	0.00035 J	<0 001	<0.001
	MW6B-ROX-070822	7/8/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	0.00033 J	<0 005	<0.001
	MW6B-ROX-102122	10/21/2022	<0.025	0.00027 J	<0.025	<0 001	<0 001	<0 001	<0.001 UJ	<0.001 UJ	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	0.00035 J	<0 005	<0.001
	MW6B-ROX-011123	1/11/2023	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	0.00045 J	<0 005	<0.001
	MW6B-ROX-011123-PAH	1/11/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MW6B-ROX-011123-DUP	1/11/2023	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	0.00046 J	<0 005	<0.001
	MW6B-ROX-011123-DUP-PAH	1/11/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-06C	MW6C-ROX-041122	4/11/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000032	<0.001	<0.005	<0.001	<0 001	0.00036 J	<0 001	<0.001
	MW6C-ROX-070822	7/8/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	0.00031 J	<0 005	<0.001
	MW6C-ROX-102122	10/21/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0.001 UJ	<0.001 UJ	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	0.00026 J	<0 005	<0.001
	MW6C-ROX-011123	1/11/2023	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000029	<0.001	<0.005	<0.001	<0 001	0.00033 J	<0 005	<0.001
	MW6C-ROX-011123-PAH	1/11/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-06D	MW6D-ROX-041122	4/11/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000034	<0.001	<0.005	<0.001	<0 001	<0 001	<0 001	<0.001
	MW6D-ROX-070822	7/8/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000032	<0.001	<0.005	<0.001	<0 001	<0.0010	<0 005	<0.001
	MW6D-ROX-102122	10/21/2022	<0.025	0.00021 J	<0.025	<0 001	<0 001	<0 001	<0.001 UJ	<0.001 UJ	<0.001	<0.001	<0.001	<0.001	<0.000031	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW6D-ROX-102122-PAH	10/21/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MW6D-ROX-011123	1/11/2023	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000029	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW6D-ROX-011123-PAH	1/11/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3a
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

			VOCs																		
			Acetone	Benzene	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Chloroform	1-Chlorohexane	Chloromethane	2-Chlorotoluene	Cymene (p-Isopropyltoluene)	1,2-Dibromo-3-chloropropane (DBCP)	cis-1,2-Dichloroethene	trans-1,3-Dichloropropene	Ethylbenzene	Isopropylbenzene (Cumene)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene
Screening Values (mg/L)			6.3 [1]	0.005 [1]	4.2 [1]	0.35 [3]	0.7 [3]	0.7 [3]	0.7 [1]	0.07 [1]			0.14 [3]		0.0002 [1]	0.07 [1]		0.7 [1]	0.7 [1]	0.07 [1]	0.14 [1]	0.7 [3]
Location	**Sample ID**	**Sample Date**	**Analytical Results (mg/L)**																			
MW-07	MW7-ROX-041922	4/19/2022	<13 UJ	820	<13 UJ	<0 5 UJ	<0 5 UJ	<0.5 UJ	<0.5 UJ	<0.5 UJ	<0.5 UJ	<0.5 UJ	<0.5 UJ	<0.5 UJ	<0 00003	<0 5 UJ	<2 5 UJ	<0 5 UJ	<0 5 UJ	<0 5 UJ	<2 5 UJ	<0 5 UJ
	MW7-ROX-041922-DUP	4/19/2022	<13	950	<13	<0.5	<0.5	<0.5	<0.5	<0 5	<0 5	<0 5	<0 5	<0 5	<0.000031	<0.5	<2.5	<0.5	<0.5	<0.5	<2.5	<0.5
	MW7-ROX-071822	7/18/2022	<25 UJ	560	<25 UJ	<1 UJ	<1 UJ	<1 UJ	<1 UJ	<1 UJ	<1 UJ	<1 UJ	<1 UJ	<1 UJ	<0.000031	<1 UJ	<5 UJ	<1 UJ	<1 UJ	<1 UJ	<5 UJ	<1 UJ
	MW7-ROX-103122	10/31/2022	<13	680	<13	<0.5	<0.5	<0.5	<0.5	<0 5	<0 5	<0 5	<0 5	<0 5	<0.000031	<0.5	<2.5	<0.5	<0.5	0.3 J	<2.5	<0.5
	MW7-ROX-103122-DUP	10/31/2022	<13	760	<13	<0.5	<0.5	<0.5	<0.5	<0 5	<0 5	<0 5	<0 5	<0 5	<0 00003	<0.5	<2.5	<0.5	<0.5	<0.5	<2.5	<0.5
	MW7-ROX-010923	1/9/2023	<50	420	<50	<2	<2	<2	<2	<2	<2	<2	<2	<2	0 00002 J *+ J	<2	<10	<2	<2	<2	<10	<2
MW-08	MW8-ROX-041922	4/19/2022	<13 UJ	350	<13 UJ	<0 5 UJ	<0 5 UJ	<0.5 UJ	<0.5 UJ	<0.5 UJ	<0.5 UJ	<0.5 UJ	<0.5 UJ	<0.5 UJ	<0.000031	<0 5 UJ	<2 5 UJ	<0 5 UJ	<0 5 UJ	<0 5 UJ	<2 5 UJ	<0 5 UJ
	MW8-ROX-071822	7/18/2022	<1.3	13	<1.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0 05	<0.000035	<0 05	<0 25	<0 05	<0.05	0.061	<0.25	<0 05
	MW8-ROX-071822-DUP	7/18/2022	<1.3	13	<1.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0 05	<0 00003	<0 05	<0 25	<0 05	<0.05	0.051	<0.25	<0 05
	MW8-ROX-103122	10/31/2022	<6.3	280	<6.3	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0 25	<0.000031	<0 25	<1.3	0 31	<0.25	<0.25	<1.3	<0 25
	MW8-ROX-010923	1/9/2023	<25 UJ	390	<25 UJ	<1 UJ	<1 UJ	<1 UJ	<1 UJ	<1 UJ	<1 UJ	<1 UJ	<1 UJ	<1 UJ	0.000028 J *+ J	<1 UJ	<5 UJ	<1 UJ	<1 UJ	<1 UJ	<5 UJ	<1 UJ
	MW8-ROX-010923-DUP	1/9/2023	<25 UJ	380	<25 UJ	<1 UJ	<1 UJ	<1 UJ	<1 UJ	<1 UJ	<1 UJ	<1 UJ	<1 UJ	<1 UJ	0.000028 J *+ J	<1 UJ	<5 UJ	<1 UJ	<1 UJ	<1 UJ	<5 UJ	<1 UJ
MW-09	MW9-ROX-040722	4/7/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000033	<0.001	<0.005	<0.001	<0 001	<0 001	<0 001	<0.001
	MW9-ROX-071222	7/12/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000031	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW9-ROX-102722	10/27/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	<0 001	<0.005 H UJ	<0.001
	MW9-ROX-010523	1/5/2023	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
MW-10	MW10-ROX-041422	4/14/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000032	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW10-ROX-070822	7/8/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000031	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW10-ROX-102022	10/20/2022	<0.025	0 0005 J	<0.025	<0 001	<0 001	<0 001	<0.001 UJ	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000031	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW10-ROX-011223	1/12/2023	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000029	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
MW-11	MW11-ROX-040722	4/7/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000033	<0.001	<0.005	<0.001	<0 001	<0 001	<0 001	<0.001
	MW11-ROX-070822	7/8/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000034	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW11-ROX-102022	10/20/2022	<0.025	0.00049 J	<0.025	<0 001	<0 001	<0 001	<0.001 UJ	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000029	<0.001	<0.005	<0.001	<0 001	< 0 001	<0 005	<0.001
	MW11-ROX-011223	1/12/2023	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	< 0 001	<0 005	<0.001
MW-12	MW12-ROX-041222	4/12/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000032	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW12-ROX-070822	7/8/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000031	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW12-ROX-102622	10/26/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW12-ROX-102622-PAH	10/26/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MW12-ROX-010623	1/6/2023	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000029	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
MW-13	MW13-ROX-041422	4/14/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000031	<0.001	<0.005	<0.001	<0 001	0.00083 J	<0 005	<0.001
	MW13-ROX-071122	7/11/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000032	<0.001	<0.005	<0.001	<0 001	0.00069 J	<0 005	<0.001
	MW13-ROX-102422	10/24/2022	<0.025	0 0003 J	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000030	<0.001	<0.005	<0.001	<0 001	0.001	<0 005	<0.001
	MW13-ROX-010923	1/9/2023	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000029	<0.001	<0.005	<0.001	<0 001	0.00074 J	<0 005	<0.001
MW-14	MW14-ROX-040822	4/8/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000034	<0.001	<0.005	<0.001	<0 001	<0 001	<0 001	<0.001
	MW14-ROX-071122	7/11/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW14-ROX-102422	10/24/2022	<0.025	0.00054 J	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000031	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW14-ROX-102422-DUP	10/24/2022	<0.025	0.00054 J	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000031	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW14-ROX-010923	1/9/2023	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000029	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW14-ROX-010923-DUP	1/9/2023	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
MW-16	MW16-ROX-041222	4/12/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW16-ROX-071222	7/12/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW16-ROX-102522	10/25/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000033	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW16-ROX-010523	1/5/2023	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3a
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

			VOCs																		
			Acetone	Benzene	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Chloroform	1-Chlorohexane	Chloromethane	2-Chlorotoluene	Cymene (p-Isopropyltoluene)	1,2-Dibromo-3-chloropropane (DBCP)	cis-1,2-Dichloroethene	trans-1,3-Dichloropropene	Ethylbenzene	Isopropylbenzene (Cumene)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene
Screening Values (mg/L)			**6.3** [1]	**0.005** [1]	**4.2** [1]	**0.35** [3]	**0.7** [3]	**0.7** [3]	**0.7** [1]	**0.07** [1]			**0.14** [3]		**0.0002** [1]	**0.07** [1]		**0.7** [1]	**0.7** [1]	**0.07** [1]	**0.14** [1]	**0.7** [3]
Location	**Sample ID**	**Sample Date**	**Analytical Results (mg/L)**																			
MW-22	MW22-ROX-041522	4/15/2022	<0.025	0.0031	<0.025	<0 001	0.0009 J	0.0025	<0 001	<0.001	<0.001	<0.001	<0.001	0 0012	<0.000033	<0.001	<0.005	0.025	0.0078	<0 001	0.016	0.014
	MW22-ROX-071422	7/14/2022	<0.025	0.0026	<0.025	<0 001	0.0021	0.0028	<0 001	<0.001	<0.001	<0.001	<0.001	0 0027	<0.000031	<0.001	<0.005	0.055	0.017	<0 001	0.034	0.029
	MW22-ROX-071422-DUP	7/14/2022	<0.025	0.0024	<0.025	<0 001	0.0027	0.0045	<0 001	<0.001	<0.001	<0.001	<0.001	0 0028	<0.000032	<0.001	<0.005	0.052	0.021	<0 001	0.039	0.037
	MW22-ROX-102822	10/28/2022	<0.025	0.0056	0.0039 J	0.0043	0.0023	0.0045	<0.001 UJ	<0.001	<0.001	<0.001	<0.001	0 0029	<0.000033	<0.001	<0.005	0 09	0 02	<0 001	0.046	0.037
	MW22-ROX-011023	1/10/2023	0.029 J	0.0085	0.0086 J	0.0041	0.0022	0.0044	<0 002	<0.002	<0.002	<0.002	<0.002	0 0035	0.000041 *+ J	<0.002	<0 01	0.085	0.021	<0 002	0.041	0.042
MW-23	MW23-ROX-041222	4/12/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000034	<0.001	<0.005	<0 001	<0 001	0.00025 J	<0 001	<0.001
	MW23-ROX-071322	7/13/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	0 00021 J	<0.005	<0.001	<0 001	0.00082 J	<0 005	<0.001
	MW23-ROX-102622	10/26/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	0.00042 J	<0 005	<0.001
	MW23-ROX-011023	1/10/2023	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000029	<0.001	<0.005	<0.001	<0 001	0.00032 J	<0 005	<0.001
MW-24	MW24-ROX-040722	4/7/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000034	<0.001	<0.005	<0.001	<0 001	<0 001	<0 001	<0.001
	MW24-ROX-071122	7/11/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW24-ROX-102022	10/20/2022	<0.025	0.00055 J	<0.025	<0 001	<0 001	<0 001	<0.001 UJ	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW24-ROX-102022-PAH	10/20/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MW24-ROX-011223	1/12/2023	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW24-ROX-011223-PAH	1/12/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-25	MW25-ROX-041922	4/19/2022	<0.025	0 013	<0.025	<0 001	<0 001	<0 001	0.0034	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000031	<0.001	<0.005	<0 001	<0 001	<0 001	<0 005	<0.001
	MW25-ROX-071822	7/18/2022	<0.025	0 014	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000033	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW25-ROX-103122	10/31/2022	<0.025	0.02	<0.025	<0 001	<0 001	<0 001	0.00069 J	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	0.00078 J	<0 005	<0.001
	MW25-ROX-010923	1/9/2023	<0.025	0 024	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	0.00071 J	<0 005	<0.001
MW-26	MW26-ROX-041122	4/11/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000033	<0.001	<0.005	<0 001	<0 001	0.00036 J	<0 001	<0.001
	MW26-ROX-071222	7/12/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW26-ROX-102822	10/28/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW26-ROX-010623	1/6/2023	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000029	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
MW-27	MW27-ROX-040822	4/8/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000033	<0.001	<0.005	<0.001	<0 001	<0 001	<0 001	<0.001
	MW27-ROX-071122	7/11/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000031	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW27-ROX-102622	10/26/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000031	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	MW27-ROX-010623	1/6/2023	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
MW-28	MW28-ROX-041322	4/13/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000032	<0.001	<0.005	<0 001	<0 001	0.0028	<0 001	<0.001
	MW28-ROX-071222	7/12/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000031	<0.001	<0.005	<0.001	<0 001	0.0064	<0 005	<0.001
	MW28-ROX-102522	10/25/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000031	<0.001	<0.005	<0.001	<0 001	0.0014	<0 005	<0.001
	MW28-ROX-102522-DUP	10/25/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000036	<0.001	<0.005	<0.001	<0 001	0.0014	<0 005	<0.001
	MW28-ROX-010523	1/5/2023	<0.025	0.00038 J	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	0.0026	<0 005	<0.001
P-54	P54-ROX-040822	4/8/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000032	<0.001	<0.005	<0.001	<0 001	<0 001	<0 001	<0.001
	P54-ROX-071222	7/12/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000032	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	P54-ROX-102722	10/27/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	P54-ROX-010623	1/6/2023	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000029	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
P-56	P56-ROX-042022	4/20/2022	<0.025	<0 001	<0.025	0.0013	0.0022	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	0 0013	<0.000032	<0.001	<0.005	0.0033	0.021	<0 001	<0 005	0.024
	P56-ROX-071322	7/13/2022	<0.025	0 0007 J	<0.025	0.00082 J	0.0023	<0 001	0.00074 J	<0.001	<0.001	<0.001	0 0014	0 0012	<0.000031	<0.001	<0.005	0.0022	0.017	<0 001	0.0052	0.021
	P56-ROX-110122	11/1/2022	<0.025	0 0005 J	<0.025	<0 001	0.0011	<0 001	<0 001	0.0015	<0.001	<0.001	<0.001	<0.001	<0.000031	<0.001	<0.005	<0.001	0.0062	<0 001	<0 005	0.0071
	P56-ROX-010923	1/9/2023	<0.025	<0 001	<0.025	0.00089 J	0.0016	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	0 00087 J	<0.000029	<0.001	<0.005	0.0012	0.012	<0 001	<0 005	0.014

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3a
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

			VOCs																		
			Acetone	Benzene	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Chloroform	1-Chlorohexane	Chloromethane	2-Chlorotoluene	Cymene (p-Isopropyltoluene)	1,2-Dibromo-3-chloropropane (DBCP)	cis-1,2-Dichloroethene	trans-1,3-Dichloropropene	Ethylbenzene	Isopropylbenzene (Cumene)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene
Screening Values (mg/L)			**6.3** [1]	**0.005** [1]	**4.2** [1]	**0.35** [3]	**0.7** [3]	**0.7** [3]	**0.7** [1]	**0.07** [1]			**0.14** [3]		**0.0002** [1]	**0.07** [1]		**0.7** [1]	**0.7** [1]	**0.07** [1]	**0.14** [1]	**0.7** [3]
Location	**Sample ID**	**Sample Date**	**Analytical Results (mg/L)**																			
P-57	P57-ROX-041522	4/15/2022	<0.025	0 048	<0.025	<0 001	0.0008 J	0.0017	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000031	<0.001	<0.005	0.00052 J	0.0067	<0 001	0.0095	0.0053
	P57-ROX-071522	7/15/2022	<0.025	0 014	<0.025	0.0033	0.0053	0.0074	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	0.00082 J	0.024	<0 001	0.018	0.023
	P57-ROX-102822	10/28/2022	0.02 J *+ J	0 054	<0.025	0.0036	0.0058	0.0078	<0 001	<0.001	<0.001	<0.001	<0.001	0 00076 J	<0 00003	<0.001	<0.005	0.0014	0.031	<0 001	0.012	0.035
	P57-ROX-102822-PAH	10/28/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	P57-ROX-011023	1/10/2023	0.01 J	0.05	0.0028 J	0.0023	0.0046	0.0054	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	0.00095 J	0.021	<0 001	0.0082	0.023
P-58	P58-ROX-041822	4/18/2022	<13	190	<13	<0.5	<0.5	<0.5	<0.5	<0 5	<0 5	<0 5	<0 5	<0 5	<0 00003	<0.5	<2.5	0.34 J	<0.5	<0.5	<2.5	<0.5
	P58-ROX-041822-DUP	4/18/2022	<13	210	<13	<0.5	<0.5	<0.5	<0.5	<0 5	<0 5	<0 5	<0 5	<0 5	<0.000031	<0.5	<2.5	0.43 J	<0.5	<0.5	<2.5	<0.5
	P58-ROX-071422	7/14/2022	<25	230	<25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.000031	<1	<5	0.69 J	<1	<1	<5	<1
	P58-ROX-071422-DUP	7/14/2022	<25	230	<25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.000031	<1	<5	0.57 J	<1	<1	<5	<1
P-59	P59-ROX-041822	4/18/2022	<0.5	3.8	<0.5	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0 02	<0 00003	<0 02	<0.1	0 35	0.054	<0.02	0.17	0.096
	P59-ROX-071422	7/14/2022	<0.5	1.9	<0.5	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.000033	<0 02	<0.1	0.3	0.056	<0.02	0.13	0.086
	P59-ROX-110422	11/4/2022	0.14 J	2.2	<0 25	<0.01	<0.01	<0.01	<0 01 UJ	<0.01	<0.01	<0.01	<0.01	<0.01	<0 00003	<0 01	<0 05	0.17	0.044	<0.01	0.096	0.077
	P59-ROX-011123	1/11/2023	<0.5	2.5	<0.5	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.000029	<0 02	<0.1	0.16	0.045	<0.02	0.12	0.073
	P59-ROX-011123-DUP	1/11/2023	<0.5	2.7	<0.5	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0 00003	<0 02	<0.1	0.17	0.049	<0.02	0.13	0.076
	P59-ROX-011123-DUP-PAH	1/11/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
P-74	P74-ROX-041822	4/18/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	P74-ROX-041822-DUP	4/18/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	P74-ROX-071322	7/13/2022	<0.025	0.041	<0.025	<0 001	<0 001	<0 001	0.00059 J	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	0.00068 J	<0 005	<0.001
	P74-ROX-102822	10/28/2022	<0.025	0.029 J	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	0.00077 J	<0 005	<0.001
	P74-ROX-102822-DUP	10/28/2022	<0.025	0.022 J	<0.025	<0 001	<0 001	<0 001	<0.001 UJ	<0.001	<0.001	0.001	<0.001	<0.001	<0.000029	<0.001	<0.005	<0.001	<0 001	0.00091 J	<0 005	<0.001
	P74-ROX-011023	1/10/2023	<0.025	0.0013	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
P-93A	P93A-ROX-041922	4/19/2022	<0 025	0.0076	<0.025	<0 001	<0 001	0.0013	<0 001	<0.001	0.00077 J	<0.001	<0.001	<0.001	<0.000031	<0.001	0.00025 J	<0.001	<0 001	<0 001	<0 005	<0.001
	P93A-ROX-071522	7/15/2022	<0 025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000031	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	P93A-ROX-110122	11/1/2022	<0 025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000031	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	P93A-ROX-010523	1/5/2023	<0 025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	P93A-ROX-010523-PAH	1/5/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
P-93B	P93B-ROX-042022	4/20/2022	<130	920	<130	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.000031	<5	<25	<5	<5	<5	<25	<5
	P93B-ROX-071522	7/15/2022	<50 UJ	1100	<50 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<0.000032	<2 UJ	<10 UJ	<2 UJ	<2 UJ	<2 UJ	<10 UJ	<2 UJ
	P93B-ROX-071522-DUP	7/15/2022	<50 UJ	1100	<50 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<0.000031	<2 UJ	<10 UJ	<2 UJ	<2 UJ	<2 UJ	<10 UJ	<2 UJ
	P93B-ROX-110422	11/4/2022	<50 UJ	790	<50 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<2 UJ	<0.000031	<2 UJ	<10 UJ	<2 UJ	<2 UJ	<2 UJ	<10 UJ	<2 UJ
	P93B-ROX-011123	1/11/2023	<25 UJ	1400	<25 UJ	<1 UJ	<1 UJ	<1 UJ	<1 UJ	<1 UJ	<1 UJ	<1 UJ	<1 UJ	<1 UJ	<0.000029	<1 UJ	<5 UJ	<1 UJ	<1 UJ	<1 UJ	<5 UJ	<1 UJ
P-93C	P93C-ROX-041922	4/19/2022	<0.025	0.047	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000032	<0.001	<0.005	<0.001	<0 001	0.0031	<0 005	<0.001
	P93C-ROX-071322	7/13/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	0.0038	<0 005	<0.001
	P93C-ROX-110122	11/1/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000031	<0.001	<0.005	<0.001	<0 001	0.0016	<0 005	<0.001
	P93C-ROX-010523	1/5/2023	<0 025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	0.0019	<0 005	<0.001
P-93D	P93D-ROX-041922	4/19/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000032	<0.001	<0.005	<0.001	<0 001	0.001	<0 005	<0.001
	P93D-ROX-071522	7/15/2022	<0.025	0.0043	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000031	<0.001	<0.005	<0.001	<0 001	0.001	<0 005	<0.001
	P93D-ROX-110322	11/3/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	0 0011	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	0.00073 J	<0 005	<0.001
	P93D-ROX-010523	1/5/2023	<0 025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000032	<0.001	<0.005	<0.001	<0 001	0.00061 J	<0 005	<0.001
	P93D-ROX-010523-PAH	1/5/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3a
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

			VOCs																		
			Acetone	Benzene	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Chloroform	1-Chlorohexane	Chloromethane	2-Chlorotoluene	Cymene (p-Isopropyltoluene)	1,2-Dibromo-3-chloropropane (DBCP)	cis-1,2-Dichloroethene	trans-1,3-Dichloropropene	Ethylbenzene	Isopropylbenzene (Cumene)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene
Screening Values (mg/L)			**6.3** [1]	**0.005** [1]	**4.2** [1]	**0.35** [3]	**0.7** [3]	**0.7** [3]	**0.7** [1]	**0.07** [1]			**0.14** [3]		**0.0002** [1]	**0.07** [1]		**0.7** [1]	**0.7** [1]	**0.07** [1]	**0.14** [1]	**0.7** [3]
Location	**Sample ID**	**Sample Date**	**Analytical Results (mg/L)**																			
P-114R	P114R-ROX-041422	4/14/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000031	<0.001	<0.005	<0 001	<0 001	0.00093 J	<0 005	<0.001
	P114R-ROX-071122	7/11/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	0.0013	<0 005	<0.001
	P114R-ROX-102422	10/24/2022	<0.025	0.00047 J	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000031	<0.001	<0.005	<0.001	<0 001	0.00098 J	<0 005	<0.001
	P114R-ROX-010623	1/6/2023	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	0.0014	<0 005	<0.001
	P114R-ROX-010623-PAH	1/6/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ROST-3-MW	ROST3MW-ROX-041222	4/12/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000032	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	ROST3MW-ROX-071222	7/12/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	0.00058 J	0.00061 J	<0 001	<0 005	<0.001
	ROST3MW-ROX-102722	10/27/2022	0.023 J	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	ROST3MW-ROX-010523	1/5/2023	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
ROST-4-PZ(C)	ROST4PZC-ROX-041522	4/15/2022	<0.025	0.00023 J	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000033	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	ROST4PZ(C)-ROX-071422	7/14/2022	<0.025	0.0029	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	0 00094 J	<0.000032	<0.001	<0.005	0.0027	0.0047	<0 001	0 05	0.0077
	ROST4PZ(C)-ROX-102822	10/28/2022	<0.025	0.0025	0.0041 J	<0 001	<0 001	<0 001	<0.001 UJ	<0.001	<0.001	<0.001	<0.001	0 00079 J	<0 00003	<0.001	<0.005	0.0022	0.005	<0 001	0.048	0.0086
	ROST4PZC-ROX-011323	1/13/2023	<0.025	<0 001	0.0028 J	<0 001	<0 001	<0 001	0 0009 J	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000029	<0.001	<0.005	<0.001	0.00094 J	<0 001	<0 005	0.002
ROST-4-PZ(E)	ROST4PZ(E)-ROX-071522	7/15/2022	<0.025	0 021	<0.025	<0 001	0.0012	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	0 0018	<0.000032	<0.001	<0.005	0.2	0.0089 J	<0 001	0.11	0.013 J
	ROST4PZ(E)-ROX-071522-DUP	7/15/2022	<0.025	0 017	<0.025	<0 001	0.001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	0 0012	<0.000031	<0.001	<0.005	0.16	0.0068 J	<0 001	0.11	0.0093 J
	ROST4PZ(E)-ROX-102822	10/28/2022	<0.025	0 014	0.076	0.002	0.00077 J	<0 001	<0.001 UJ	<0.001	<0.001	<0.001	<0.001	0 0015	<0 00003	<0.001	<0.005	0 09	0.0045	<0 001	0.11	0.0067
	ROST4PZ(E)-ROX-102822-DUP	10/28/2022	<0.025	0 014	0.08	0.0017	<0 001	<0 001	<0.001 UJ	<0.001	<0.001	<0.001	<0.001	0 0014	<0 00003	<0.001	<0.005	0.098	0.0046	<0 001	0.12	0.007
	ROST4PZE-ROX-011023	1/10/2023	0 085	0.0043	0.038	0.0016	0.00082 J	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	0 00075 J	<0.000029	<0.001	<0.005	0.033	0.0052	<0 001	0.063	0.0048
ROST-4-PZ(G)	ROST4PZG-ROX-041522	4/15/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000035	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	ROST4PZG-ROX-041522-DUP	4/15/2022	<0.025	<0 001	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000031	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	ROST4PZ(G)-ROX-071222	7/12/2022	<0.025	0.00033 J	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000031	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	ROST4PZ(G)-ROX-102722	10/27/2022	<0.025	0.00047 J	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.000032	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
	ROST4PZ(G)-ROX-102722-PAH	10/27/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ROST4PZG-ROX-010623	1/6/2023	0.55	0.00032 J	<0.025	<0 001	<0 001	<0 001	<0 001	<0.001	<0.001	<0.001	<0.001	<0.001	<0 00003	<0.001	<0.005	<0.001	<0 001	<0 001	<0 005	<0.001
T-12	T12-ROX-042022	4/20/2022	<0.25	1.2	<0 25	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0 01	<0.000032	<0 01	<0 05	0.013	<0.01	0.0028 J	<0.05	0.008 J
	T12-ROX-071422	7/14/2022	<0.25	1.3	<0 25	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0 01	<0.000033	<0 01	<0 05	0.012	0.0071 J	<0.01	<0.05	0.014
	T12-ROX-110122	11/1/2022	<0.13	2.2	<0.13	<0 005	<0 005	<0 005	<0 005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.000032	<0.005	<0.025	0.011	0.005	<0 005	0.02 J	0.0075
	T12-ROX-011123	1/11/2023	<0.25	2.1	<0 25	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0 01	<0.000029	<0 01	<0 05	0.026	0.0069 J	<0.01	0 07	0.009 J
	T12-ROX-011123-DUP	1/11/2023	<0.25	2.1	<0 25	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0 01	<0.000029	<0 01	<0 05	0.025	0.0068 J	<0.01	0.058	0.0088 J

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3a
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

			VOCs						SVOCs												
			Toluene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylenes	o-Xylenes	Xylenes (total)	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	bis(2-Ethylhexyl)phthalate	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)acridine	Dibenzo(a,h)anthracene
Screening Values (mg/L)			1.0 [1]	0.07 [3]	0.07 [3]	10 [1]		10 [1]	0.42 [1]	0.42 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.006 [1]	0.012 [1]		0.0003 [1]
Location	**Sample ID**	**Sample Date**	**Analytical Results (mg/L)**																		
MW-01	MW1-ROX-041322	4/13/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0.00019 UJ	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0096	<0.00019	<0.0096	<0.00019
	MW1-ROX-070822	7/8/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.028	<0.0094	<0.00019	<0.0094	<0.00019
	MW1-ROX-102022	10/20/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	0.000081 J	<0.00019 U	<0 00019 U	<0 00019 U	<0.00019	<0.0002 U	<0.029 UJ	<0.0095	<0.00019 U	<0.0095	<0.00019
	MW1-ROX-011323	1/13/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00021	<0 00021	<0 00021	0.00014 J	0 00016 J	0.00029	0 00026	0.00017 J	<0.031	<0.01	0 00023	<0.01	0.00018 J
	MW1-ROX-011323-PAH	1/13/2023	--	--	--	--	--	--	--	--	--	<0.0002 H UJ	<0.0002 H UJ	<0.0002 H UJ	<0.0002 H UJ	<0.0002 H UJ	--	--	<0 0002 H UJ	--	<0 0002 H UJ
MW-02	MW2-ROX-041422	4/14/2022	0.0033	0.011	0.015	0.032	0.0035 J	0 035	<0 00019	<0 00019	<0.00019 UJ	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0096	<0.00019	<0.0096	<0.00019
	MW2-ROX-041422-DUP	4/14/2022	0.0036	0.013	0.018	0.038	0.0042 J	0 042	<0 00019	<0 00019	<0.00019 UJ	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0095	<0.00019	<0.0095	<0.00019
	MW2-ROX-071422	7/14/2022	0.0054	0.092	0.049	0.24	0.021 J	0.26	<0 00019	<0 00019	<0 00019	0.000056 J	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0097	<0.00019	<0.0097	<0.00019
	MW2-ROX-102822	10/28/2022	0.0039	0.018	0.026	0.04	0.0037 J	0 044	<0 00096	<0 00096	<0 00019	<0.00019 U	<0 00019	0 00014 J	<0 00019 UJ	0.00016 J	<0.029	<0.0096	0 000081 J	<0.0096	0 000085 J
	MW2-ROX-011323	1/13/2023	0.0032	0 0057	0.011	0.015	0.0017 J	0 016	<0 00021	<0 00021	<0 00021	<0.00021	<0 00021	<0 00021	<0.00021	<0 00021 UJ	<0.032	<0 011	<0.00021	<0 011	<0.00021
MW-03	MW3-ROX-041222	4/12/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0.00019 UJ	0.000055 J	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0096	<0.00019	<0.0096	<0.00019
	MW3-ROX-071422	7/14/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0 00019 UJ	<0.00019	0 023 J	<0.0095	<0.00019	<0.0095	<0.00019 UJ
	MW3-ROX-102522	10/25/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019 U	<0 00019 U	<0 00019 U	<0.00019	<0.00019 U	<0.028	<0.0093	<0.00019	<0.0093	<0.00019 U
	MW3-ROX-011123	1/11/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	0.000066 J	<0.0002	<0.0002	<0 03	<0.01	<0.0002	<0.01	<0.0002
	MW3-ROX-011123-PAH	1/11/2023	--	--	--	--	--	--	--	--	--	--	--	<0 0002 H UJ	--	--	--	--	--	--	--
MW-04	MW4-ROX-041922	4/19/2022	0 00082 J	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0.00019 UJ	<0.00019	<0 00019	<0 00019 U	<0.00019	0.00012 J	<0.029	<0.0097	<0.00019	<0.0097	<0.00019
	MW4-ROX-071822	7/18/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0.00019 UJ	<0 00019	<0 00019	<0.00019 U	0 00018 J	<0 00019 U	<0.00019	<0.00019	<0.029	<0.0096	<0.00019	<0.0096	0.00011 J
	MW4-ROX-103122	10/31/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.028	<0.0094	<0.00019	<0.0094	<0.00019
	MW4-ROX-010923	1/9/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.031	<0.01	<0.0002	<0.01	<0.0002
MW-05	MW5-ROX-041322	4/13/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0.00019 UJ	<0.00019	<0 00019	<0 00019	0.00013 J	<0.00019	<0.029	<0.0096	<0.00019	<0.0096	0.00017 J
	MW5-ROX-071122	7/11/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019 U	0 00011 J	0.000078 J	<0.00019	<0.00019	0.016 J F2	0 0053 J	<0.00019	<0.0093	<0.00019
	MW5-ROX-102722	10/27/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0.00038 UJ	<0.00038 UJ	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.028	<0.0093 H UJ	<0.00019	<0.0094	<0.00019
	MW5-ROX-011023	1/10/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.0002	0.034	<0.01	<0.0002	<0.01	<0.0002
MW-06A	MW6A-ROX-041122	4/11/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00042 U	<0.00019 UJ	<0.00019 U	0 00016 J *+ J	0 00014 J	<0 00019 UJ	0.00014 J	0 027 J	<0.0094	0.0001 J	<0.0094	0.00011 J
	MW6A-ROX-070822	7/8/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0.0002	<0.0002	<0.0002	<0 0002 U	<0.0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0097 H UJ	<0.00020	<0.0099	<0.00020
	MW6A-ROX-102122	10/21/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	< 0.00018	0.00039	0.00017 J J	0.0034 B	0.0028 B	0 0051 B	0.0016	0.0019 B	<0.028	<0.0092	0.0041 B	<0.0092	<0.00018
	MW6A-ROX-102122-PAH	10/21/2022	--	--	--	--	--	--	<0.00032 H UJ	<0.00032 H UJ	<0.00032 H UJ	<0 00032 H UJ	0.00018 J H J	<0.00032 H UJ	<0 00032 H UJ	<0 00032 H UJ	--	--	0.00014 J H J	--	<0.00032 H UJ
	MW6A-ROX-011123	1/11/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00021	<0 00021	<0 00021	<0.00021	<0 00021	<0 00021	<0.00021	<0.00021	<0.031	<0.01	<0.00021	<0.01	<0.00021
MW-06B	MW6B-ROX-041122	4/11/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0.00019 UJ	<0.00019	0.0001 J *+ J	0 00006 J	<0 00019 UJ	<0.00019	<0.028	<0.0095	<0.00019	<0.0095	<0.00019
	MW6B-ROX-070822	7/8/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0096	<0.00019	<0.0096	<0.00019
	MW6B-ROX-102122	10/21/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.028 UJ	<0.0091 H UJ	<0.00019 U	<0.0093	<0.00019
	MW6B-ROX-011123	1/11/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00021	0 000062 J J	<0 00021	0.00017 J	<0 00021	0.00028	<0.00021	0.00025	<0.032	<0 011	0.00016 J	<0 011	0.00011 J
	MW6B-ROX-011123-PAH	1/11/2023	--	--	--	--	--	--	--	<0.00021 H UJ	--	0 00015 J H J	--	0.000096 J H J	--	<0 00021 H UJ	--	--	0.00011 J H J	--	0.000092 J H J
	MW6B-ROX-011123-DUP	1/11/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00021	<0 00021	<0 00021	<0.00021	<0 00021	0.000036 J	<0.00021	<0.00021	<0.031	<0.01	<0.00021	<0.01	<0.00021
	MW6B-ROX-011123-DUP-PAH	1/11/2023	--	--	--	--	--	--	--	--	--	--	--	<0.00021 H UJ	--	--	--	--	--	--	--
MW-06C	MW6C-ROX-041122	4/11/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0.00019 UJ	<0.00019 U	0 00012 J *+ J	0 000055 J J	<0 00019 UJ	<0.00019	<0.028	<0.0093	<0.00019	<0.0093	0.000078 J J
	MW6C-ROX-070822	7/8/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0096 H UJ	<0.0002	<0.0099	<0.0002
	MW6C-ROX-102122	10/21/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019 U	<0 00019	<0 00019 U	<0.00019	<0.00019	<0.028	0 0059 J	<0.00019 U	<0.0093	<0.00019
	MW6C-ROX-011123	1/11/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	0.000044 J	<0.0002	<0.0002	<0 03	<0.01	<0.0002	<0.01	<0.0002
	MW6C-ROX-011123-PAH	1/11/2023	--	--	--	--	--	--	--	--	--	--	--	<0.0002 H UJ	--	--	--	--	--	--	--
MW-06D	MW6D-ROX-041122	4/11/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0.00019 UJ	<0.00019 U	0 00011 J *+ J	0.000076 J	<0 00019 UJ	<0.00019	<0.028	<0.0095	<0.00019	<0.0095	<0.00019
	MW6D-ROX-070822	7/8/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.028	<0.0094	<0.00019	<0.0094	<0.00019
	MW6D-ROX-102122	10/21/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	0 00013 J	0.00017 J J	0.0043 B	0.0028 B	0 0045 B	0.0015	0.0023 B	<0.028	0 0047 J	0.0056 B	<0.0093	0 00034
	MW6D-ROX-102122-PAH	10/21/2022	--	--	--	--	--	--	<0.00019 H UJ	<0.00019 H UJ	<0.00019 H UJ	<0 00019 H UJ	0 000094 J H J	<0.00019 H UJ	<0 00019 H UJ	0.000093 J H J	--	--	<0 00019 H UJ	--	<0.00019 H UJ
	MW6D-ROX-011123	1/11/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00021	0 000054 J J	<0 00021	<0.00021	<0 00021	0 00005 J	<0.00021	<0.00021	<0.031	<0.01	<0.00021	<0.01	<0.00021
	MW6D-ROX-011123-PAH	1/11/2023	--	--	--	--	--	--	--	<0.00021 H UJ	--	--	--	<0.00021 H UJ	--	--	--	--	--	--	--

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3a
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

			VOCs						SVOCs											
			Toluene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylenes	o-Xylenes	Xylenes (total)	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	bis(2-Ethylhexyl)phthalate	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)acridine	Dibenzo(a,h)anthracene
Screening Values (mg/L)			**1.0** [1]	**0.07** [3]	**0.07** [3]	**10** [1]		**10** [1]	**0.42** [1]	**0.42** [3]	**2.1** [1]	**0.00013** [1]	**0.0002** [1]	**0.00018** [1]	**0.21** [3]	**0.00017** [1]	**28** [1]	**0.006** [1]	**0.012** [1]		**0.0003** [1]
Location	**Sample ID**	**Sample Date**	**Analytical Results (mg/L)**																		
MW-07	MW7-ROX-041922	4/19/2022	<0 5 UJ	<0.5 UJ	<0.5 UJ	<2.5 UJ	<2.5 UJ	<5 UJ	<0.0002	<0.0002	<0.0002 UJ	<0 0002	<0 0002	0.000087 J	<0.0002	<0.0002	0 022 J	<0.0099	<0.0002	<0.0099	<0.0002
	MW7-ROX-041922-DUP	4/19/2022	0 24 J	<0.5	<0 5	<2 5	<2.5	<5	<0.0002	<0.0002	<0.0002 UJ	<0 0002	<0 0002	<0.0002	<0.0002	<0.0002	0 022 J	<0.0099	<0.0002	<0.0099	<0.0002
	MW7-ROX-071822	7/18/2022	<1 UJ	<1 UJ	<1 UJ	<5 UJ	<5 UJ	<10 UJ	0.00012 J J	0 00018 J	<0 00019	0.000066 J	<0 00019	<0 00019	<0.00019	<0.00019	0.022 J *1	<0.0096	<0.00019	<0.0096	<0.00019
	MW7-ROX-103122	10/31/2022	0.82	<0.5	<0 5	<2 5	<2.5	<5	<0 00018	<0 00018	<0 00018	<0.00018	<0 00018	<0 00018	<0.00018	<0.00018	0 026 J	<0.0092	<0.00018	<0.0092	<0.00018
	MW7-ROX-103122-DUP	10/31/2022	0 36 J	<0.5	<0 5	<2 5	<2.5	<5	<0 00018	<0 00018	<0 00018	<0.00018	<0 00018	<0 00018	<0.00018	<0.00018	<0.028	<0.0092	<0.00018	<0.0092	<0.00018
	MW7-ROX-010923	1/9/2023	<2	<2	<2	<10	<10	<20	<0.0002	<0.0002	<0.0002	<0 0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.00020	<0.01	<0.00020
MW-08	MW8-ROX-041922	4/19/2022	<0 5 UJ	<0.5 UJ	<0.5 UJ	<2.5 UJ	<2.5 UJ	<5 UJ	<0 00019	<0 00019	<0.00019 UJ	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0097	<0.00019	<0.0097	<0.00019
	MW8-ROX-071822	7/18/2022	<0 05	<0 05	<0.05	<0.25	<0 25	<0 5	0.00031 J	<0 00019	<0 00019	0.000070 J	<0 00019	<0 00019	<0.00019	<0.00019	<0.028	<0.0095	<0.00019	<0.0095	<0.00019
	MW8-ROX-071822-DUP	7/18/2022	<0 05	<0 05	<0.05	<0.25	<0 25	<0 5	0.00035 J	0 00015 J	0.000058 J	0.000058 J	<0 00019	<0 00019	<0.00019	<0.00019	<0.028	<0.0094	<0.00019	<0.0094	<0.00019
	MW8-ROX-103122	10/31/2022	0 9	<0 25	<0.25	0.74 J	0 26 J	0.99 J	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.028	<0.0093	<0.00019	<0.0093	<0.00019
	MW8-ROX-010923	1/9/2023	<1 UJ	<1 UJ	<1 UJ	<5 UJ	<5 UJ	<10 UJ	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0097	<0.00019	<0.0097	<0.00019
	MW8-ROX-010923-DUP	1/9/2023	<1 UJ	<1 UJ	<1 UJ	<5 UJ	<5 UJ	<10 UJ	<0.0002	<0.0002	<0.0002	<0 0002	<0 0002	<0.0002	<0.0002	<0.0002	<0 03	<0.01	<0.0002	<0.01	<0.0002
MW-09	MW9-ROX-040722	4/7/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0.00019 UJ	<0.00019	<0 00019 U	<0 00024 U	<0.00019	<0.00019	<0.028	<0.0094	<0.00019	<0.0094	<0.00019
	MW9-ROX-071222	7/12/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019 U	<0 00019 U	<0 00019 U	0.00018 J	0 00015 J J	<0.028	<0.0094	0.00017 J	<0.0094	0 00022
	MW9-ROX-102722	10/27/2022	<0.001	<0 001 H UJ	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019 U	<0 00019	<0 00019	<0.00019	<0.00019	<0.028	0.006 J	<0.00019	<0.0094	<0.00019
	MW9-ROX-010523	1/5/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00021	<0 00021	<0 00021	<0.00021	<0 00021	<0 00021	<0.00021	<0.00021	<0.031	<0.01	<0.00021	<0.01	<0.00021
MW-10	MW10-ROX-041422	4/14/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0.00019 UJ	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0095	<0.00019	<0.0095	<0.00019
	MW10-ROX-070822	7/8/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019 U	<0 00019	<0 00019	<0.00019	<0.00019	<0.028	<0.0094	<0.00019	<0.0094	<0.00019
	MW10-ROX-102022	10/20/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	0.000034 J	<0.00025 U	<0 00019 U	<0 00021 U	<0.00019	<0.00021 U	<0.028	<0.0093	<0.0002 U	<0.0093	<0.00019
	MW10-ROX-011223	1/12/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00021	<0 00021	<0 00021	<0.00021	<0 00021	<0 00021	<0.00021	<0.00021	<0.031	<0.01	<0.00021	<0.01	<0.00021
MW-11	MW11-ROX-040722	4/7/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0.0002	<0.0002	<0.0002 UJ	<0 0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0.0002	<0.0098	<0.0002
	MW11-ROX-070822	7/8/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0095	<0.00019	<0.0095	<0.00019
	MW11-ROX-102022	10/20/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019 U	<0 00019	<0 00019 U	<0.00019	<0.00019 U	<0.029	<0.0096	<0.00019 U	<0.0096	<0.00019
	MW11-ROX-011223	1/12/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00021	<0 00021	<0 00021	<0.00021	<0 00021	<0 00021	<0.00021	<0.00021	<0.031	<0.01	<0.00021	<0.01	<0.00021
MW-12	MW12-ROX-041222	4/12/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0.00019 UJ	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0097	<0.00019	<0.0097	<0.00019
	MW12-ROX-070822	7/8/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.028	<0.0095 H UJ	<0.00019	0.0046 J	<0.00019
	MW12-ROX-102622	10/26/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	0.000068 J	<0.00019 U	0.00026	0.00022	0.0002	0.00025	<0.028	<0.0093	0 000072 J	<0.0093	0.00018 J
	MW12-ROX-102622-PAH	10/26/2022	--	--	--	--	--	--	<0.00019 H UJ	<0.00019 H UJ	<0.00019 H UJ	<0 00019 H UJ	<0.00019 H UJ	<0.00019 H UJ	<0 00019 H UJ	<0 00019 H UJ	--	--	<0 00019 H UJ	--	<0.00019 H UJ
	MW12-ROX-010623	1/6/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0095	<0.00019	<0.0095	<0.00019
MW-13	MW13-ROX-041422	4/14/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0.00019 UJ	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0097	<0.00019	<0.0097	<0.00019
	MW13-ROX-071122	7/11/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.028	<0.0095	<0.00019	<0.0095	<0.00019
	MW13-ROX-102422	10/24/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019 U	<0 00022 U	<0 00019 U	0.00013 J	<0.00022 U	<0.028	<0.0094	0.00014 J	<0.0094	0.00013 J
	MW13-ROX-010923	1/9/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0096	<0.00019	<0.0096	<0.00019
MW-14	MW14-ROX-040822	4/8/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	0.000088 J *+ J	<0.00019	0.00013 J J	0 00014 J	0.00012 J	0.00012 J	<0.029	<0.0096	0.00012 J	0.0025 J	0.0001 J
	MW14-ROX-071122	7/11/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019 U	<0 00019	<0 00019	<0.00019	<0.00019	<0.028	<0.0095	<0.00019	<0.0095	<0.00019
	MW14-ROX-102422	10/24/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00018	<0 00018	0.000036 J	<0.00018 U	<0 00027 U	<0 00023 U	0.00015 J	<0.00033 U	<0.028	<0.0092	0.00012 J	<0.0092	0.00014 J
	MW14-ROX-102422-DUP	10/24/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	0.000034 J	<0.00019 U	<0.0002 U	<0 00019 U	<0.00019	<0.00021 U	<0.028	<0.0093	0.00008 J	<0.0093	0 000078 J
	MW14-ROX-010923	1/9/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.028	<0.0095	<0.00019	<0.0095	<0.00019
	MW14-ROX-010923-DUP	1/9/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0097	0 00023	<0.0097	<0.00019
MW-16	MW16-ROX-041222	4/12/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0.00019 UJ	<0 00019 UJ	0.00011 J J	0.00008 J J	<0.00019	<0 00019 UJ	<0.029	<0.0096	<0.00019 UJ	<0.0096	<0.00019 UJ
	MW16-ROX-071222	7/12/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019 U	0.00016 J J	<0 00019 U	<0.00019	0 00015 J J	<0.028	<0.0094	<0.00019	<0.0094	<0.00019
	MW16-ROX-102522	10/25/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019 U	<0.00019	<0.00019 U	<0.028	<0.0094	<0.00019	<0.0094	<0.00019
	MW16-ROX-010523	1/5/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00021	<0 00021	<0 00021	<0.00021	<0 00021	<0 00021	<0.00021	<0.00021	<0.032	<0 011	<0.00021	<0 011	<0.00021

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3a
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

			VOCs						SVOCs												
			Toluene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylenes	o-Xylenes	Xylenes (total)	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	bis(2-Ethylhexyl)phthalate	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)acridine	Dibenzo(a,h)anthracene
Screening Values (mg/L)			1.0 [1]	0.07 [3]	0.07 [3]	10 [1]		10 [1]	0.42 [1]	0.42 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.006 [1]	0.012 [1]		0.0003 [1]
Location	**Sample ID**	**Sample Date**	**Analytical Results (mg/L)**																		
MW-22	MW22-ROX-041522	4/15/2022	0.0027	0.1	0.019	0.032	0.0029 J	0 035	<0 00019	<0 00019	<0.00019 UJ	<0.00019	0.000058 J	0 00011 J	<0.00019	0.00011 J	<0.029	<0.0097	<0.00019	<0.0097	<0.00019
	MW22-ROX-071422	7/14/2022	0.0057	0.15	0.031 J	0.08	0 0076	0 088	<0.00019 UJ	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.028	<0.0095 H UJ	<0.00019	<0.0094	<0.00019
	MW22-ROX-071422-DUP	7/14/2022	0.0057	0.18	0.04 J	0.097	0 0080	0.1	<0.00019 UJ	<0 00019	<0 00019	0 0001 J	0.00019	0.000072 J	<0.00019	<0.00019	<0.028	<0.0095	<0.00019	<0.0095	0 000083 J
	MW22-ROX-102822	10/28/2022	0.0099	0 2	0.049	0.27	0.01	0.28	<0 00019	<0 00019	<0 00019	<0.00019 U	0 00013 J	0.0001 J	<0 00019 UJ	0.00013 J	<0.028	<0.0094	<0.00019	<0.0094	0.0001 J
	MW22-ROX-011023	1/10/2023	0.011	0.21	0.047	0.24	0.0097 J	0.25	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0097	<0.00019	<0.0097	<0.00019
MW-23	MW23-ROX-041222	4/12/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0.00019 UJ	0.000086 J J	0 000078 J J	<0 00019	<0.00019	<0.00019	<0.029	<0.0096	<0.00019	<0.0096	<0.00019
	MW23-ROX-071322	7/13/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	0.000041 J	<0.00019	<0.00019	0 016 J	<0.0095	<0.00019	<0.0095	<0.00019
	MW23-ROX-102622	10/26/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	0.000059 J	<0.00019 U	0 00015 J	0 00011 J	<0.00019	0.00015 J	<0.028	<0.0093	<0.00019	<0.0093	0.00013 J
	MW23-ROX-011023	1/10/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00021	0.0001 J	<0 00021	<0.00021	<0 00021	<0 00021	<0.00021	<0.00021	<0.031	<0.01	<0.00021	<0.01	<0.00021
MW-24	MW24-ROX-040722	4/7/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0.00019 UJ	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0096	<0.00019	<0.0096	<0.00019
	MW24-ROX-071122	7/11/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.028	<0.0094	<0.00019	<0.0094	<0.00019
	MW24-ROX-102022	10/20/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00018	<0 00018	0 00012 J	0.00094 B	0.00061 B	0.00067 B	0.0003	<0.00059 U	<0.028	<0.0092	0 00098 B	<0.0092	0 000052 J
	MW24-ROX-102022-PAH	10/20/2022	--	--	--	--	--	--	<0.00019 H UJ	<0.00019 H UJ	0 000062 J H J	<0 00019 H UJ	0.00012 J H J	<0.00019 H UJ	<0 00019 H UJ	0 00012 J H J	--	--	0.000072 J H J	--	<0.00019 H UJ
	MW24-ROX-011223	1/12/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00021	<0 00021	<0 00021	<0.00021	<0 00021	0 00013 J	<0.00021	<0.00021	<0.032	<0 011	<0.00021	<0 011	0 000063 J
	MW24-ROX-011223-PAH	1/12/2023	--	--	--	--	--	--	--	--	--	--	--	0 000086 J H J	--	--	--	--	--	--	--
MW-25	MW25-ROX-041922	4/19/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0.0002	<0.0002	<0.0002 UJ	<0 0002	<0.0002	0.000067 J	<0.0002	<0.0002	<0 03	<0.01	<0.0002	<0.01	<0.0002
	MW25-ROX-071822	7/18/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0.00019 UJ	<0 00019	<0 00019	0.000055 J	<0 00019	<0 00019	<0.00019	<0.00019	0.0084 J *1	<0.0094	<0.00019	<0.0094	<0.00019
	MW25-ROX-103122	10/31/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.028	<0.0093	<0.00019	<0.0093	<0.00019
	MW25-ROX-010923	1/9/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00021	<0 00021	<0 00021	<0.00021	<0 00021	<0 00021	<0.00021	<0.00021	<0.031	<0.01	<0.00021	<0.01	<0.00021
MW-26	MW26-ROX-041122	4/11/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0.00019 UJ	<0.00019	0 00015 J *+ J	0 00013 J	0.00025	0.00011 J	<0.028	<0.0094	<0.00019	<0.0094	0 00023
	MW26-ROX-071222	7/12/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019 U	0.00012 J J	<0 00019 U	<0.00019	<0.00019	<0.028	<0.0095	<0.00019	<0.0095	0.00016 J J
	MW26-ROX-102822	10/28/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	0.00019	<0.00019 U	<0 00019	0 00011 J	<0 00019 UJ	<0.00019	<0.028	<0.0094	<0.00019	<0.0094	0 000059 J
	MW26-ROX-010623	1/6/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002 UJ	<0.0002	<0.0002	<0.031	<0.01	<0.0002	<0.01	<0.0002
MW-27	MW27-ROX-040822	4/8/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0.00019 UJ	<0.00019	0 00011 J	0.000092 J	<0.00019	0.000097 J	<0.028	<0.0095	<0.00019	<0.0095	<0.00019
	MW27-ROX-071122	7/11/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	0.00015 J	0 00018 J	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.028	<0.0094	<0.00019	<0.0094	<0.00019
	MW27-ROX-102622	10/26/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00018	<0 00018	0.000033 J	<0.00018 U	0 00017 J	0 00012 J	<0.00018	0.00014 J	<0.028	<0.0092	<0.00018	<0.0092	0.00012 J
	MW27-ROX-010623	1/6/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.0002	<0 03	<0.0099	<0.0002	<0.0099	<0.0002
MW-28	MW28-ROX-041322	4/13/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0.00019 H UJ	<0.00019 H UJ	0 000054 J H J	<0 00019 H UJ	<0.00019 H UJ	<0.00019 H UJ	<0 00019 H UJ	<0 00019 H UJ	<0.029	<0.0095	<0 00019 H UJ	<0.0095	<0.00019 H UJ
	MW28-ROX-071222	7/12/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019 U	0.0001 J J	<0 00019 U	<0.00019	<0.00019	<0.028	<0.0095	<0.00019	<0.0095	<0.00019
	MW28-ROX-102522	10/25/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019 U	<0 00019 U	<0 00023 U	0.00014 J	<0.00028 U	<0.028	<0.0094	0.00015 J	<0.0094	0.00015 J
	MW28-ROX-102522-DUP	10/25/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019 U	<0 00019 U	<0 00025 U	0.00016 J	<0.00035 U	<0.028	<0.0094	0.00015 J	<0.0094	0.00013 J
	MW28-ROX-010523	1/5/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.029	<0.0098	<0.0002	<0 0098 UJ	<0.0002
P-54	P54-ROX-040822	4/8/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0.00019 UJ	<0.00019	0 00011 J	0.000083 J	<0.00019	<0.00019	<0.029	<0.0096	<0.00019	<0.0096	<0.00019
	P54-ROX-071222	7/12/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019 U	0 00014 J	<0 00019 U	0.00015 J	0.00011 J	<0.028	<0.0094	<0.00019	<0.0094	0.0002
	P54-ROX-102722	10/27/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019 U	<0 00019	<0 00019	<0.00019	<0.00019	<0.028	0 0046 J	<0.00019	<0.0093	<0.00019
	P54-ROX-010623	1/6/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	0.000056 J B	<0.0002	<0.0002	<0.031	<0.01	<0.0002	<0.01	<0.0002
P-56	P56-ROX-042022	4/20/2022	0.0012	0.013	0 0045	0.034	0.001 J	0 035	0.00081	<0.0002	<0.0002 UJ	<0 0002	<0.0002	<0.0002	<0.0002 UJ	<0.0002	<0 03	<0.01	<0.0002	<0.01	<0.0002
	P56-ROX-071322	7/13/2022	0.0014	0.027	0 0071	0.052	0.0017 J	0 054	0.00063	<0 00018	0.000075 J	<0.00018	0 00016 J	0.000053 J	<0.00018	<0.00018	<0.028	<0.0092	<0.00018	<0.0092	<0.00018
	P56-ROX-110122	11/1/2022	0 00042 J	<0.001	<0.001	0.0018 J	<0.005	0 0018 J	0.00046	0 00014 J	<0.0002	<0 0002 U	<0.0002	<0.0002	<0.0002	<0.0002	<0.031	0 0051 J	<0.0002	<0.01	<0.0002
	P56-ROX-010923	1/9/2023	0 00054 J	0.007	0 0028	0.015	<0.005	0 015	0.00084	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0097	<0.00019	<0.0097	<0.00019

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3a
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

			VOCs						SVOCs												
			Toluene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylenes	o-Xylenes	Xylenes (total)	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	bis(2-Ethylhexyl)phthalate	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)acridine	Dibenzo(a,h)anthracene
Screening Values (mg/L)			1.0 [1]	0.07 [3]	0.07 [3]	10 [1]		10 [1]	0.42 [1]	0.42 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.006 [1]	0.012 [1]		0.0003 [1]
Location	**Sample ID**	**Sample Date**	**Analytical Results (mg/L)**																		
P-57	P57-ROX-041522	4/15/2022	0.0023	<0.001	<0.001	<0.005	<0.005	<0.01	0.00034	<0 00019	<0.00019 UJ	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0096	<0.00019	<0.0096	<0.00019
	P57-ROX-071522	7/15/2022	0.0040	<0.001	<0.001	0.0015 J	<0.005	0 0018 J	0.00015 J J	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029 H UJ	<0 0095 H UJ	<0.00019	<0 0095 H UJ	<0.00019
	P57-ROX-102822	10/28/2022	0.0043	<0.001	<0.001	0.0014 J	<0.005	0 0018 J	0.00033 J	<0 00093	<0 00019	<0 0002 U	0.00023	0.00025	<0.00093	0.00026	<0.028	0.0054 J H J	0 00021	<0.0093	0.00014 J
	P57-ROX-102822-PAH	10/28/2022	--	--	--	--	--	--	0.00035 J H J	<0.00038 H UJ	<0.00038 H UJ	<0 00019 H UJ	<0.00019 H UJ	<0.00019 H UJ	<0 00019 H UJ	0 00011 J H J	--	--	<0 00019 H UJ	--	<0.00019 H UJ
	P57-ROX-011023	1/10/2023	0.0028	<0.001	<0.001	0 00092 J	<0.005	<0.01	0.00047	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0095	<0.00019	<0.0095	<0.00019
P-58	P58-ROX-041822	4/18/2022	<0.5	<0.5	<0 5	<2 5	<2.5	<5	0.00087	0.00042	<0.00019 UJ	0.00023	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0097	0 00028	<0.0097	<0.00019
	P58-ROX-041822-DUP	4/18/2022	<0.5	<0.5	<0 5	<2 5	<2.5	<5	0 0007	0.00039	<0.00019 UJ	0.00019	0.00021	<0 00019	<0.00019	<0.00019	<0.029	<0.0097	0 00024	<0.0097	<0.00019
	P58-ROX-071422	7/14/2022	0.75 J	<1	<1	<5	<5	<10	0 0013	0.00069	0.00075	0.00038	0.00039	0.00028	0 00021	<0.00018	<0.028	<0.0092	0 00049	<0.0092	0 00018
	P58-ROX-071422-DUP	7/14/2022	0 58 J	<1	<1	<5	<5	<10	0 0011	0.00060	0.00072	0.00057	0.00047	0 00023 J	0.00017 J	<0.00037	<0.055	<0 018	0.00035 J	<0 018	0.00014 J
P-59	P59-ROX-041822	4/18/2022	0.17	0.15	0.063	0 3	<0.1	0.31	0 0004	<0 00019	<0.00019 UJ	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.057	<0 019	<0.00019	<0 019	<0.00019
	P59-ROX-071422	7/14/2022	0.14	0.14	0.064	0.28	<0.1	0.29	0.00046 J	<0 00038	0.00039	0.00025 J	0 00035 J	0 00011 J	<0.00038	<0.00038	<0.056	<0 019	<0.00038	<0 019	<0.00038
	P59-ROX-110422	11/4/2022	0.11	0.069	0.038	0.16	<0 05	0.16	0.00039	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.028	<0.0094	<0.00019	<0.0093	<0.00019
	P59-ROX-011123	1/11/2023	0.1	0.051	0.039	0.15	< 0.1	0.16 J	0.00044	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0097	<0.00019	<0.0097	<0.00019
	P59-ROX-011123-DUP	1/11/2023	0.11	0.058	0.04	0.17	< 0.1	0.17 J	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	0.000075 J	<0.00019	<0.00019	<0.029 UJ	<0.0096 UJ	0 000092 J	<0 0096 UJ	<0.00019
	P59-ROX-011123-DUP-PAH	1/11/2023	--	--	--	--	--	--	--	--	--	--	--	<0 00038 U	--	--	--	--	<0.00038 H UJ	--	--
P-74	P74-ROX-041822	4/18/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0.00019 UJ	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0097	<0.00019	<0.0097	<0.00019
	P74-ROX-041822-DUP	4/18/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0.00019 UJ	<0.00019	<0 00019	0.000052 J	<0.00019	<0.00019	<0.029	<0.0096	<0.00019	<0.0096	<0.00019
	P74-ROX-071322	7/13/2022	0.0013	<0.001	<0.001	0.0011 J	<0.005	<0.01	<0 00019	<0 00019	<0 00019	0.000087 J	0 00017 J	0.000061 J	<0.00019	<0.00019	<0.028	<0.0095	<0.00019	<0.0095	<0.00019
	P74-ROX-102822	10/28/2022	0.0005 J	<0.001	<0.001	<0.005	<0.005	<0.01	<0.00038 UJ	<0.00038 UJ	0 00003 J	<0.00019 U	0 00014 J	0 00011 J	<0 00019 UJ	0.00015 J	<0.028	<0.0094	<0.00019	<0.0094	0 000048 J
	P74-ROX-102822-DUP	10/28/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019 U	<0 00019	<0 00019	<0 00019 UJ	<0.00019	<0.028	<0.0095 H UJ	<0.00019	<0.0094	<0.00019
	P74-ROX-011023	1/10/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0096	<0.00019	<0.0096	<0.00019
P-93A	P93A-ROX-041922	4/19/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0.0002	<0.0002	<0.0002 UJ	<0 0002	0 00014 J	0 00014 J	<0.0002	<0.0002	<0 03	<0 01 H UJ	<0.0002	<0.01	0.00016 J
	P93A-ROX-071522	7/15/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0.00019 UJ	<0 00019	<0 00019	0.00005 J	<0 00019	<0 00019	<0.00019	<0.00019	<0.028	<0.0095	<0.00019	<0.0095	<0.00019
	P93A-ROX-110122	11/1/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0.0002	<0.0002	<0.0002	<0 0002	0 00019 J	0 00016 J	<0.0002	0.00011 J	<0.031	0 0055 J H J	<0.0002	<0.01	<0.0002
	P93A-ROX-010523	1/5/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	0.00029	<0.00019	<0.00019	<0.029	<0.0096	<0.00019	<0.0096	<0.00019
	P93A-ROX-010523-PAH	1/5/2023	--	--	--	--	--	--	--	--	--	--	--	<0.00019 H UJ	--	--	--	--	--	--	--
P-93B	P93B-ROX-042022	4/20/2022	<5	<5	<5	<25	<25	<50	<0 00021	<0 00021	0 00019 J	0.00013 J	<0 00021	<0 00021	<0 00021 UJ	<0.00021	<0.031	<0.01	0 000078 J	<0.01	<0.00021
	P93B-ROX-071522	7/15/2022	<2 UJ	<2 UJ	<2 UJ	<10 UJ	<10 UJ	<20 UJ	<0.00019 UJ	<0 00019	<0 00019	0.000099 J	0 00018 J	0 000051 J J	<0.00019	<0.00019	<0.028	<0.0093	<0.00019	<0.0093	0 000065 J
	P93B-ROX-071522-DUP	7/15/2022	<2 UJ	<2 UJ	<2 UJ	<10 UJ	<10 UJ	<20 UJ	0.00035 J	0.00036	0.000046 J	0.000082 J	<0 00018	<0 00018	<0.00018	<0.00018	<0.028	<0.0092	<0.00018	<0.0092	<0.00018
	P93B-ROX-110422	11/4/2022	<2 UJ	<2 UJ	<2 UJ	<10 UJ	<10 UJ	<20 UJ	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.028	0 0049 J	<0.00019	<0.0093	<0.00019
	P93B-ROX-011123	1/11/2023	<1 UJ	<1 UJ	<1 UJ	<5 UJ	<5 UJ	<10 UJ	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0096	<0.00019	<0.0096	<0.00019
P-93C	P93C-ROX-041922	4/19/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0.00019 UJ	<0.00019	0 00013 J	0 00011 J	<0.00019	<0.00019	<0.029	<0.0097	<0.00019	<0.0097	0.00013 J
	P93C-ROX-071322	7/13/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00021	<0 00021	<0 00021	<0.00021	<0 00021	<0 00021	<0.00021	<0.00021	<0.031	<0.01	<0.00021	<0.01	<0.00021
	P93C-ROX-110122	11/1/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0.0002	<0.0002	<0.0002	<0 0002 U	0.00046	0.00028	<0.0002	0.0003	<0.031	<0.01	<0.0002	<0.01	0 000094 J
	P93C-ROX-010523	1/5/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0097	<0.00019	<0.0097	<0.00019
P-93D	P93D-ROX-041922	4/19/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0.0002	<0.0002	<0.0002 UJ	<0 0002	<0.0002	<0.0002	<0.0002	<0.0002	<0 03	<0 01 H UJ	<0.0002	<0.0099	<0.0002
	P93D-ROX-071522	7/15/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0.00019 UJ	<0 00019	<0 00019	0.00006 J	0 00015 J	<0 00019	<0.00019	<0.00019	<0.028	<0.0094	<0.00019	<0.0094	<0.00019
	P93D-ROX-110322	11/3/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00018	<0 00018	<0 00018	<0.00018	<0 00018	0 00012 J	<0.00018	<0.00018	<0.028	0 0051 J	<0.00018	<0.0092	<0.00018
	P93D-ROX-010523	1/5/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	0.00022	<0 00019	0.00033	<0.00019	0.00026	<0.028	<0.0094	0 00021	<0.0094	<0.00019
	P93D-ROX-010523-PAH	1/5/2023	--	--	--	--	--	--	--	--	--	<0 00019 H UJ	--	<0.00019 H UJ	--	<0.00019 H UJ	--	--	<0 00019 H UJ	--	<0 00019 H UJ

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3a
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

			VOCs						SVOCs												
			Toluene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylenes	o-Xylenes	Xylenes (total)	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	bis(2-Ethylhexyl)phthalate	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)acridine	Dibenzo(a,h)anthracene
Screening Values (mg/L)			1.0 [1]	0.07 [3]	0.07 [3]	10 [1]		10 [1]	0.42 [1]	0.42 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.006 [1]	0.012 [1]		0.0003 [1]
Location	**Sample ID**	**Sample Date**	**Analytical Results (mg/L)**																		
P-114R	P114R-ROX-041422	4/14/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0.00019 UJ	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0095	<0.00019	<0.0095	<0.00019
	P114R-ROX-071122	7/11/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	0.00028	<0 00019	<0 00019	<0.00019 U	0.000099 J	0.000096 J	<0.00019	<0.00019	0 018 J	<0.0096 H UJ	<0.00019	<0.0094	0 000096 J
	P114R-ROX-102422	10/24/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	0.00043	<0 00019	<0 00019	<0.00021 U	<0 00027 U	<0 00026 U	0.00018 J	<0.00027 U	<0.028	0.005 J	0 00023	<0.0094	0.00016 J
	P114R-ROX-010623	1/6/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	0 00013 J B	<0.00019	<0.00019	<0.029	<0.0097	<0.00019	<0.0097	<0.00019
	P114R-ROX-010623-PAH	1/6/2023	--	--	--	--	--	--	--	--	--	--	--	<0.00019 H UJ	--	--	--	--	--	--	--
ROST-3-MW	ROST3MW-ROX-041222	4/12/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0.00019 UJ	0.000054 J J	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0095	<0.00019	<0.0095	<0.00019
	ROST3MW-ROX-071222	7/12/2022	<0.001	<0.001	<0.001	0.0026 J	<0.005	0 0026 J	0 000085 J	0.000057 J	<0 00019	<0.00019 U	0 00011 J	<0 00019 U	<0.00019	<0.00019	<0.029	<0.0096	<0.00019	<0.0096	<0.00019
	ROST3MW-ROX-102722	10/27/2022	<0.001	<0.001	<0.001	0 00071 J	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.028	<0.0093	<0.00019	<0.0093	<0.00019
	ROST3MW-ROX-010523	1/5/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00021	<0 00021	<0 00021	<0.00021	<0 00021	<0 00021	<0.00021	<0.00021	<0.031	<0.01	<0.00021	<0.01	<0.00021
ROST-4-PZ(C)	ROST4PZC-ROX-041522	4/15/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	0.001	<0 00019	<0.00019 UJ	<0.00019	0.000059 J	<0 00019	<0.00019	<0.00019	<0.029	<0.0095	<0.00019	<0.0095	<0.00019
	ROST4PZ(C)-ROX-071422	7/14/2022	0.0075	0 0099	0 0023	0.041	0.0011 J	0 042	0.0015 J	<0 00019	0.00043	0.000082 J	0 00017 J	<0 00019	<0.00019	<0.00019	<0.029	<0.0095	<0.00019	<0.0095	<0.00019
	ROST4PZ(C)-ROX-102822	10/28/2022	0.003	0.011	0 0025	0.023	0.0015 J	0 025	<0 00093	0 00033 J	0.00047	<0.00019 U	<0 00019	<0 00019	<0 00019 UJ	<0.00019	<0.028	<0.0093	<0.00019	<0.0093	0 000065 J
	ROST4PZC-ROX-011323	1/13/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	0 0008	<0 00021	0.00038	<0.00021	<0 00021	<0 00021	<0.00021	<0 00021 UJ	<0.031	<0.01	<0.00021	<0.01	<0.00021
ROST-4-PZ(E)	ROST4PZ(E)-ROX-071522	7/15/2022	0.025	0.16 J	0.024 J	0 27 J	0.033	0.31 J	0.0050 J	0.00065	0.0043 J	0.00022	0 00018 J	0 000059 J J	<0.00019	<0.00019	<0.029	<0.0095 H UJ	0 00032	<0.0096	<0.00019
	ROST4PZ(E)-ROX-071522-DUP	7/15/2022	0.02	0.12 J	0.018 J	0 21 J	0.026	0.23 J	0.0029 J	0.00033	0.0012 J	0.000095 J	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0096	<0.00019	<0.0096	<0.00019
	ROST4PZ(E)-ROX-102822	10/28/2022	0.0089	0.13	0.013	0.21	0.026	0.24	0.003	0 00056 J	<0 00019	<0.00019 U	<0 00019	<0 00019 U	<0 00019 UJ	<0.00019	<0.028 UJ	<0.0094	0.0001 J	<0.0094	<0.00019
	ROST4PZ(E)-ROX-102822-DUP	10/28/2022	0.0093	0.13	0.013	0.22	0.027	0.24	0.003	0 00048 J	<0 00019	<0.00019 U	<0 00019	<0 00019	<0 00019 UJ	<0.00019	<0.028	<0.0093	0.00009 J	<0.0093	<0.00019
	ROST4PZE-ROX-011023	1/10/2023	0.0037	0.12	0 0066	0.097	0.014	0.11	0.004	0.00064	0 0017	0.00015 J	<0 00019	<0 00019	<0.00019	<0.00019	<0.028	<0.0095	0.00015 J	<0.0095	<0.00019
ROST-4-PZ(G)	ROST4PZG-ROX-041522	4/15/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0.00019 UJ	<0.00019	0.000067 J	<0 00019	<0.00019	<0.00019	<0.029	<0.0097	<0.00019	<0.0097	<0.00019
	ROST4PZG-ROX-041522-DUP	4/15/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0.00019 UJ	<0.00019	<0 00019	0.000057 J	<0.00019	<0.00019	<0.029	<0.0095	<0.00019	<0.0095	<0.00019
	ROST4PZ(G)-ROX-071222	7/12/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019 U	0.00011 J J	<0 00019 U	<0.00019	<0.00019	0 016 J	<0.0095	<0.00019	<0.0095	0.00017 J J
	ROST4PZ(G)-ROX-102722	10/27/2022	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	0.000075 J	<0.00019	0.00044	0.00038	<0.00019	0.00038	<0.028	<0.0094	0.00016 J	<0.0094	0 00024
	ROST4PZ(G)-ROX-102722-PAH	10/27/2022	--	--	--	--	--	--	<0.00019 H UJ	<0.00019 H UJ	0 000067 J H J	<0 00037 H UJ	<0.00037 H UJ	<0.00037 H UJ	<0 00037 H UJ	<0.00037 H UJ	--	--	<0 00037 H UJ	--	<0 00037 H UJ
	ROST4PZG-ROX-010623	1/6/2023	<0.001	<0.001	<0.001	<0.005	<0.005	<0.01	<0 00019	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0097	<0.00019	<0.0097	<0.00019
T-12	T12-ROX-042022	4/20/2022	0.026	0.01	0.0089 J	0.067	<0 05	0.072 J	<0.0002	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002 UJ	<0.0002	<0.03 UJ	<0.0099	<0.0002	<0.0099	<0.0002
	T12-ROX-071422	7/14/2022	0.03	<0 01	0.011	0.067	<0 05	0.067 J	<0.0002 UJ	<0.0002	<0.0002	0.00012 J	0 0002	0.000067 J	<0.0002	<0.0002	<0 03	<0.0098	<0.0002	<0.0098	0 000063 J
	T12-ROX-110122	11/1/2022	0.044	0 0059	0.011	0.059	0.0051 J	0 064	0.00027	<0.0002	<0.0002	<0 0002	<0.0002	<0.0002	<0.0002	<0.0002	<0 03	0 0055 J	<0.0002	<0.01	<0.0002
	T12-ROX-011123	1/11/2023	0.053	0.019	0.022	0.11	0.0079 J	0.12	0.00032	<0 00019	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029 UJ	<0.0095	<0.00019	<0.0095	<0.00019
	T12-ROX-011123-DUP	1/11/2023	0.053	0.018	0.022	0.11	0.0076 J	0.12	0.00026	0.00011 J J	<0 00019	<0.00019	<0 00019	<0 00019	<0.00019	<0.00019	<0.029	<0.0095	<0.00019	<0.0095	<0.00019

TABLE 3a
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

			SVOCs																		
			Dibenzofuran	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	Nitrobenzene	Phenanthrene	Phenol	Pyrene	Pyridine
Screening Values (mg/L)			0.007 [3]	5.6 [1]	0.14 [2]		0.7 [1]	0.14 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	0.49 [3]	0.028 [1]	0.35 [1]	0.14 [3]	0.014 [1]	0.21 [3]	0.1 [1]	0.21 [1]	0.007 [3]
Location	**Sample ID**	**Sample Date**	**Analytical Results (mg/L)**																			
MW-01	MW1-ROX-041322	4/13/2022	<0 0096	<0.0096 U	<0.0096	<0.0096	<0.0096	<0 0096	<0.00019	<0.00019	<0 0096	<0.0096	<0.00019	<0 00019	<0.00019	<0.0096	<0.019	<0.0096	<0 00019	<0 0096	<0.00019	<0 0096
	MW1-ROX-070822	7/8/2022	<0 0094	<0.0094	<0.0094	<0.0094	0.0038 J	<0 0094	<0.00019	<0.00019	<0 0094	<0.0094	<0.00019	<0 00019	<0.00019	<0.0094	<0.019	<0.0094	<0 00019	<0 0094	<0.00019	<0 0094
	MW1-ROX-102022	10/20/2022	<0 0095	<0.0095	<0.0095	<0.0095	0.0033 J	<0 0095	<0.00019 U	<0.00019	<0 0095	<0.0095	0 000057 J	<0 00019	<0.00019	<0.0095	<0.019	<0.0095	<0 00019 U	<0 0095	<0.00019 U	<0 0095
	MW1-ROX-011323	1/13/2023	<0.01	<0 01	<0 01	<0 01	<0.01	<0.01	0.00023	<0.00021	<0.01	<0.01	0 00025	<0 00021	<0.00021	<0 01	<0.021	<0 01	0 00008 J	<0.01	0 00014 J	< 0.01
	MW1-ROX-011323-PAH	1/13/2023	--	--	--	--	--	--	<0.0002 H UJ	--	--	--	<0 0002 H UJ	--	--	--	--	--	<0.0002 H UJ	--	<0.0002 H UJ	--
MW-02	MW2-ROX-041422	4/14/2022	<0 0096	<0.0096	<0.0096	<0.0096	<0.0096	<0 0096	<0.00019	<0.00019	<0 0096	<0.0096	<0.00019	0.011	0 017	<0.0096	<0.019	<0.0096	<0 00019	<0.0096 UJ	<0.00019	<0.0096 UJ
	MW2-ROX-041422-DUP	4/14/2022	<0 0095	<0.0095	<0.0095	<0.0095	<0.0095	<0 0095	<0.00019	<0.00019	<0 0095	<0.0095	<0.00019	0.013	0 018	<0.0095	<0.019	<0.0095	<0 00019	<0.0095 UJ	<0.00019	<0.0095 UJ
	MW2-ROX-071422	7/14/2022	<0 0097	0 00035 J	<0.0097	<0.0097	<0.0097	<0 0097	<0.00019	<0.00019	<0 0097	<0.0097	<0.00019	0.011	0 023	<0.0097	<0.019	<0.0097	0.000047 J	<0 0097	<0.00019	<0 0097
	MW2-ROX-102822	10/28/2022	<0 0096	<0.0096	<0.0096	<0.0096	<0.0096	<0 0096	<0.00096	<0.00096	<0 0096	<0.0096	0 000087 J	0 0096	0 017	<0.0096	<0.019	<0.0096	0.000076 J	<0 0096	0.000083 J	<0 0096
	MW2-ROX-011323	1/13/2023	<0.011	0.0006 J	<0.011	<0.011	<0 011	<0.011	<0.00021	<0.00021	<0.011	<0 011	<0.00021	0 0091	0 013	<0.011	<0.021	<0.011	0.000039 J	<0.011	<0.00021	<0.011
MW-03	MW3-ROX-041222	4/12/2022	<0 0096	<0.0096	<0.0096	<0.0096	<0.0096	<0 0096	<0.00019	<0.00019	<0 0096	<0.0096	<0.00019	<0 00019	<0.00019	<0.0096	<0.019	<0.0096	<0 00019	<0 0096	<0.00019	<0 0096
	MW3-ROX-071422	7/14/2022	<0 0095	<0.0095	<0.0095	<0.0095	<0.0095	<0 0095	<0.00019	<0.00019	<0 0095	<0.0095	<0.00019 UJ	0.00011 J J	<0.00019	<0.0095	<0.019	<0.0095	<0 00019	<0 0095	<0.00019 UJ	<0 0095
	MW3-ROX-102522	10/25/2022	<0 0093	<0.0093	<0.0093	<0.0093	<0.0093	<0 0093	<0.00019	<0.00019	<0 0093	<0.0093	<0.00019 U	<0 00019	<0.00019	<0.0093	<0.019	<0.0093	<0 00019	<0 0093	<0.00019 U	<0 0093
	MW3-ROX-011123	1/11/2023	<0.01	<0 01	<0 01	<0 01	<0.01	<0.01	<0.00020	<0.00020	<0.01	<0.01	<0.0002	<0.0002	<0 0002	<0 01	<0 02	<0 01	<0.0002	<0.01	<0 0002	<0.01
	MW3-ROX-011123-PAH	1/11/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-04	MW4-ROX-041922	4/19/2022	<0 0097	<0.0097	<0.0097	<0.0097	<0.0097	<0 0097	0.00017 J	<0.00019	<0 0097	<0.0097	0.00012 J	0 000086 J	<0.00019	<0.0097	<0.019	<0.0097	0 00011 J	<0 0097	0.000098 J	<0 0097
	MW4-ROX-071822	7/18/2022	<0 0096	<0.0096	<0.0096	<0.0096	<0.0096	<0 0096	<0.00019	<0.00019	<0 0096	<0.0096	0 000071 J	<0 00019	<0.00019	<0.0096	<0.019	<0.0096	<0 00019	<0 0096	0.000043 J	<0.0096 UJ
	MW4-ROX-103122	10/31/2022	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	<0.00019	<0.00019	<0 0094	<0.0094	<0.00019	<0 00019	<0.00019	<0.0094	<0.019	<0.0094	<0 00019	<0 0094	<0.00019	<0 0094
	MW4-ROX-010923	1/9/2023	<0.01	<0 01	<0 01	<0 01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0.01	<0.0002	<0.0002	<0 0002	<0 01	<0 02	<0 01	<0.0002	<0.01	<0 0002	<0.01
MW-05	MW5-ROX-041322	4/13/2022	<0 0096	<0.0096	<0.0096	<0.0096	0.0035 J	<0 0096	<0.00017 U	<0.00019	<0 0096	<0.0096	0.00014 J	<0 00019	<0.00019	<0.0096	<0.019	<0.0096	<0 00019	<0 0096	<0.00019 U	<0 0096
	MW5-ROX-071122	7/11/2022	<0 0093	<0.0093 U	<0.0093	<0.0093	<0.0093	<0 0093	<0.00019	<0.00019	<0 0093	<0.0093	0 000099 J	<0 00019	<0.00019	<0.0093	<0.019	<0.0093	<0 00019	<0 0093	<0.00019	<0 0093
	MW5-ROX-102722	10/27/2022	<0 0094	0 00046 J	<0.0094	0 00035 J	0.0026 J	<0 0094	<0.00019	<0.00038 UJ	<0 0094	<0.0094	0 000042 J	<0 00019	<0.00019	<0.0094	<0.019	<0.0094	<0 00019	<0 0094	<0.00019	<0 0094
	MW5-ROX-011023	1/10/2023	<0.01	<0 01	<0 01	<0 01	<0.01	0.0037 J F1 J	<0 0002	<0.0002	<0.01	<0.01	<0.0002	<0.0002	<0 0002	<0 01	<0 02	<0 01	<0.0002	<0.01	<0 0002	<0.01
MW-06A	MW6A-ROX-041122	4/11/2022	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	0 0001 J	<0.00019	<0 0094	<0.0094	0.00015 J	<0 00019	<0.00019	<0.0094	<0.019	<0.0094	<0 00019	<0 0094	0.000071 J	<0 0094
	MW6A-ROX-070822	7/8/2022	<0 0099	<0.0099	<0.0099	<0.0099	<0.0099	<0 0099	<0 0002	<0.0002	<0 0099	<0.0099	<0.0002	<0.0002	<0 0002	<0.0099	<0 02	<0.0099	<0.0002	<0 0099	<0 0002	<0 0099
	MW6A-ROX-102122	10/21/2022	<0 0092	<0.0092	<0.0092	<0.0092	<0.0092	<0 0092	0.0012 B	< 0.00018	<0 0092	<0.0092	0.0015	<0 00018	<0.00018	<0.0092	<0.018	<0.0092	<0 00025 U	<0 0092	0.0010 B	<0 0092
	MW6A-ROX-102122-PAH	10/21/2022	--	--	--	--	--	--	<0 00032 H UJ	<0.00032 H UJ	--	--	<0.00032 H UJ	<0.00032 H UJ	<0.00032 H UJ	--	--	--	<0.00032 H UJ	--	<0.00032 H UJ	--
	MW6A-ROX-011123	1/11/2023	<0.01	<0 01	<0 01	<0 01	<0.01	<0.01	<0.00021	<0.00021	<0.01	<0.01	<0.00021	<0 00021	<0.00021	<0 01	<0.021	<0 01	<0 00021	<0.01	<0.00021	<0.01
MW-06B	MW6B-ROX-041122	4/11/2022	<0 0095	<0.0095	<0.0095	<0.0095	<0.0095	0.004 J	<0.00019	<0.00019	<0 0095	<0.0095	<0.00019	<0 00019	<0.00019	<0.0095	<0.019	<0.0095	<0 00019	<0 0095	<0.00019	<0 0095
	MW6B-ROX-070822	7/8/2022	<0 0096	<0.0096 U	<0.0096	<0.0096	<0.0096	<0 0096	<0.00019	<0.00019	<0 0096	<0.0096	<0.00019	<0 00019	<0.00019	<0.0096	<0.019	<0.0096	<0 00019	<0 0096	<0.00019	<0 0096
	MW6B-ROX-102122	10/21/2022	<0 0093	0 0013 J B	<0.0093 UJ	<0.0093	<0.0093	<0 0093	<0.00019	<0.00019	<0 0093	<0.0093	<0.00019	<0 00019	<0.00019	<0 0093 UJ	<0 019 UJ	<0.0093	<0 00019	<0.0093 UJ	<0.00019 U	<0 0093
	MW6B-ROX-011123	1/11/2023	<0.011	<0.011	<0.011	<0.011	<0 011	<0.011	<0.00021	<0.00021	<0.011	<0 011	<0.00021	<0 00021	<0.00021	<0.011	<0.021	<0.011	<0 00021	<0.011	0 00017 J J	<0.011
	MW6B-ROX-011123-PAH	1/11/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0001 J H J	--
	MW6B-ROX-011123-DUP	1/11/2023	<0.01	<0 01	<0 01	<0 01	<0.01	<0.01	<0.00021	<0.00021	<0.01	<0.01	<0.00021	<0 00021	<0.00021	<0 01	<0.021	<0 01	<0 00021	<0.01	<0.00021	<0.01
	MW6B-ROX-011123-DUP-PAH	1/11/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-06C	MW6C-ROX-041122	4/11/2022	<0 0093	<0.0093 U	<0.0093	<0.0093	<0.0093	<0 0093	<0.00019	<0.00019	<0 0093	<0.0093	0.00013 J J	<0 00019	<0.00019	<0.0093	<0.019	<0.0093	<0 00019	<0 0093	<0.00019	<0 0093
	MW6C-ROX-070822	7/8/2022	<0 0099	<0.0099	<0.0099	<0.0099	<0.0099	<0 0099	<0 0002	<0.0002	<0 0099	0.0099	<0.0002	<0.0002	<0 0002	<0.0099	<0 02	<0.0099	<0.0002	<0 0099	<0 0002	<0 0099
	MW6C-ROX-102122	10/21/2022	<0 0093	<0.0093	<0.0093	<0.0093	<0.0093	<0 0093	<0.00019 U	<0.00019	<0 0093	<0.0093	<0.00019	<0 00019	<0.00019	<0.0093	<0.019	<0.0093	<0 00019 U	<0 0093	<0.00019 U	<0 0093
	MW6C-ROX-011123	1/11/2023	<0.01	<0 01	<0 01	<0 01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0.01	<0.0002	<0.0002	<0 0002	<0 01	<0 02	<0 01	<0.0002	<0.01	<0 0002	<0.01
	MW6C-ROX-011123-PAH	1/11/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-06D	MW6D-ROX-041122	4/11/2022	<0 0095	<0.0095	<0.0095	<0.0095	<0.0095	<0 0095	<0.00019	<0.00019	<0 0095	<0.0095	<0.00019	<0 00019	<0.00019	<0.0095	<0.019	<0.0095	<0 00019	<0 0095	<0.00019	<0 0095
	MW6D-ROX-070822	7/8/2022	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	<0.00019	<0.00019	<0 0094	<0.0094	<0.00019	<0 00019	<0.00019	<0.0094	<0.019	<0.0094	<0 00019	<0 0094	<0.00019	<0 0094
	MW6D-ROX-102122	10/21/2022	<0 0093	<0.0093	<0.0093	<0.0093	<0.0093	<0 0093	0.0029 B	<0.00019	<0 0093	<0.0093	0.0015	<0 00019	<0.00019	<0.0093	<0.019	<0.0093	<0 00025 U	<0 0093	0.0029 B	<0 0093
	MW6D-ROX-102122-PAH	10/21/2022	--	--	--	--	--	--	<0 00019 H UJ	<0.00019 H UJ	--	--	<0.00019 H UJ	<0.00019 H UJ	0.0001 J H J	--	--	--	<0.00019 H UJ	--	<0.00019 H UJ	--
	MW6D-ROX-011123	1/11/2023	<0.01	<0 01	<0 01	<0 01	<0.01	<0.01	<0.00021	<0.00021	<0.01	<0.01	<0.00021	<0 00021	<0.00021	<0 01	<0.021	<0 01	<0 00021	<0.01	<0.00021	<0.01
	MW6D-ROX-011123-PAH	1/11/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3a
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

			SVOCs																		
			Dibenzofuran	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	Nitrobenzene	Phenanthrene	Phenol	Pyrene	Pyridine
Screening Values (mg/L)			0.007 [3]	5.6 [1]	0.14 [2]		0.7 [1]	0.14 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	0.49 [3]	0.028 [1]	0.35 [1]	0.14 [3]	0.014 [1]	0.21 [3]	0.1 [1]	0.21 [1]	0.007 [3]
Location	**Sample ID**	**Sample Date**	**Analytical Results (mg/L)**																			
MW-07	MW7-ROX-041922	4/19/2022	<0 0099	0 00069 J	<0.0099	<0.0099	<0.0099	<0 0099	<0 0002	<0.0002	<0 0099	<0.0099	<0.0002	0.0015	0.0023	<0.0099	<0 02	<0.0099	0.00021	0.082	0.000091 J	<0 0099
	MW7-ROX-041922-DUP	4/19/2022	<0 0099	<0.0099	<0.0099	<0.0099	<0.0099	<0 0099	<0 0002	<0.0002	<0 0099	<0.0099	<0.0002	0.0016	0.0021	<0.0099	<0 02	<0.0099	0.00024	0.084	<0 0002	<0 0099
	MW7-ROX-071822	7/18/2022	<0 0096	<0.0096	<0.0096	<0.0096	<0.0096	<0 0096	<0.00019	0 00020	<0 0096	<0.0096	<0.00019	0 0019	0.0030	<0.0096	<0.019	<0.0096	0.00027	0.086	0.000054 J	<0 0096
	MW7-ROX-103122	10/31/2022	<0 0092	<0.0092	<0.0092	<0.0092	<0.0092	<0 0092	<0.00018	<0.00018	<0 0092	<0.0092	<0.00018	0 00098	0.0017	<0.0092	0.0014 J	<0.0092	<0 00018	0.12	<0.00018	<0 0092
	MW7-ROX-103122-DUP	10/31/2022	<0 0092	0 00082 J	<0.0092	<0.0092	<0.0092	<0 0092	<0.00018	<0.00018	<0 0092	<0.0092	<0.00018	0.001	0.0017	<0.0092	0.0013 J	<0.0092	0 00012 J	0.11	<0.00018	<0 0092
	MW7-ROX-010923	1/9/2023	<0.01	<0 01	<0 01	<0 01	<0.01	<0.01	0.00018 J	<0.0002	<0.01	<0.01	<0.0002	0 0011	0.0015	<0 01	<0 02	<0 01	0 00012 J	0.034	<0 0002 U	<0.01
MW-08	MW8-ROX-041922	4/19/2022	<0 0097	<0.0097	<0.0097	<0.0097	<0.0097	<0 0097	<0.00019	<0.00019	<0 0097	<0.0097	<0.00019	0.012	0.0048	<0.0097	<0.019	<0.0097	<0 00019	0.26	<0.00019	<0 0097
	MW8-ROX-071822	7/18/2022	<0 0095	<0.0095	<0.0095	<0.0095	<0.0095	<0 0095	<0.00019	0 00032	<0 0095	<0.0095	<0.00019	0 0065	0.00046	<0.0095	<0.019	<0.0095	0.000058 J	0.12	<0.00019	<0.0095 UJ
	MW8-ROX-071822-DUP	7/18/2022	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	<0.00019	0 00046	<0 0094	<0.0094	<0.00019	0 0070	0.00041	<0.0094	<0.019	<0.0094	0.000071 J	0.1	<0.00019	<0.0094 UJ
	MW8-ROX-103122	10/31/2022	<0 0093	<0.0093	<0.0093	<0.0093	<0.0093	<0 0093	0.000097 J	<0.00019	<0 0093	<0.0093	<0.00019	0.014	0.0061	<0.0093	<0.019	<0.0093	<0 00019	0.26	<0.00019	<0 0093
	MW8-ROX-010923	1/9/2023	0.00042 J	<0.0097	<0.0097	<0.0097	<0.0097	<0 0097	<0.00019	<0.00019	<0 0097	<0.0097	<0.00019	0.011	0.0042	<0.0097	<0.019	<0.0097	0 00018 J	0.27	<0.00019	<0 0097
	MW8-ROX-010923-DUP	1/9/2023	<0.01	<0 01	<0 01	<0 01	<0.01	<0.01	<0 0002	<0.0002	<0.01	0 0011 J	<0.0002	0 0096	0.0037	<0 01	<0 02	<0 01	0.00024	0.23	<0 0002	<0.01
MW-09	MW9-ROX-040722	4/7/2022	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	0.00008 J	<0.00019	<0 0094	<0.0094	<0.00019	<0 00019	<0.00019	<0.0094	<0.019	<0.0094	<0 00019	<0 0094	<0.00019	<0 0094
	MW9-ROX-071222	7/12/2022	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	0.000089 J	<0.00019	<0 0094	<0.0094	0 00021	<0 00019	<0.00019	<0.0094	<0.019	<0.0094	<0 00019	<0 0094	<0.00019	<0 0094
	MW9-ROX-102722	10/27/2022	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	<0.00019	<0.00019	<0 0094	<0.0094	<0.00019	<0 00019	<0.00019	<0.0094	<0.019	<0.0094	<0 00019	<0 0094	<0.00019	<0 0094
	MW9-ROX-010523	1/5/2023	<0.01	<0 01	<0 01	<0 01	<0.01	<0.01	<0.00021	<0.00021	<0.01	<0.01	<0.00021	<0 00021	<0.00021	<0 01	<0.021	<0 01	<0 00021	<0.01	<0.00021	<0 01 UJ
MW-10	MW10-ROX-041422	4/14/2022	<0 0095	<0.0095	<0.0095	<0.0095	<0.0095	<0 0095	<0.00019	<0.00019	<0 0095	<0.0095	<0.00019	<0 00019	<0.00019	<0.0095	<0.019	<0.0095	<0 00019	<0.0095 UJ	<0.00019	<0.0095 UJ
	MW10-ROX-070822	7/8/2022	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	<0.00019	<0.00019	<0 0094	<0.0094	<0.00019	<0 00019	<0.00019	<0.0094	<0.019	<0.0094	<0 00019	<0 0094	<0.00019	<0 0094
	MW10-ROX-102022	10/20/2022	<0 0093	<0.0093	<0.0093	<0.0093	<0.0093	<0 0093	<0.00032 U	<0.00019	<0 0093	<0.0093	0 000044 J	<0 00019	<0.00019	<0.0093	<0.019	<0.0093	<0 00019 U	<0 0093	<0.00024 U	<0 0093
	MW10-ROX-011223	1/12/2023	<0.01	<0 01	<0 01	<0 01	<0.01	<0.01	<0.00021	<0.00021	<0.01	<0.01	<0.00021	<0 00021	<0.00021	<0 01	<0.021	<0 01	<0 00021	<0.01	<0.00021	<0.01
MW-11	MW11-ROX-040722	4/7/2022	<0 0098	<0.0098	<0.0098	<0.0098	<0.0098	<0 0098	<0 0002	<0.0002	<0 0098	<0.0098	<0.0002	<0.0002	<0 0002	<0.0098	<0 02	<0.0098	<0.0002	<0.0098	<0 0002	<0 0098
	MW11-ROX-070822	7/8/2022	<0 0095	<0.0095	<0.0095	<0.0095	<0.0095	<0 0095	<0.00019	<0.00019	<0 0095	<0.0095	<0.00019	<0 00019	<0.00019	<0.0095	<0.019	<0.0095	<0 00019	<0 0095	<0.00019	<0 0095
	MW11-ROX-102022	10/20/2022	<0 0096	<0.0096	<0.0096	<0.0096	<0.0096	<0 0096	<0.00019	<0.00019	<0 0096	<0.0096	<0.00019	<0 00019	<0.00019	<0.0096	<0.019	<0.0096	<0 00019 U	<0 0096	<0.00019 U	0 0058 J
	MW11-ROX-011223	1/12/2023	<0.01	;,l;	<0 01	<0 01	<0.01	<0.01	<0.00021	<0.00021	<0.01	<0.01	<0.00021	<0 00021	<0.00021	<0 01	<0.021	<0 01	<0 00021	<0.01	<0.00021	<0.01
MW-12	MW12-ROX-041222	4/12/2022	<0 0097	<0.0097	<0.0097	<0.0097	<0.0097	<0 0097	<0.00019	<0.00019	<0 0097	<0.0097	<0.00019	<0 00019	<0.00019	<0.0097	<0.019	<0.0097	<0 00019	<0 0097	<0.00019	<0 0097
	MW12-ROX-070822	7/8/2022	<0 0095	<0.0095 U	<0.0095	<0.0095	<0.0095	<0 0095	<0.00019	<0.00019	<0 0095	<0.0095	<0.00019	<0 00019	<0.00019	<0.0095	<0.019	0 00048 J	<0 00019	<0 0095	<0.00019	<0 0095
	MW12-ROX-102622	10/26/2022	<0 0093	0 00057 J	<0.0093	<0.0093	<0.0093	<0 0093	0.000088 J J	<0.00019 UJ	<0 0093	<0.0093	0.00017 J	<0 00019	<0.00019	<0.0093	<0.019	<0.0093	0.000097 J	<0 0093	0 00008 J	<0.0093 UJ
	MW12-ROX-102622-PAH	10/26/2022	--	--	--	--	--	--	<0 00019 H UJ	<0.00019 H UJ	--	--	<0.00019 H UJ	<0.00019 H UJ	<0.00019 H UJ	--	--	--	<0.00019 H UJ	--	<0.00019 H UJ	--
	MW12-ROX-010623	1/6/2023	<0 0095	<0.0095	<0.0095	<0.0095	<0.0095	<0 0095	<0.00019	<0.00019	<0 0095	<0.0095	<0.00019	<0 00019	<0.00019	<0.0095	<0.019	<0.0095	<0 00019	<0 0095	<0.00019	<0 0095
MW-13	MW13-ROX-041422	4/14/2022	<0 0097	<0.0097	<0.0097	<0.0097	<0.0097	<0 0097	<0.00019	<0.00019	<0 0097	<0.0097	<0.00019	<0 00019	<0.00019	<0.0097	<0.019	<0.0097	<0 00019	<0.0097 UJ	<0.00019	<0.0097 UJ
	MW13-ROX-071122	7/11/2022	<0 0095	<0.0095	<0.0095	<0.0095	<0.0095	<0 0095	<0.00019	<0.00019	<0 0095	<0.0095	<0.00019	<0 00019	<0.00019	<0.0095	<0.019	<0.0095	<0 00019	<0 0095	<0.00019	<0 0095
	MW13-ROX-102422	10/24/2022	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	<0.00019	<0.00019	<0 0094	<0.0094	<0.00019 U	<0 00019	<0.00019	<0.0094	<0.019	<0.0094	<0 00019	<0 0094	<0.00019	<0 0094
	MW13-ROX-010923	1/9/2023	<0 0096	<0.0096	<0.0096	<0.0096	<0.0096	<0 0096	<0.00019	<0.00019	<0 0096	<0.0096	<0.00019	<0 00019	<0.00019	<0.0096	<0.019	<0.0096	<0 00019	<0 0096	<0.00019	<0 0096
MW-14	MW14-ROX-040822	4/8/2022	<0 0096	<0.0096 U	<0.0096	<0.0096	<0.0096	0 0045 J	0.00015 J	<0.00019	<0 0096	<0.0096	0.00017 J	<0 00019	<0.00019	<0.0096	<0.019	<0.0096	<0 00019	<0 0096	0 00012 J	<0 0096
	MW14-ROX-071122	7/11/2022	<0 0095	<0.0095 U	<0.0095	<0.0095	<0.0095	<0 0095	<0.00019	<0.00019	<0 0095	<0.0095	<0.00019	<0 00019	<0.00019	<0.0095	<0.019	<0.0095	<0 00019	<0 0095	<0.00019	<0 0095
	MW14-ROX-102422	10/24/2022	<0 0092	<0.0092	<0.0092	<0.0092	<0.0092	<0 0092	0.000063 J	<0.00018	<0 0092	<0.0092	<0.00018 U	<0 00018	0.000074 J	<0.0092	<0.018	<0.0092	<0 00018 U	<0 0092	<0.00018 U	<0 0092
	MW14-ROX-102422-DUP	10/24/2022	<0 0093	<0.0093	<0.0093	<0.0093	<0.0093	<0 0093	<0.00019	<0.00019	<0 0093	<0.0093	<0.00019 U	<0 00019	<0.00019	<0.0093	<0.019	<0.0093	<0 00019 U	<0 0093	<0.00019 U	<0 0093
	MW14-ROX-010923	1/9/2023	<0 0095	<0.0095	<0.0095	<0.0095	<0.0095	<0 0095	<0.00019	<0.00019	<0 0095	<0.0095	<0.00019	<0 00019	<0.00019	<0.0095	<0.019	<0.0095	<0 00019	<0 0095	<0.00019	<0 0095
	MW14-ROX-010923-DUP	1/9/2023	<0 0097	<0.0097	<0.0097	<0.0097	<0.0097	<0 0097	0.00032	<0.00019	<0 0097	<0.0097	<0.00019	<0 00019	<0.00019	<0.0097	<0.019	<0.0097	<0 00019	<0 0097	<0.00033 U	<0 0097
MW-16	MW16-ROX-041222	4/12/2022	<0 0096	<0.0096	<0.0096	<0.0096	<0.0096	<0 0096	0.0001 J J	<0.00019	<0 0096	<0.0096 UJ	<0.00019	<0 00019	<0.00019	<0.0096	<0.019	<0.0096	<0 00019	<0 0096	0.000055 J J	<0 0096
	MW16-ROX-071222	7/12/2022	<0 0094	0.0014 J	<0.0094 UJ	<0.0094	<0.0094	<0 0094	0.000075 J J	<0.00019	<0 0094	<0.0094	<0.00019	<0 00019	<0.00019	<0 0094 UJ	<0 019 UJ	<0.0094	0 000046 J J	<0.0094 UJ	<0.00019	<0 0094
	MW16-ROX-102522	10/25/2022	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	<0.00019	<0.00019	<0 0094	<0.0094	<0.00019	<0 00019	<0.00019	<0.0094	<0.019	<0.0094	<0 00019	<0 0094	<0.00019	<0 0094
	MW16-ROX-010523	1/5/2023	<0.011	<0.011	<0.011	<0.011	<0 011	<0.011	<0.00021	<0.00021	<0.011	<0 011	<0.00021	<0 00021	0.00011 J	<0.011	<0.021	<0.011	<0 00021	<0.011	<0.00021	<0.011 UJ

TABLE 3a
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

			SVOCs																		
			Dibenzofuran	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	Nitrobenzene	Phenanthrene	Phenol	Pyrene	Pyridine
Screening Values (mg/L)			0.007 [3]	5.6 [1]	0.14 [2]		0.7 [1]	0.14 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	0.49 [3]	0.028 [1]	0.35 [1]	0.14 [3]	0.014 [1]	0.21 [3]	0.1 [1]	0.21 [1]	0.007 [3]
Location	**Sample ID**	**Sample Date**	**Analytical Results (mg/L)**																			
MW-22	MW22-ROX-041522	4/15/2022	<0 0097	<0.0097	<0.0097	<0.0097	<0.0097	<0 0097	0.00014 J	<0.00019	<0 0097	<0.0097	0.0001 J	0.0044	0.0051	<0.0097	<0.019	<0.0097	<0 00019	<0.0097 UJ	0.000073 J	<0.0097 UJ
	MW22-ROX-071422	7/14/2022	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	<0.00019	<0.00019	<0 0094	<0.0094	<0.00019	0 0042	0 0046 J	<0.0094	<0.019	<0.0094	0.000054 J	<0 0094	<0.00019	<0 0094
	MW22-ROX-071422-DUP	7/14/2022	<0 0095	<0.0095	<0.0095	<0.0095	<0.0095	<0 0095	0.000073 J	<0.00019	<0 0095	<0.0095	0 000065 J	0 0051	0.006 J	<0.0095	<0.019	<0.0095	0 00011 J	<0 0095	0.000067 J	<0 0095
	MW22-ROX-102822	10/28/2022	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	<0.00019	<0.00019 UJ	<0 0094	<0.0094	0.0001 J	0 0072	0.0082	<0.0094	<0.019	<0.0094	0 00008 J	<0 0094	0 00007 J	<0 0094
	MW22-ROX-011023	1/10/2023	<0 0097	<0.0097	<0.0097	<0.0097	<0.0097	<0 0097	<0.00019	<0.00019	<0 0097	<0.0097	<0.00019	0.0067	0.0063	<0.0097	<0.019	<0.0097	<0 00019	<0 0097	<0.00019	<0 0097
MW-23	MW23-ROX-041222	4/12/2022	<0 0096	<0.0096	<0.0096	<0.0096	<0.0096	<0 0096	<0.00019	<0.00019	<0 0096	<0.0096	0 0001 J J	<0 00019	<0.00019	<0.0096	<0.019	<0.0096	<0 00019	<0 0096	<0.00019	<0 0096
	MW23-ROX-071322	7/13/2022	<0 0095	<0.0095	<0.0095	<0.0095	<0.0095	<0 0095	<0.00019	<0.00019	<0 0095	<0.0095	<0.00019	<0 00019	<0.00019	<0.0095	<0.019	<0.0095	<0 00019	<0 0095	<0.00019	<0 0095
	MW23-ROX-102622	10/26/2022	<0 0093	0 00057 J	<0.0093	0 00052 J	<0.0093	<0 0093	0.000083 J	<0.00019	<0 0093	<0.0093	0.00012 J	<0 00019	0.000056 J	<0.0093	<0.019	<0.0093	0.000056 J	<0 0093	0.000062 J	<0 0093
	MW23-ROX-011023	1/10/2023	<0.01	0 00093 J	<0 01	<0 01	<0.01	<0.01	<0.00021	<0.00021	<0.01	<0.01	<0.00021	<0 00021	0.00012 J	<0 01	<0.021	<0 01	<0 00021	<0.01	<0.00021	<0.01
MW-24	MW24-ROX-040722	4/7/2022	<0 0096	<0.0096	<0.0096	<0.0096	<0.0096	<0 0096	<0.00019	<0.00019	<0 0096	<0.0096	<0.00019	<0 00019	<0.00019	<0.0096	<0.019	<0.0096	<0 00019	<0 0096	<0.00019	<0 0096
	MW24-ROX-071122	7/11/2022	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	<0.00019	<0.00019	<0 0094	<0.0094	<0.00019	<0 00019	<0.00019	<0.0094	<0.019	<0.0094	<0 00019	<0 0094	<0.00019	<0 0094
	MW24-ROX-102022	10/20/2022	<0 0092	<0.0092	<0.0092	<0.0092	<0.0092	<0 0092	0.00098 B	<0.00018	<0 0092	<0.0092	0 00027	<0 00018	<0.00018	<0.0092	<0.018	<0.0092	<0 00028 U	<0 0092	0.00076 B	<0 0092
	MW24-ROX-102022-PAH	10/20/2022	--	--	--	--	--	--	<0 00019 H UJ	<0.00019 H UJ	--	--	<0.00019 H UJ	<0.00019 H UJ	<0.00019 H UJ	--	--	--	<0.00019 H UJ	--	<0.00019 H UJ	--
	MW24-ROX-011223	1/12/2023	<0.011	<0.011	<0.011	<0.011	<0 011	<0.011	<0.00021	<0.00021	<0.011	<0 011	0 000065 J	<0 00021	<0.00021	<0.011	<0.021	<0.011	0.000066 J	<0.011	<0.00021	<0.011
	MW24-ROX-011223-PAH	1/12/2023	--	--	--	--	--	--	--	--	--	--	0.00013 J H J	--	--	--	--	--	<0.00021 H UJ	--	--	--
MW-25	MW25-ROX-041922	4/19/2022	<0.01	0 00061 J	<0 01	<0 01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0.01	<0.0002	<0.0002	<0 0002	<0 01	<0 02	<0 01	<0.0002	<0.01	<0 0002	<0.01
	MW25-ROX-071822	7/18/2022	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	<0.00019	<0.00019	<0 0094	<0.0094	<0.00019	<0 00019	<0.00019	<0.0094	<0.019	<0.0094	<0 00019	<0 0094	<0.00019	<0.0094 UJ
	MW25-ROX-103122	10/31/2022	<0 0093	<0.0093	<0.0093	<0.0093	<0.0093	<0 0093	<0.00019	<0.00019	<0 0093	<0.0093	<0.00019	<0 00019	<0.00019	<0.0093	<0.019	<0.0093	<0 00019	<0 0093	<0.00019	<0 0093
	MW25-ROX-010923	1/9/2023	<0.01	<0 01	<0 01	<0 01	<0.01	<0.01	<0.00021	<0.00021	<0.01	<0.01	<0.00021	<0 00021	<0.00021	<0 01	<0.021	<0 01	<0 00021	<0.01	<0.00021 U	<0.01
MW-26	MW26-ROX-041122	4/11/2022	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	<0.00019	<0.00019	<0 0094	<0.0094	0 00025	<0 00019	<0.00019	<0.0094	<0.019	<0.0094	<0 00019	<0.0094	<0.00019	<0 0094
	MW26-ROX-071222	7/12/2022	<0 0095	<0.0095	<0.0095	<0.0095	<0.0095	<0 0095	<0.00019	<0.00019	<0 0095	<0.0095	0.00015 J J	<0 00019	<0.00019	<0.0095	<0.019	<0.0095	<0 00019	<0 0095	<0.00019	<0 0095
	MW26-ROX-102822	10/28/2022	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	<0.00019	<0.00019 UJ	<0 0094	<0.0094	0 000048 J	<0 00019	0.000066 J	<0.0094	<0.019	<0.0094	0.000044 J	<0 0094	0.000046 J	<0 0094
	MW26-ROX-010623	1/6/2023	<0.01	0 00067 J	<0 01	<0 01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0.01	<0.0002	<0.0002	<0 0002	<0 01	<0 02	<0 01	<0.0002	<0.01	<0 0002	< 0.01
MW-27	MW27-ROX-040822	4/8/2022	<0 0095	<0.0095	<0.0095	<0.0095	<0.0095	0 0039 J	0.000099 J	<0.00019	<0 0095	<0.0095	<0.00019	<0 00019	<0.00019	<0.0095	<0.019	<0.0095	<0 00019	<0 0095	0.000047 J	<0 0095
	MW27-ROX-071122	7/11/2022	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	<0.00019	<0.00019	<0 0094	<0.0094	<0.00019	0 0002	0.00024	<0.0094	<0.019	<0.0094	0.000051 J	<0 0094	<0.00019	<0 0094
	MW27-ROX-102622	10/26/2022	<0 0092	0.0006 J	<0.0092	0 00045 J	<0.0092	<0 0092	<0.00018	<0.00018 UJ	<0 0092	<0.0092	0.00014 J	<0 00018	<0.00018	<0.0092	<0.018	<0.0092	0.000044 J	<0 0092	0.000039 J	<0.0092 UJ
	MW27-ROX-010623	1/6/2023	<0 0099	<0.0099	<0.0099	<0.0099	<0.0099	<0 0099	<0 0002	<0.0002	<0 0099	<0.0099	<0.0002	<0.0002	<0 0002	<0.0099	<0 02	<0.0099	<0.0002	<0 0099	<0 0002	<0 0099
MW-28	MW28-ROX-041322	4/13/2022	<0 0095	<0.0095	<0.0095	<0.0095	<0.0095	<0 0095	0.000087 J H J	<0.00019 H UJ	<0 0095	<0.0095	<0.00019 H UJ	<0.00019 H UJ	<0.00019 H UJ	<0.0095	<0.019	<0.0095	0.000055 J H *+ J	<0 0095	<0.00019 H UJ	<0 0095
	MW28-ROX-071222	7/12/2022	<0 0095	0 00031 J	<0.0095	<0.0095	<0.0095	<0 0095	<0.00019	<0.00019	<0 0095	<0.0095	0.00014 J J	<0 00019	<0.00019	<0.0095	<0.019	<0.0095	<0 00019	<0 0095	<0.00019	<0 0095
	MW28-ROX-102522	10/25/2022	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	<0.00019	<0.00019	<0 0094	<0.0094	<0.00019 U	<0 00019	0.000069 J	<0.0094	<0.019	<0.0094	<0 00019	<0 0094	<0.00019	<0 0094
	MW28-ROX-102522-DUP	10/25/2022	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	<0.00019	<0.00019	<0 0094	<0.0094	<0.00019 U	<0 00019	<0.00019	<0.0094	<0.019	<0.0094	<0 00019	<0 0094	<0.00019 U	<0 0094
	MW28-ROX-010523	1/5/2023	<0 0098	0.001 J	<0.0098	<0.0098	<0.0098	<0 0098	<0 0002	<0.0002	<0 0098	<0.0098	<0.0002	<0.0002	<0 0002	<0.0098	<0 02	<0.0098	<0.0002	<0 0098	<0 0002	<0.0098 UJ
P-54	P54-ROX-040822	4/8/2022	<0 0096	<0.0096	<0.0096	<0.0096	<0.0096	<0 0096	0.000086 J	<0.00019	<0 0096	<0.0096	<0.00019	<0 00019	<0.00019	<0.0096	<0.019	<0.0096	<0 00019	<0 0096	<0.00019	<0 0096
	P54-ROX-071222	7/12/2022	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	0.000066 J	<0.00019	<0 0094	<0.0094	0 00019	<0 00019	<0.00019	<0.0094	<0.019	<0.0094	<0 00019	<0 0094	<0.00019	<0 0094
	P54-ROX-102722	10/27/2022	<0 0093	0 00032 J	<0.0093	<0.0093	<0.0093	<0 0093	<0.00019	<0.00019	<0 0093	<0.0093	<0.00019	<0 00019	<0.00019	<0.0093	<0.019	<0.0093	0.000039 J	<0 0093	<0.00019	<0 0093
	P54-ROX-010623	1/6/2023	<0.01	0 00064 J	<0 01	<0 01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0.01	<0.0002	<0.0002	<0 0002	<0 01	<0 02	<0 01	<0.0002	<0.01	<0 0002	<0.01
P-56	P56-ROX-042022	4/20/2022	0.00053 J	<0 01	<0 01	<0 01	<0.01	<0.01	<0 0002	0 00045	<0.01	<0.01	<0.0002	0.017	0 016	<0 01	<0 02	<0 01	0.001	<0.01	0.000046 J	<0 01 UJ
	P56-ROX-071322	7/13/2022	<0 0092	<0.0092	<0.0092	<0.0092	<0.0092	<0 0092	<0.00018	0 00034	<0 0092	<0.0092	<0.00018	0.01	0.0092	<0.0092	0.0006 J	<0.0092	0.00073	<0 0092	0.000045 J	<0 0092
	P56-ROX-110122	11/1/2022	<0.01	<0 01	<0 01	<0 01	<0.01	<0.01	0.000091 J	0.0003	<0.01	<0.01	<0.0002	0 0038	0 002	<0 01	<0 02	<0 01	0.00042	<0.01	0.000064 J	<0.01
	P56-ROX-010923	1/9/2023	0.00066 J	<0.0097	<0.0097	<0.0097	<0.0097	<0 0097	<0.00019	0 00039	<0 0097	<0.0097	<0.00019	0.012	0 012	<0.0097	<0.019	<0.0097	0 0011	<0 0097	<0.00019 U	<0 0097

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3a
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

			SVOCs																		
			Dibenzofuran	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	Nitrobenzene	Phenanthrene	Phenol	Pyrene	Pyridine
Screening Values (mg/L)			**0.007** [3]	**5.6** [1]	**0.14** [2]		**0.7** [1]	**0.14** [2]	**0.28** [1]	**0.28** [1]	**0.00006** [2]		**0.00043** [1]	**0.49** [3]	**0.028** [1]	**0.35** [1]	**0.14** [3]	**0.014** [1]	**0.21** [3]	**0.1** [1]	**0.21** [1]	**0.007** [3]
Location	**Sample ID**	**Sample Date**	**Analytical Results (mg/L)**																			
P-57	P57-ROX-041522	4/15/2022	0.00055 J	<0.0096	<0.0096	<0.0096	<0.0096	<0 0096	0.000099 J	0 00052	<0 0096	<0.0096	<0.00019	0.028	0 029	<0.0096	<0.019	<0.0096	0.00036	<0.0096 UJ	<0.00019	<0.0096 UJ
	P57-ROX-071522	7/15/2022	<0.0095 H UJ	<0.0095 H UJ	0.023 H J	<0.0095 H UJ	<0 0095 H UJ	<0.0095 H UJ	<0.00019	0 00027	<0 0095	<0.0095 H UJ	<0.00019	0.0096	0 012	<0 0095 H UJ	0.0015 H J	<0.0095 H UJ	0 00018 J	<0.0095 H UJ	<0.00019	<0.0095 H UJ
	P57-ROX-102822	10/28/2022	<0 0093	<0.0093	<0.0093	<0.0093	<0.0093	<0 0093	<0.00093	<0.00093 UJ	<0 0093	<0.0093	0.00014 J	0.022	0 029	<0.0093	<0.019	<0.0093	0.00055	<0 0093	0.0002	<0 0093
	P57-ROX-102822-PAH	10/28/2022	--	--	--	--	--	--	<0 00038 H UJ	0.0008 H J	--	--	<0.00019 H UJ	0 025 H J	0.027 H J	--	--	--	0.00028 J H J	--	<0.00019 H UJ	--
	P57-ROX-011023	1/10/2023	0.00077 J	0 00091 J	<0.0095	<0.0095	<0.0095	<0 0095	<0.00019	0 00069	<0 0095	<0.0095	<0.00019	0.027	0.0079	<0.0095	<0.019	<0.0095	0.00045	0.0071 J J	<0.00019	<0 0095
P-58	P58-ROX-041822	4/18/2022	0 0014 J	<0.0097	<0.0097	<0.0097	<0.0097	<0 0097	0.00026	0.002	<0 0097	<0.0097	<0.00019	0.081	0 036	<0.0097	<0.019	<0.0097	0 0016	0 6	0.00058	<0 0097
	P58-ROX-041822-DUP	4/18/2022	0 0016 J	<0.0097	<0.0097	<0.0097	<0.0097	<0 0097	0.00022	0.0016	<0 0097	<0.0097	<0.00019	0.081	0 035	<0.0097	<0.019	<0.0097	0 0014	0.67	0.00053	<0 0097
	P58-ROX-071422	7/14/2022	0 0026 J	<0.0092	0.013	<0.0092	<0.0092	<0 0092	0.00025	0.0030 J	<0 0092	<0.0092	0.00017 J	0.071	0 059	0.024	0.018	<0.0092	0 0026	0 31 J	0.0011	<0 0092
	P58-ROX-071422-DUP	7/14/2022	<0.018	<0.018	0.012 J	<0.018	<0 018	<0.018	0.00029 J	0.0017 J	<0.018	<0 018	0 000088 J	0.088	0 051	0.023	0.016 J	<0.018	0 0024	0.13 J	0.0013	<0.018
P-59	P59-ROX-041822	4/18/2022	<0.019	<0.019	<0.019	<0.019	<0 019	<0.019	<0.00019	<0.00019	<0.019	<0 019	<0.00019	0.019	0 026	<0.019	<0.038	<0.019	0.00088	0.028	<0.00019	<0.019
	P59-ROX-071422	7/14/2022	<0.019	<0.019	<0.019	<0.019	<0 019	<0.019	0.00023 J	0 00044	<0.019	<0 019	<0.00038	0.014	0.02	<0.019	<0.038	<0.019	0 0013	0.023	0.00047	<0.019
	P59-ROX-110422	11/4/2022	<0 0093	<0.0093	<0.0093	<0.0093	<0.0093	<0 0093	0.00045	<0.00019	<0 0093	<0.0093	<0.00019	0.013	0 019	<0.0093	<0.019	<0.0093	0 0011	0.024	<0.00019	<0 0093
	P59-ROX-011123	1/11/2023	<0 0097	<0.0097	<0.0097	<0.0097	<0.0097	<0 0097	<0.00019	0.00036 J	<0 0097	<0.0097	<0.00019	0 012 J	0.015 J	<0.0097	0.0012 J	<0.0097	0 00092 J	0.035 J	0 00037 J	<0 0097
	P59-ROX-011123-DUP	1/11/2023	<0.0096 UJ	<0.0096 UJ	<0.0096 UJ	<0.0096	<0 0096 UJ	<0.0096 UJ	0.000089 J	<0.00019	0.0036 J J	<0.0096 UJ	<0.00019	0.0039 J	0 0053 J	<0 0096 UJ	<0 019 UJ	<0.0096 UJ	0 00037 J	0.0025 J J	0 00019 J	<0.0096 UJ
	P59-ROX-011123-DUP-PAH	1/11/2023	--	--	--	--	--	--	0 00022 J H J	--	--	--	--	0 012 H J	0.016 H J	--	--	--	0 00076 H J	--	0.0004 H J	--
P-74	P74-ROX-041822	4/18/2022	<0 0097	0 00033 J	<0.0097	<0.0097	<0.0097	<0 0097	<0.00019	<0.00019	<0 0097	<0.0097	<0.00019	<0 00019	<0.00019	<0.0097	<0.019	<0.0097	<0 00019	<0 0097	<0.00019	<0 0097
	P74-ROX-041822-DUP	4/18/2022	<0 0096	<0.0096	<0.0096	<0.0096	<0.0096	<0 0096	<0.00019	<0.00019	<0 0096	<0.0096	<0.00019	<0 00019	<0.00019	<0.0096	<0.019	<0.0096	0.000037 J	<0 0096	<0.00019 U	<0 0096
	P74-ROX-071322	7/13/2022	<0 0095	<0.0095	<0.0095	<0.0095	<0.0095	<0 0095	<0.00019	<0.00019	<0 0095	<0.0095	<0.00019	<0 00019	<0.00019	<0.0095	<0.019	<0.0095	0.000048 J	<0 0095	0.000069 J	<0 0095
	P74-ROX-102822	10/28/2022	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	<0 00038 UJ	<0.00038 UJ	<0 0094	<0.0094	<0.00019	<0 00019	<0.00019	<0.0094	<0.019	<0.0094	0.000052 J	<0 0094	0.000055 J	<0 0094
	P74-ROX-102822-DUP	10/28/2022	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	<0.00019	<0.00019 UJ	<0 0094	<0.0094	<0.00019	<0 00019	<0.00019	<0.0094	<0.019	<0.0094	<0 00019	<0 0094	<0.00019	<0 0094
	P74-ROX-011023	1/10/2023	<0 0096	0 00031 J	<0.0096	<0.0096	<0.0096	<0 0096	<0.00019	<0.00019	<0 0096	<0.0096	<0.00019	<0 00019	<0.00019	<0.0096	<0.019	<0.0096	<0 00019	<0 0096	0.000044 J	<0 0096
P-93A	P93A-ROX-041922	4/19/2022	<0.01	<0 01	<0 01	<0 01	<0.01	<0.01	0.00011 J	<0.0002	<0.01	<0.01	0.00017 J	<0.0002	<0 0002	<0 01	<0 02	<0 01	0.000079 J	<0.01	<0 0002	<0.01
	P93A-ROX-071522	7/15/2022	<0 0095	<0.0095	<0.0095	<0.0095	<0.0095	<0 0095	<0.00019	<0.00019	<0 0095	<0.0095	<0.00019	<0 00019	<0.00019	<0.0095	<0.019	<0.0095	<0 00019	<0 0095	<0.00019	<0.0095 UJ
	P93A-ROX-110122	11/1/2022	<0.01	<0 01	<0 01	<0 01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0.01	<0.0002	<0.0002	0.000098 J	<0 01	<0 02	<0 01	<0.0002	<0.01	<0 0002	<0.01
	P93A-ROX-010523	1/5/2023	<0 0096	<0.0096	<0.0096	<0.0096	<0.0096	<0 0096	<0.00019	<0.00019	<0 0096	<0.0096	<0.00019	<0 00019	<0.00019	<0.0096	<0.019	<0.0096	<0 00019	<0 0096	<0.00019	<0.0096 UJ
	P93A-ROX-010523-PAH	1/5/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
P-93B	P93B-ROX-042022	4/20/2022	<0.01	<0 01	0.0042 J	<0 01	<0.01	<0.01	0.00036	<0.00021	<0.01	<0.01	<0.00021	0.00012 J	0.00012 J	<0 01	0.0025 J	<0 01	0.00043	0.4	0.00026	<0.01
	P93B-ROX-071522	7/15/2022	<0 0093	<0.0093	0.005 J	<0.0093	<0.0093	<0 0093	<0.00019	<0.00019 UJ	<0 0093	<0.0093	0 000061 J	<0.00019 UJ	0 00012 J J	<0.0093	0.0012 J	<0.0093	0.000041 J	0.32	0 00004 J	<0.0093 UJ
	P93B-ROX-071522-DUP	7/15/2022	0 00042 J J	0.0015 J	0.0054 J	<0.0092	<0.0092	<0 0092	<0.00018	0.0004 J	<0 0092	0 0013 J	<0.00018	0 012 J	0.015 J	<0.0092	0.0015 J	<0.0092	0.00027	0.3	<0.00018	<0 0092
	P93B-ROX-110422	11/4/2022	<0 0093	<0.0093	0.0044 J	<0.0093	<0.0093	<0 0093	<0.00019	<0.00019	<0 0093	<0.0093	<0.00019	0.00016 J	<0.00019	<0.0093	0.0012 J	<0.0093	<0 00019	0.31	<0.00019	<0 0093
	P93B-ROX-011123	1/11/2023	<0 0096	<0.0096	0.0045 J	<0.0096	<0.0096	<0 0096	<0.00019	<0.00019	<0 0096	<0.0096	<0.00019	<0 00019	<0.00019	<0.0096	0.0014 J	<0.0096	<0 00019	0.31	<0.00019	<0 0096
P-93C	P93C-ROX-041922	4/19/2022	<0 0097	<0.0097	<0.0097	<0.0097	<0.0097	<0 0097	0.000093 J	<0.00019	<0 0097	<0.0097	0.00017 J	<0 00019	<0.00019	<0.0097	<0.019	<0.0097	0.000045 J	<0 0097	<0.00019	<0 0097
	P93C-ROX-071322	7/13/2022	<0.01	<0 01	<0 01	<0 01	<0.01	<0.01	<0.00021	<0.00021	<0.01	<0.01	<0.00021	<0 00021	<0.00021	<0 01	<0.021	<0 01	<0 00021	<0.01	<0.00021	<0.01
	P93C-ROX-110122	11/1/2022	<0.01	<0 01	<0 01	<0 01	<0.01	<0.01	<0 0002	<0.0002	<0.01	<0.01	<0.0002 U	<0.0002	0.000082 J	<0 01	<0 02	<0 01	<0.0002	<0.01	0.000064 J	<0.01
	P93C-ROX-010523	1/5/2023	<0 0097	<0.0097	<0.0097	<0.0097	<0.0097	<0 0097	0.00016 J	<0.00019	<0 0097	<0.0097	<0.00019	<0 00019	<0.00019	<0.0097	<0.019	<0.0097	<0 00019	<0 0097	0.000072 J	<0.0097 UJ
P-93D	P93D-ROX-041922	4/19/2022	<0 0099	0 00039 J	<0.0099	<0.0099	<0.0099	<0 0099	<0 0002	<0.0002	<0 0099	<0.0099	<0.0002	<0.0002	<0 0002	<0.0099	<0 02	<0.0099	<0.0002	<0.0099	<0 0002	<0 0099
	P93D-ROX-071522	7/15/2022	<0 0094	0 00083 J	<0.0094 UJ	<0.0094	<0.0094	<0 0094	<0.00019	<0.00019	<0 0094	<0.0094	<0.00019	<0 00019	<0.00019	<0 0094 UJ	<0 019 UJ	<0.0094	<0 00019	<0.0094 UJ	0.000039 J	0.0036 J J
	P93D-ROX-110322	11/3/2022	<0 0092	0 00084 J	<0.0092	<0.0092	0.0026 J	<0 0092	0.000092 J	<0.00018	<0 0092	<0.0092	<0.00018	<0 00018	<0.00018	<0.0092	<0.018	<0.0092	<0 00018	<0 0092	0.000068 J	<0 0092
	P93D-ROX-010523	1/5/2023	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	0.00018 J	<0.00019	<0 0094	<0.0094	<0.00019	<0 00019	<0.00019	<0.0094	<0.019	<0.0094	<0 00019	<0 0094	0 00015 J	<0.0094 UJ
	P93D-ROX-010523-PAH	1/5/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.00019 H UJ	--

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3a
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

			SVOCs																		
			Dibenzofuran	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	Nitrobenzene	Phenanthrene	Phenol	Pyrene	Pyridine
Screening Values (mg/L)			0.007 [3]	5.6 [1]	0.14 [2]		0.7 [1]	0.14 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	0.49 [3]	0.028 [1]	0.35 [1]	0.14 [3]	0.014 [1]	0.21 [3]	0.1 [1]	0.21 [1]	0.007 [3]
Location	**Sample ID**	**Sample Date**	**Analytical Results (mg/L)**																		
P-114R	P114R-ROX-041422	4/14/2022	<0 0095	<0.0095	<0.0095	<0.0095	<0.0095	<0 0095	<0.00019	<0.00019	<0 0095	<0.0095	<0.00019	<0 00019	<0.00019	<0.0095	<0.019	<0.0095	<0 00019	<0.0095 UJ	<0.00019	<0.0095 UJ
	P114R-ROX-071122	7/11/2022	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	0.000091 J	<0.00019	<0 0094	<0.0094	0.00011 J	<0 00019	<0.00019	<0.0094	<0.019	<0.0094	0.000062 J	<0 0094	<0.00019	<0 0094
	P114R-ROX-102422	10/24/2022	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	0.00022	<0.00019	<0 0094	<0.0094	<0.0002 U	<0 00019	<0.00019	<0.0094	<0.019	<0.0094	<0 00019 U	<0 0094	0.00022 B	<0 0094
	P114R-ROX-010623	1/6/2023	<0 0097	<0.0097	<0.0097	<0.0097	<0.0097	<0 0097	0.00016 J	<0.00019	<0 0097	<0.0097	<0.00019	<0 00019	<0.00019	<0.0097	<0.019	<0.0097	<0 00019	<0 0097	0 00018 J	<0 0097
	P114R-ROX-010623-PAH	1/6/2023	--	--	--	--	--	--	<0 00019 H UJ	--	--	--	--	--	--	--	--	--	--	--	<0.00019 H UJ	--
ROST-3-MW	ROST3MW-ROX-041222	4/12/2022	<0 0095	<0.0095	<0.0095	<0.0095	<0.0095	<0 0095	<0.00019	<0.00019	<0 0095	<0.0095	<0.00019	<0 00019	<0.00019	<0.0095	<0.019	<0.0095	<0 00019	<0 0095	0.000041 J J	<0 0095
	ROST3MW-ROX-071222	7/12/2022	<0 0096	0 00052 J	<0.0096 UJ	<0.0096	<0.0096	<0 0096	<0.00019	<0.00019	<0 0096	<0.0096	<0.00019	0.00016 J	0.000063 J	<0 0096 UJ	<0 019 UJ	<0.0096	<0 00019	<0.0096 UJ	<0.00019	<0 0096
	ROST3MW-ROX-102722	10/27/2022	<0 0093	<0.0093	<0.0093	<0.0093	<0.0093	<0 0093	<0.00019	<0.00019	<0 0093	<0.0093	<0.00019	0 0002	<0.00019	<0.0093	<0.019	<0.0093	<0 00019	<0 0093	<0.00019	<0.0093 UJ
	ROST3MW-ROX-010523	1/5/2023	<0.01	<0 01	<0 01	<0 01	<0.01	<0.01	<0.00021	<0.00021	<0.01	<0.01	<0.00021	0.00022	<0.00021	<0 01	<0.021	<0 01	<0 00021	<0.01	<0.00021	<0 01 UJ
ROST-4-PZ(C)	ROST4PZC-ROX-041522	4/15/2022	0.00082 J	<0.0095 U	<0.0095	<0.0095	<0.0095	<0 0095	0.00012 J	0.001	<0 0095	<0.0095	0.00005 J	0.0056	<0.00019	<0.0095	<0.019	<0.0095	0 0028	<0.0095 UJ	0.000098 J	<0.0095 UJ
	ROST4PZ(C)-ROX-071422	7/14/2022	0.00077 J	<0.0095	<0.0095	<0.0095	<0.0095	<0 0095	0.000075 J	0.0011	<0 0095	<0.0095	<0.00019	0.034	0 011	<0.0095	0.00066 J	<0.0095	0 0030	<0 0095	0 00015 J	<0 0095
	ROST4PZ(C)-ROX-102822	10/28/2022	0.00064 J	<0.0093	<0.0093	<0.0093	<0.0093	<0 0093	<0.00093	0.0013	<0 0093	<0.0093	0 000066 J	0.027	0.0084	<0.0093	<0.019	<0.0093	0 0029	<0 0093	0 00012 J	<0 0093
	ROST4PZC-ROX-011323	1/13/2023	0 00041 J J	<0 01	<0 01	<0 01	<0.01	<0.01	<0.00021	0.0008	<0.01	<0.01	<0.00021	0 0048	<0.00021	<0 01	<0.021	<0 01	0 0024	<0.01	0.000092 J	<0.01
ROST-4-PZ(E)	ROST4PZ(E)-ROX-071522	7/15/2022	0 0036 J	<0.0096	0.024	<0.0096	<0.0096	<0 0096	0.00072 J	0.0046 J	<0 0096	<0.0096	<0.00019	0.077	0.075 J	<0.0096	0.0021 J	<0.0096	0.019 J	0.0026 J	0.0017 J	<0.0096 UJ
	ROST4PZ(E)-ROX-071522-DUP	7/15/2022	0 0020 J	<0.0096	0.019	<0.0096	<0.0096	<0 0096	0 00017 J J	0.0024 J	<0 0096	0 0032 J	<0.00019	0.066	0.058 J	<0.0096	0.0017 J	<0.0096	0.0054 J	<0 0096	0 00042 J	<0.0096 UJ
	ROST4PZ(E)-ROX-102822	10/28/2022	0 0011 J	<0.0094	<0.0094 UJ	<0.0094	<0.0094	<0 0094	<0.00094	0.0021	<0 0094	0 0017 J	0 000044 J	0 038 J	0.033 J	<0 0094 UJ	<0 019 UJ	<0.0094	0 0044	<0.0094 UJ	0.00029	<0 0094
	ROST4PZ(E)-ROX-102822-DUP	10/28/2022	0.001 J	<0.0093	<0.0093	<0.0093	<0.0093	<0 0093	<0.00093	0.002	<0 0093	0 0021 J	<0.00019	0 064 J	0.057 J	<0.0093	<0.019	<0.0093	0 0047	<0 0093	0.00035	<0 0093
	ROST4PZE-ROX-011023	1/10/2023	0.003 J	<0.0095	<0.0095	<0.0095	<0.0095	<0 0095	0.00032	0.0027	<0 0095	<0.0095	<0.00019	0.065	0 049	<0.0095	<0.019	<0.0095	0 0085	<0 0095	0.0007	<0 0095
ROST-4-PZ(G)	ROST4PZG-ROX-041522	4/15/2022	<0 0097	<0.0097	<0.0097	<0.0097	<0.0097	<0 0097	0.000088 J	<0.00019	<0 0097	<0.0097	<0.00019	<0 00019	0.00009 J	<0.0097	<0.019	<0.0097	<0 00019	<0.0097 UJ	0.000051 J	<0.0097 UJ
	ROST4PZG-ROX-041522-DUP	4/15/2022	<0 0095	<0.0095	<0.0095	<0.0095	<0.0095	<0 0095	<0.00019	<0.00019	<0 0095	<0.0095	<0.00019	<0 00019	0.000063 J	<0.0095	<0.019	<0.0095	0.000055 J	<0.0095 UJ	<0.00019	<0.0095 UJ
	ROST4PZ(G)-ROX-071222	7/12/2022	<0 0095	0 00043 J	<0.0095	<0.0095	<0.0095	<0 0095	<0.00019	<0.00019	<0 0095	<0.0095	0.00016 J J	<0 00019	<0.00019	<0.0095	<0.019	<0.0095	0 000044 J J	<0 0095	<0.00019	<0 0095
	ROST4PZ(G)-ROX-102722	10/27/2022	<0 0094	<0.0094	<0.0094	<0.0094	<0.0094	<0 0094	0.00012 J	<0.00019	<0 0094	<0.0094	0 00025	<0 00019	<0.00019	<0.0094	<0.019	<0.0094	0 00012 J	<0 0094	0 00012 J	<0 0094
	ROST4PZ(G)-ROX-102722-PAH	10/27/2022	--	--	--	--	--	--	<0 00019 H UJ	<0.00019 H UJ	--	--	<0.00037 H UJ	<0.00019 H UJ	0 00012 J H J	--	--	--	<0.00019 H UJ	--	<0.00037 H UJ	--
	ROST4PZG-ROX-010623	1/6/2023	<0 0097	0.0003 J	<0.0097	<0.0097	<0.0097	0.0029 J J	<0.00019	<0.00019	<0 0097	<0.0097	<0.00019	<0 00019	<0.00019	<0.0097	<0.019	<0.0097	0.000037 J	<0 0097	<0.00019	<0 0097
T-12	T12-ROX-042022	4/20/2022	<0 0099	<0.0099	<0.0099 UJ	<0.0099 UJ	<0.0099	<0 0099	<0 0002	<0.0002	<0 0099	0 0016 J	<0.0002	<0.0002	<0 0002	<0 0099 UJ	<0.02 UJ	<0.0099	<0.0002	0.0076 J J	<0 0002	<0.0099 UJ
	T12-ROX-071422	7/14/2022	<0 0098	<0.0098	0.006 J	0.006 J	<0.0098	<0 0098	0.00007 J	<0.0002	<0 0098	0 0031 J	0 000042 J	<0.0002	<0.00020	<0.0098	0.00062 J	<0.0098	<0.0002	0.13	0.000084 J	<0 0098
	T12-ROX-110122	11/1/2022	<0.01	<0 01	<0 01	<0 01	0.0029 J	<0.01	<0 0002	<0.0002	<0.01	<0.01	<0.0002	0.013	0 016	<0 01	<0 02	<0 01	0 00019 J	0.12	<0 0002	<0.01
	T12-ROX-011123	1/11/2023	<0 0095	<0.0095	0.0039 J J	<0.0095	<0.0095	<0 0095	<0.00019	0.00037 J	<0 0095	0 0054 J	<0.00019	0.022	0 032	<0 0095 UJ	<0 019 UJ	<0.0095	0.00045	0.023 J	<0.00019	<0 0095
	T12-ROX-011123-DUP	1/11/2023	<0 0095	<0.0095	0.0042 J	<0.0095	<0.0095	<0 0095	<0.00019	0.00034 J	<0 0095	<0.0095	<0.00019	0.022	0 031	<0.0095	0.00087 J	<0.0095	0.00048	0.056 J	0.000051 J J	<0 0095

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, P-66, and P-68, contained LNAPL; therefore, these wells 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 the first quarter of each year.

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

LABORATORY QUALIFIERS

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

H = Analyzed or extracted out of holding time criteria.

F2 = Indicates MS/MSD RPD is outside acceptance limit.

*+ = Indicates LCS and/or LCSD is outside acceptance limit, high biased

*1 = LCS/LCSD RPD is outside contol limit

<#.## 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 MVS Descriptions and Assumptions apply to **Figure 6**. C Tech Development Corporation's Mining Visualization System, Version 9.94 (MVS 9.94) was used to model the estimated distribution of benzene in the groundwater.

MVS Descriptions and Assumptions:

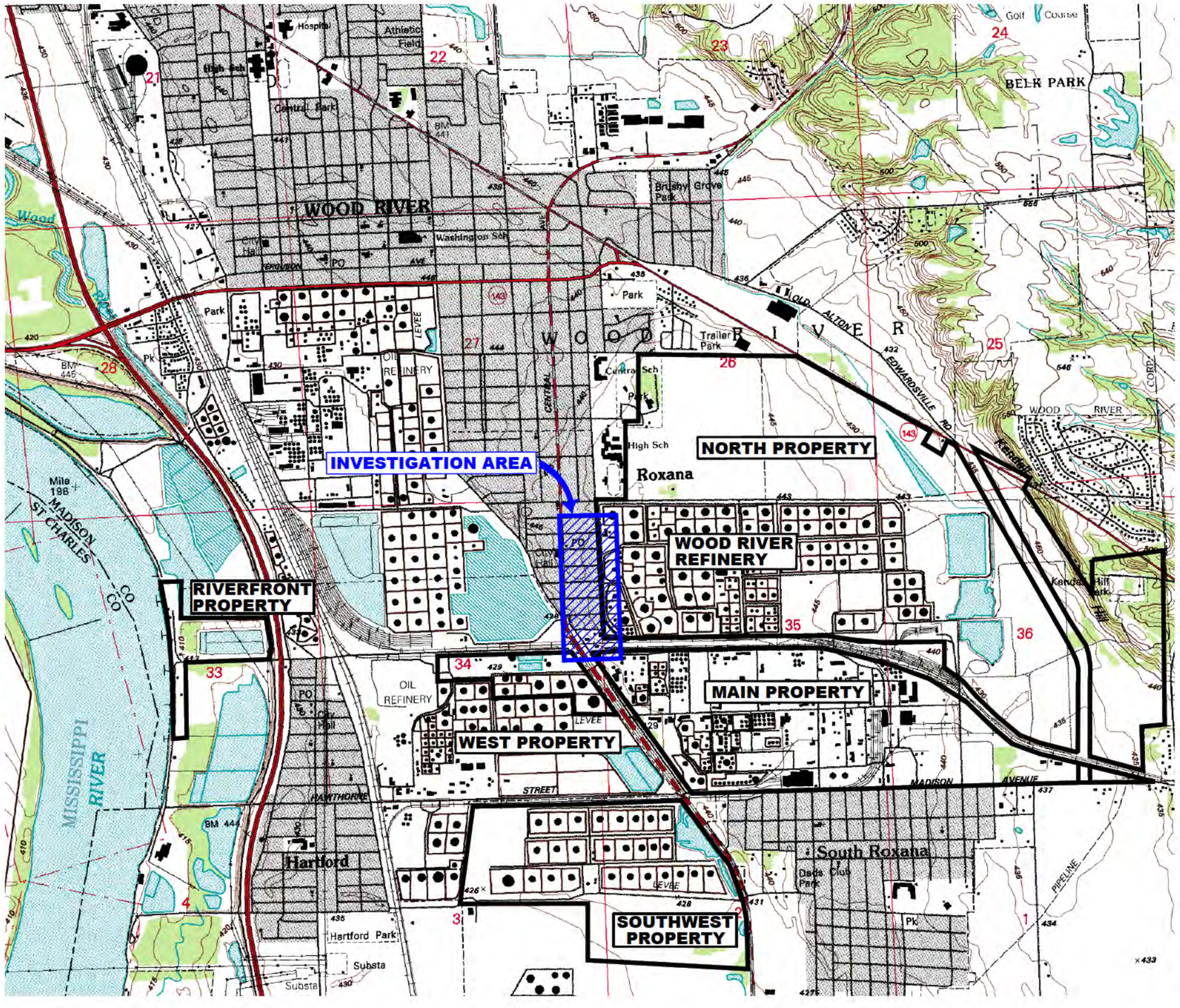
Plan View Model Output – The data input for the plan view model was not limited by depth and was modeled in two dimensions (2D). Regardless of sample depth, benzene concentrations were modeled on a flat horizontal plane.

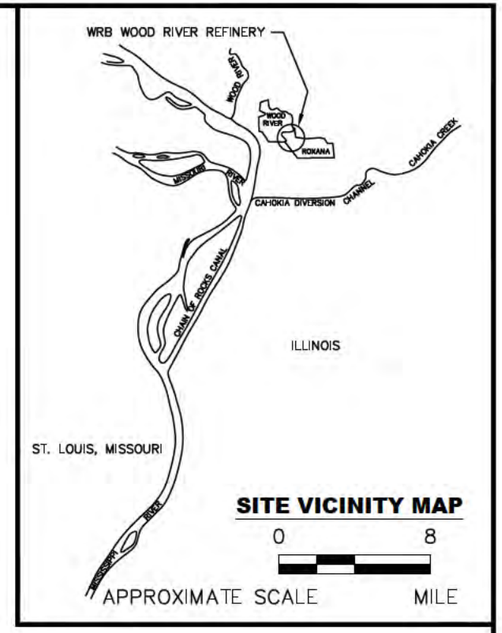
Inward Kriging / Boundary Cut-off – This method of Kriging limits the horizontal extent of data modeling to the extent of the data on the x/y plane in a convex hull.

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.

0 2000

APPROXIMATE SCALE FEET

N

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

PROJECT NO. 60697537

AECOM

DRN. BY: gds April 2023
DSGN. BY: mar
CHKD. BY: wmp

Investigation Area Location Map

FIG. NO. 1

File: C:\Users\mdreuman\ACCDocs\os dis services - dis dist projects\os americas\shell illinois\60697537 - 900 s central ave - roxana - il\roxana 1023 gw mpt\worksheets\part2_20230315\FIGURE 1 INVESTIGATION AREA LOCATION MAP.DWG Last edited: 03/17/23 @ 12:55 PM @ WCC-ST LOUIS

File: C:\USERS\LORENTE\AECOM\GDS GIS SERVICES - GIS CAD PROJECTS\DCS AMERICAS\SHELL\ILLINOIS\USF00666-900_S_CENTRAL_AVE-ROXANA-IL\ROXANA 1Q23 GW RPT\2.WORKSPACE\PART2_20230315\FIGURE 2 GROUNDWATER MONITORING WELL SAMPLING LOCATIONS.DWG Last edited: Mar. 17, 23 @ 12:29 PM by: lorente

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
FIFTH ST
SIXTH ST
SEVENTH ST
EIGHTH ST
HIGHWAY 111 (S. CENTRAL AVE)
CHAFFER AVE
2ND STREET
1ST STREET
RAND AVENUE
BP
VILLAGE OF ROXANA
NORTH PROPERTY
MAIN PROPERTY
WEST PROPERTY
1986 APPROXIMATE BENZENE RELEASE SITE
2020 APPROXIMATE BUCKEYE PIPELINE GASOLINE RELEASE SITE

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
P-68*
P-60-13
ROST-4-PZ(G)*
MW-11*
P-54*
MW-17
T-12*
MW-24*
MW-22*
P-69
MW-18
P-70
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*
MW-26*
MW-21
T-6
P-57*
MW-4*
MW-3*
P-93A*
P-93B*
P-93C*
P-93D*
P-73
MW-25*
MW-5*
MW-7*
MW-23*
MW-8*
P-58*
MW-13*
MW-6A
MW-6B*
MW-6C*
MW-6D*
P-66*
P-75
MW-14*
P-114R*
T-1
A-34
A-28
T-24
A-33
A-27
A-22
F-76
F-77
F-78
F-73
F-74
F-75

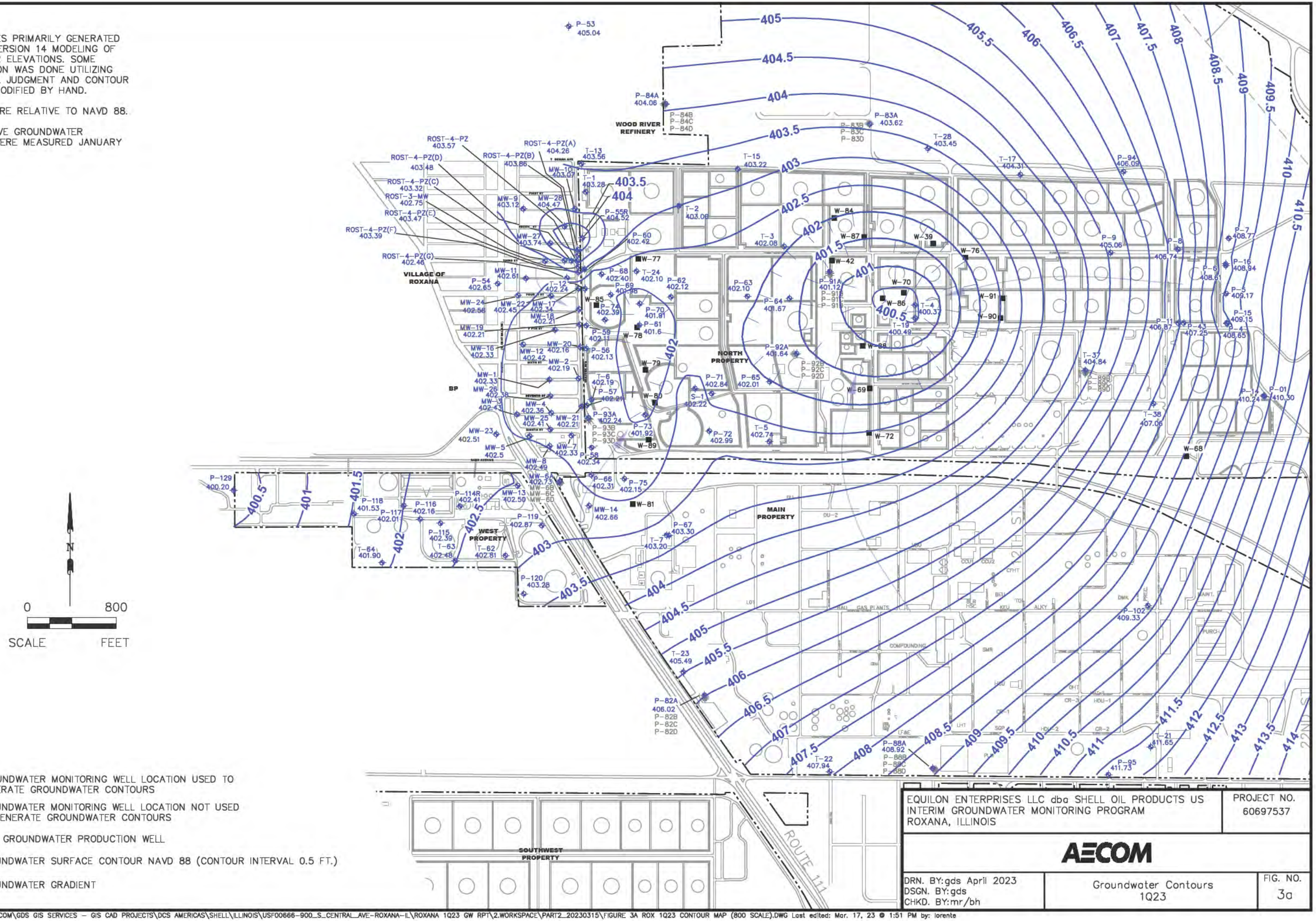
0 200
SCALE FEET
N

EQUILON ENTERPRISES LLC dba SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 60697537
AECOM		
DRN. BY:gds April 2023 DSGN. BY:mr CHKD. BY:wmp	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 JANUARY 3–4, 2023.



LEGEND

- GROUNDWATER MONITORING WELL LOCATION USED TO GENERATE GROUNDWATER CONTOURS
- GROUNDWATER MONITORING WELL 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. 60697537

AECOM

DRN. BY:gds April 2023
DSGN. BY:gds
CHKD. BY:mr/bh

Groundwater Contours 1Q23

FIG. NO. 3a

File: C:\USERS\LORENTE\AECOM\GDS GIS SERVICES – GIS CAD PROJECTS\DCS AMERICAS\SHELL\ILLINOIS\USF00666-900_S_CENTRAL_AVE-ROXANA-IL\ROXANA 1Q23 GW RPT\2.WORKSPACE\PART2_20230315\FIGURE 3A ROX 1Q23 CONTOUR MAP (800 SCALE).DWG Last edited: Mar. 17, 23 @ 1:51 PM by: lorente

File: C:\USERS\MEREUTAM\AECOM\GDS GIS SERVICES – GIS CAD PROJECTS\DCS AMERICAS\SHELL\ILLINOIS\USF00666-900_S_CENTRAL_AVE-ROXANA-IL\ROXANA 1Q23 GW RPT\2.WORKSPACE\PART2_20230315\FIGURE 3B GW CONTOURS 1Q23 WF.DWG Last edited: Mar. 17, 23 @ 4:36 PM by: lorente

LEGEND

- GROUNDWATER MONITORING WELL LOCATION USED TO GENERATE GROUNDWATER CONTOURS
- GROUNDWATER MONITORING WELL LOCATION NOT USED TO GENERATE GROUNDWATER CONTOURS
- WRR GROUNDWATER PRODUCTION WELL
- —404— GROUNDWATER SURFACE CONTOUR (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 JANUARY 3–4, 2023.

404
403.5
403.5
(A-32)
404
403
402.5
402
402.5
402
403
403.5
404

TYDEMAN AVE
FIRST ST
SECOND ST
THIRD ST
FOURTH ST
FIFTH ST
SIXTH ST
SEVENTH ST
EIGHTH ST
HIGHWAY 111 (S. CENTRAL AVE)
CHAFFER AVE
VILLAGE OF ROXANA
VILLAGE OF ROXANA
NORTH PROPERTY
WOOD RIVER REFINERY
MAIN PROPERTY
WEST PROPERTY
BP
PUBLIC WORKS YARD
RAND AVENUE
1986 APPROXIMATE BENZENE RELEASE SITE
2020 APPROXIMATE BUCKEYE PIPELINE GASOLINE RELEASE SITE

T-13 403.56
T-1 403.28
T-2 403 00
MW-9 403.12
MW-10 403.07
MW-28 404.47
ROST-4-PZ(A) 404.26
ROST-4-PZ(B) 403 86
P-55R 404.52
MW-27 403.74
ROST-4-PZ(D) 403.48
ROST-4-PZ(C) 403.32
ROST-3-MW 402.75
ROST-4-PZ 403.57
W-77
P-60 402.42
ROST-4-PZ(E) 403.47
ROST-4-PZ(F) 403.39
ROST-4-PZ(G) 402.46
P-68 402.40
T-24 402.10
P-54 402.65
MW-11 402.61
T-12 402.24
MW-17 402.34
P-62 402.12
P-69 401 98
W-85
P-70 401.91
MW-24 402.58
MW-22 402.45
MW-18 402.21
P-74 402.39
MW-19 402.21
P-59 402.11
P-61 401.60
W-78
MW-16 402 33
MW-20 402.16
P-56 402.13
MW-12 402.42
MW-2 402.19
MW-1 402.33
T-6 402.19
P-71 402.84
S-1 402.22
MW-26 402.38
P-57 402.21
P-73 401.92
W-80
MW-4 402 36
MW-21 402.21
MW-3 402.43
P-93A 402.24
P-93B
P-93C
P-93D
MW-25 402.41
MW-7 402 33
MW-5 402.50
MW-23 402 51
MW-8 402.49
W-89
P-58 402.34
P-72 402.99
P-75 402.15
P-66 402.31
MW-6A 402.73
MW-6B
MW-6C
MW-6D
MW-13 402.50
MW-14 402.66
W-81
P-117 402 01
P-114R 402.41
P-116 402.16
P-115 402.39
P-119 402.87
P-67 403.30
T-7 403.20
T-64 401.90
T-63 402.48
T-62 402.81

A-31 A-58 A-57 A-34 A-28 A-33 A-37 A-27 A-35 A-16 F-50 F-76 F-77 F-30 F-78 A-22 A-29 F-73 F-74 F-75 A-147

0 300
SCALE FEET
N

EQUILON ENTERPRISES LLC dba SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 60697537
AECOM		
DRN. BY: gds April 2023 DSGN. BY: gds CHKD. BY: mr/bh	Groundwater Contours 1Q23– West Fenceline	FIG. NO. 3b

File: C:\USERS\LORENTE\AECOM\GDS GIS SERVICES - GIS CAD PROJECTS\DCS AMERICAS\SHELL\ILLINOIS\USF00686-900_S_CENTRAL_AVE-ROXANA-IL\ROXANA 1Q23 GW RPT\2.WORKSPACE\PART2_20230315\FIGURE 4A THICKNESS OF LNAPL (WEST FENCLINE) 1Q23.DWG Last edited: Mar. 17, 23 @ 12:47 PM by: lorente

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 JANUARY 3-4, 2023.

TYDEMAN AVE
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
MAIN PROPERTY
WEST PROPERTY
WOOD RIVER REFINERY
PUBLIC WORKS YARD
BP
1986 APPROXIMATE BENZENE RELEASE SITE
2020 APPROXIMATE BUCKEYE PIPELINE GASOLINE RELEASE SITE

P-84A P-84B P-84C P-84D
T-13 T-1 T-2 T-24 T-12 T-6 T-7
A-32 A-31 A-58 A-57 A-34 A-28 A-33 A-37 A-27 A-35 A-16 A-30 A-22 A-29
F-50 F-76 F-77 F-78 F-73 F-74 F-75
MW-9 MW-10 ROST-4-PZ(A) MW-28 ROST-4-PZ(B) ROST-4-PZ(D) MW-27 ROST-4-PZ(C) ROST-3-MW ROST-4-PZ ROST-4-PZ(E) ROST-4-PZ(F) MW-11 ROST-4-PZ(G) MW-17 MW-24 MW-22 MW-18 MW-19 MW-16 MW-12 MW-20 MW-2 MW-1 MW-26 MW-21 MW-3 MW-4 MW-25 MW-5 MW-23 MW-7 MW-8 MW-6 MW-13 MW-14
P-54 P-60 P-69 P-70 P-74 P-61 P-59 P-56 P-57 P-73 P-93A P-93B P-93C P-93D P-58 P-71 P-72 P-75 P-117 P-114R P-116 P-115 P-119
0.01 P-55R 0.08*
0.01 P-68 0.06*
1.00 P-62 1.06*
0.10 S-1 0.15
1.00 P-66 1.52*
0.01* P-67
W-85
R-77 W-77
R-78 W-78
R-79 W-79
R-80 W-80
R-89 W-89
R-81 W-81

0 300
SCALE FEET
N

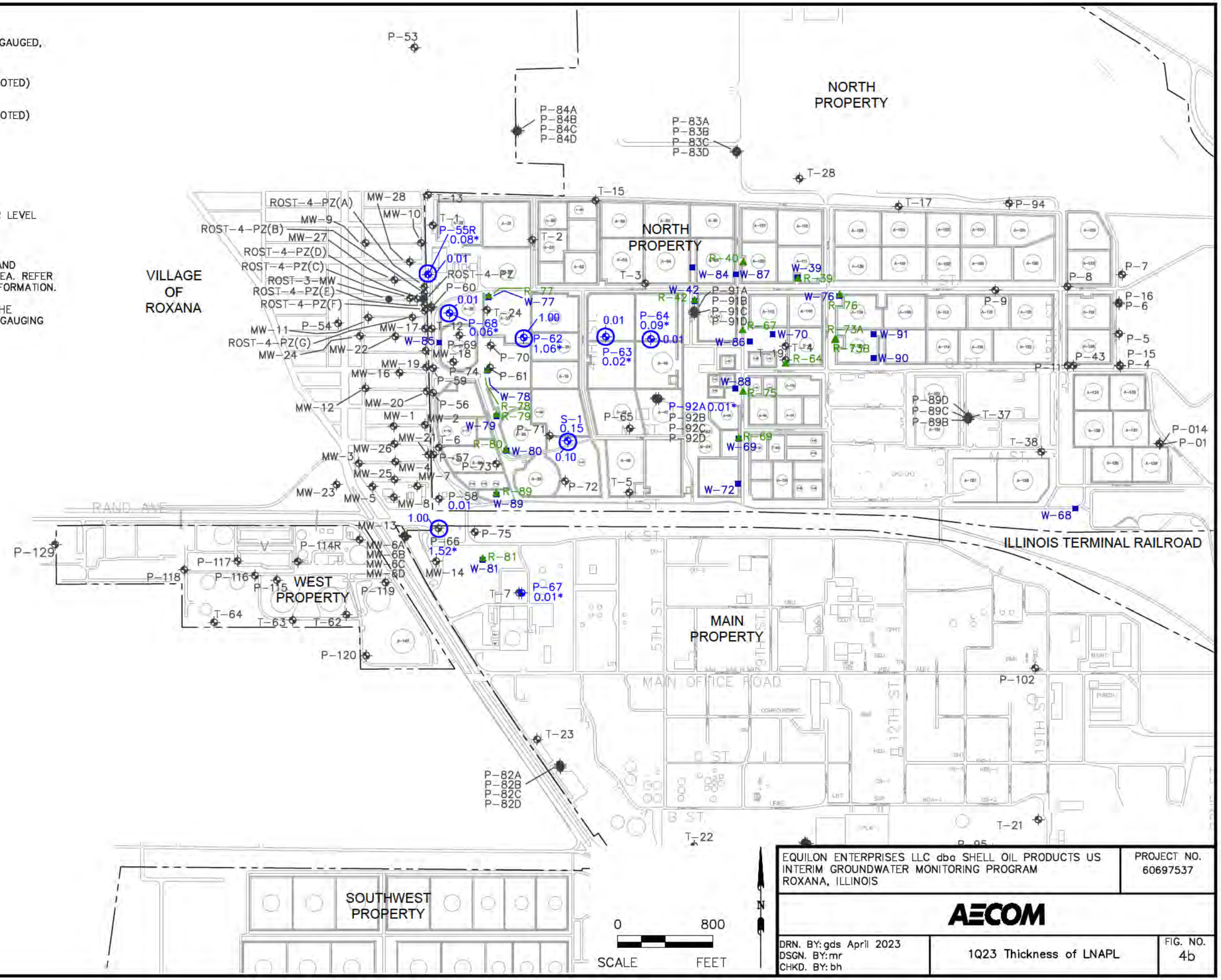
EQUILON ENTERPRISES LLC dba SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 60697537
AECOM		
DRN. BY:gds April 2023 DSGN. BY:mr CHKD. BY:bh	1Q23 Thickness of LNAPL – West Fenceline	FIG. NO. 4a

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 JANUARY 3-4, 2023.



EQUILON ENTERPRISES LLC dba SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS	PROJECT NO. 60697537
AECOM	
DRN. BY: gds April 2023 DSGN. BY: mr CHKD. BY: bh	1Q23 Thickness of LNAPL
	FIG. NO. 4b

File: C:\USERS\LORENTE\AECOM\GDS GIS SERVICES - GIS CAD PROJECTS\DCS AMERICAS\SHELL\ILLINOIS\USF00686-900 S CENTRAL AVE-ROXANA-IL\ROXANA 1Q23 GW RPT\2.WORKSPACE\PART2_20230315\FIGURE 5 1Q23 GROUNDWATER ANALYTICAL RESULTS SUMMARY.DWG Last edited: Mar. 29, 23 @ 4:34 PM by: lorente

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
1,2,4-Trimethylbenzene	0.07
Benzo(a)anthracene	0.00013
2-Methylnaphthalene	0.028
Phenol	0.1
Hexachlorobenzene	0.00006

3. J = THE RESULT IS ESTIMATED.
4. H = ANALYZED OR EXTRACTED OUT OF HOLDING TIME CRITERIA.
5. MULTIPLE RESULTS (e.g., 390 / 380) INDICATE DUPLICATE SAMPLES OR CONFIRMATION SAMPLES.
6. WELLS IDENTIFIED IN BLUE WITH NO DATA BOX INDICATE THE RESULTS DID NOT EXCEED SCREENING CRITERIA.
7. WELLS P-55R, P-58, P-66 AND P-68 WERE NOT SAMPLED DURING 1Q23 DUE TO THE PRESENCE OF LNAPL.
8. DATA FROM SVOC 8270_LL CONFIRMATION RE-ANALYSIS WAS USED FOR WELLS MW-1, MW-6B, P-92A, AND P-93D; SEE TABLE 3 FOR ORIGINAL AND CONFIRMATION SVOC 8270_LL RESULTS.

MW-9 MW-10 MW-28 MW-27 MW-11 MW-24 MW-22 MW-18 MW-19 MW-16 MW-12 MW-20 MW-2 MW-1 MW-26 MW-21 MW-4 MW-3 MW-25 MW-7 MW-5 MW-8 MW-23 MW-13 MW-6A MW-6B MW-6C MW-6D MW-14 P-114R P-54 P-55R P-58 P-59 P-60 P-61 P-66 P-68 P-69 P-70 P-73 P-74 P-75 P-56 P-57 P-93A P-93B P-93C P-93D T-12 T-8 MW-17

ROST-4-PZ(A) ROST-4-PZ(B) ROST-4-PZ(C) ROST-4-PZ ROST-3-MW ROST-4-PZ(D) ROST-4-PZ(E) ROST-4-PZ(F) ROST-4-PZ(G)

SECOND ST
THIRD ST
FOURTH ST
FIFTH ST
SIXTH ST
SEVENTH ST
EIGHTH ST
HIGHWAY 111 (S. CENTRAL AVE)
CHAFFER AVE
1ST STREET
2ND STREET
RAND AVENUE

VILLAGE OF ROXANA

NORTH PROPERTY
WOOD RIVER REFINERY
WEST PROPERTY
MAIN PROPERTY

A-34 A-27 A-22 F-78

1986 APPROXIMATE BENZENE RELEASE SITE

2020 APPROXIMATE BUCKEYE PIPELINE GASOLINE RELEASE SITE

Sample Location	ROST-4-PZ(E)
Sampled 1/10/2023	Result (mg/L)
1,2,4-Trimethylbenzene	0.12
Benzo(a)anthracene	0.00015 J
2-Methylnaphthalene	0.049

Sample Location	T-12
Sampled 1/11/2023	Result (mg/L)
Benzene	2.1 / 2.1
2-Methylnaphthalene	0.032 / 0.031

Sample Location	MW-22
Sampled 1/10/2023	Result (mg/L)
Benzene	0.0085
1,2,4-Trimethylbenzene	0.21

Sample Location	P-59
Sampled 1/11/2023	Result (mg/L)
Benzene	2.5 / 2.7
Hexachlorobenzene	<0.0097 / **0.0036 J**

Sample Location	P-57
Sampled 1/10/2023	Result (mg/L)
Benzene	0.05

Sample Location	P-93B
Sampled 1/11/2023	Result (mg/L)
Benzene	1400
Phenol	0.31

Sample Location	MW-6B
Sampled 1/11/2023	Result (mg/L)
Benzo(a)anthracene	**0.00015 J H J** / <0.00021

Sample Location	MW-7
Sampled 1/9/2023	Result (mg/L)
Benzene	420

Sample Location	MW-25
Sampled 1/9/2023	Result (mg/L)
Benzene	0.024

Sample Location	MW-8
Sampled 1/9/2023	Result (mg/L)
Benzene	390 / 380
Phenol	0.27 / 0.23

0 200 SCALE FEET N

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

PROJECT NO. 60697537

AECOM

DRN. BY:gds April 2023
DSGN. BY:mr
CHKD. BY:bh

1Q23 Groundwater Monitoring Well Analytical Exceedances

FIG. NO. 5

File: C:\USERS\LORENTE\AECOM\GDS GIS SERVICES - GIS CAD PROJECTS\DCS AMERICAS\SHELL\ILLINOIS\USF00686-900_S_CENTRAL_AVE-ROXANA-IL\ROXANA 1Q23 GW RPT\2.WORKSPACE\PART2_20230315\FIGURE 6 1Q23 DISSOLVED PHASE BENZENE CONCENTRATIONS IN GROUNDWATER.DWG Last edited: Mar. 29, 23 @ 11:40 AM by: lorente

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
- OIL RECOVERY WELL
- WATER PRODUCTION WELL
- LNAPL THICKNESS (FEET)
- * INDICATES THAT THE LNAPL AND/OR WATER LEVEL IS ABOVE THE TOP OF WELL SCREEN
- EXTENT OF MVS MODEL DATA SET
- 50.0 GROUNDWATER CONCENTRATION BENZENE (mg/L)

NOTES:

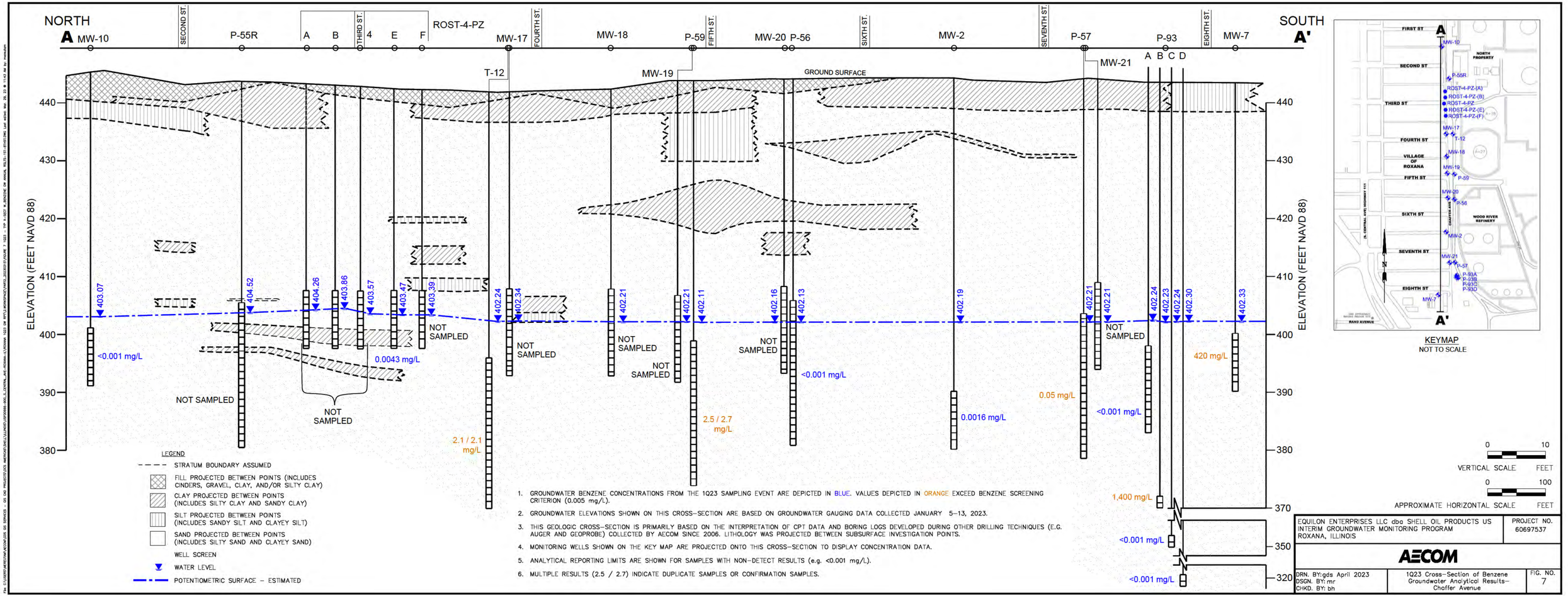
1. IMAGES GENERATED UTILIZING CTECH MINING VISUALIZATION SYSTEM MODELING SOFTWARE. CONCENTRATIONS BETWEEN KNOWN DATA POINTS (E.G. GROUNDWATER MONITORING WELLS) ARE INTERPOLATIONS AND EXTRAPOLATIONS OF THE MEASURED DATA. SOME INTERPRETATION WAS COMPLETED UTILIZING PROFESSIONAL JUDGEMENT AND CONTOUR LINES 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. 390 / 380) INDICATE DUPLICATE SAMPLES OR CONFIRMATION SAMPLES.
6. CONTOUR LINES IN AREA OF P-55R, P-58 AND P-66 ADJUSTED BASED ON AVAILABLE 1Q23 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.

SECOND ST
THIRD ST
FOURTH ST
FIFTH ST
SIXTH ST
SEVENTH ST
EIGHTH ST
HIGHWAY 111 (S. CENTRAL AVE)
CHAFFER AVE
2ND STREET
RAND AVENUE
VILLAGE OF ROXANA
NORTH PROPERTY
MAIN PROPERTY
WEST PROPERTY
WOOD RIVER REFINERY
PUBLIC WORKS YARD
BP

PZ-1(101) PZ-1(85) MW-9 <0.001 MW-10 <0.001 MW-28 0.00038 J
MW-27 <0.001
ROST-4-PZ(A) ROST-4-PZ(B) ROST-4-PZ(C) <0.001
ROST-3-MW <0.001 ROST-4-PZ(D) ROST-4-PZ(E) 0.0043 ROST-4-PZ(F) ROST-4-PZ(G) 0.00032 J
MW-11 <0.001
MW-24 <0.001 MW-22 0.0042
MW-18 MW-19 MW-16 <0.001
PZ-2(84) PZ-2(70.5) MW-12 <0.001 MW-20
MW-01 <0.001 MW-2 0.0016
MW-26 <0.001
MW-4 <0.001 MW-3 0.00061 J MW-25 0.024
MW-5 <0.001 MW-7 420 MW-8 390 / 380
MW-23 <0.001
MW-13 <0.001
MW-6A <0.001 MW-6B <0.001/<0.001 MW-6C <0.001 MW-6D <0.001/<0.001
MW-14 <0.001/<0.001
P-114R <0.001
P-115
P-54 <0.001
P-55R 0.01 0.08*
P-56 <0.001
P-57 0.05
P-58 0.01
P-59 2.5 /2.7
P-60-11 P-60-S P-60 P-60-12 P-60-13
P-66 1.52* 1.00
P-68 0.01 0.06*
P-69 P-70 P-73 P-74 0.0013 P-75
MW-17 T-12R-85 2.1 /2.1 W-85
P-93A <0.001 P-93B 1,400 P-93C <0.001 P-93D <0.001
A-34 A-28 A-33 A-27 A-22
R-77 W-77 T-24 R-78 W-78 P-61 R-79 W-79 R-80 W-80 R-89 W-89
F-76 F-77 F-78 F-73 F-74 F-75 T-6
0.005 0.05 0.5 5.0 50 500

0 200 SCALE FEET N

EQUILON ENTERPRISES LLC dba SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 60697537
AECOM		
DRN. BY:gds April 2023 DSGN. BY:mr CHKD. BY:bh	1Q23 Dissolved Phase Benzene Concentrations in Groundwater	FIG. NO. 6



1. GROUNDWATER BENZENE CONCENTRATIONS FROM THE 1Q23 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 JANUARY 5–13, 2023.
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 (2.5 / 2.7) 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

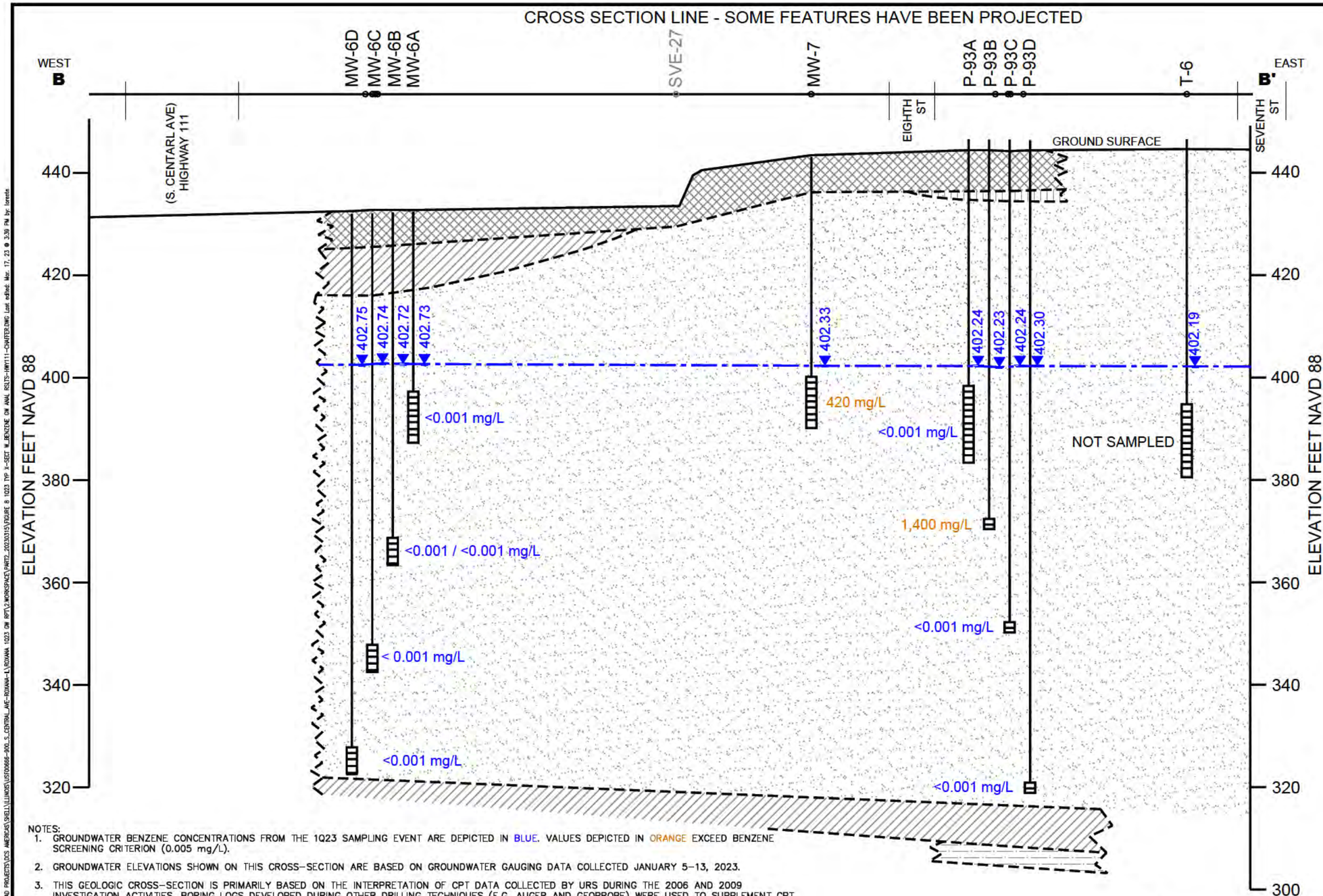
PROJECT NO. 60697537

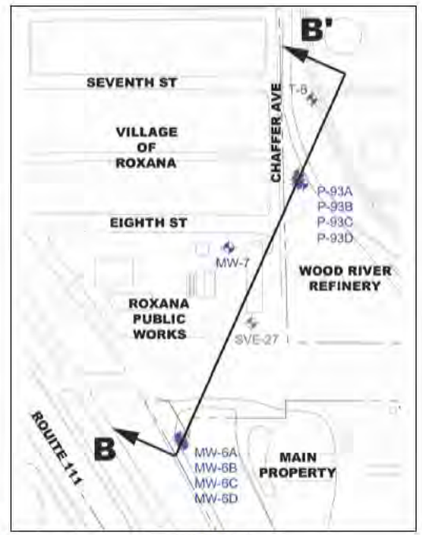
AECOM

DRN. BY: gds April 2023
DSGN. BY: mr
CHKD. BY: bh

1Q23 Cross-Section of Benzene Groundwater Analytical Results–Chaffee 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

0 20
VERTICAL SCALE FEET

0 100
HORIZONTAL SCALE FEET

NOTES:

1. GROUNDWATER BENZENE CONCENTRATIONS FROM THE 1Q23 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 JANUARY 5-13, 2023.
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 (<0.001 / <0.001) INDICATE DUPLICATE SAMPLES OR CONFIRMATION SAMPLES.

EQUILON ENTERPRISES LLC dba SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS	PROJECT NO. 60697537

AECOM

DRN. BY:gds April 2023 DSGN. BY:mr CHKD. BY:bh	1Q23 Cross-Section of Benzene Groundwater Analytical Results– Roxana Public Works Yard	FIG. NO. 8

Appendix A

Regulatory History

Appendix A

Regulatory History

The Interim Groundwater Monitoring Program (Program) began in the 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 Equilon Enterprises LLC d/b/a Shell Oil Products US (SOPUS), Illinois Environmental Protection Agency (IEPA), and URS Corporation (URS) to discuss the Program and IEPA's general comments on the 4Q10 report. Subsequent report modifications were incorporated during 1st Quarter 2011 (1Q11) and 2nd Quarter 2011 (2Q11). Additional items and comments regarding the Program were presented by IEPA on 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 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 IEPA's 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 of Roxana (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 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 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 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 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 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 December 20, 2019) (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 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 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 Program in 4th Quarter 2017.

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 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).

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 Program quarterly reports. This information is discussed in **Section 3** of the Program quarterly report. These trend plots were first included with the 2nd Quarter 2018 (2Q18) monitoring report.

On October 25, 2019, IEPA approved the Roxana Groundwater Ordinance for use as an institutional control in accordance with Title 35 of the Illinois Administrative Code Part 742 (35 IAC 742) to restrict access to groundwater (IEPA, 2019).

SOPUS's current Resource Conservation and Recovery Act (RCRA) Permit at the WRR was issued by IEPA on September 23, 2010 and expired October 28, 2020 (IEPA, 2010b). A Permit renewal application was submitted to IEPA on April 29, 2020 in accordance with Condition VI(B)(6) of the Permit and a letter from IEPA dated November 6, 2019. A timely filing of the renewal application was made and, therefore the conditions of the Permit are stayed. On June 30, 2020, IEPA issued a Notice of Incompleteness letter after conducting a completeness review of the Permit renewal application (IEPA, 2020a); AECOM submitted the Permit Application Completeness Response to IEPA on September 4, 2020 (AECOM, 2020a). IEPA issued a letter on October 30, 2020 indicating they have determined the application to be complete (IEPA, 2020b).

On October 12, 2020, AECOM, on behalf of SOPUS, requested a Class 1* Permit Modification (AECOM, 2020b) in response to an IEPA issued letter dated December 20, 2019. The December 20, 2019 letter issued approval and comments related to several Hazardous Waste Management Post-Closure Permit (Permit) Modifications requests and included a modified Permit. The letter included a condition requesting the installation of a new B-level groundwater monitoring well to be added to the Roxana Interim Groundwater Monitoring Program to intercept potential groundwater contamination observed at P-93B. The October 12th AECOM response indicated the B-level impact observed in P-93B has been delineated to the west and, therefore the installation of a new groundwater monitoring well does not appear to be necessary at this time and as such is not proposed.

A conference call was held on June 24, 2021 and included representatives of IEPA, SOPUS and AECOM. The primary purpose of the call was to introduce new team members and have a high-level discussion of the Program.

During an October 14, 2021 conference call among representatives of IEPA, SOPUS and AECOM, a high-level technical discussion of the Program was presented, primarily focused on routine monitoring activities and to introduce the potential impact observed from the Buckeye pipeline release.

On March 18, 2022, AECOM, on behalf of Shell, submitted Additional Information Supplemental to the Proposed Groundwater Management Zone in response to phone conversations with IEPA in December 2021 through February 2022 (AECOM, 2022b).

Appendix B

Water Well Sealing Form – MW-8

Print Form

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
DIVISION OF ENVIRONMENTAL HEALTH
525 W. JEFFERSON ST.
SPRINGFIELD, IL 62761

WATER WELL SEALING FORM

PDF FILLABLE/SAVABLE

RETURN ALL COPIES TO IDPH OR LOCAL HEALTH DEPARTMENT

This form shall be submitted to this Department or the local health department not more than 30 days after a water well, boring or monitoring well is sealed. Such wells are to be sealed not more than 30 days after they are abandoned in accordance with the sealing requirements in the Illinois Water Well Construction Code. THE LOCAL HEALTH DEPARTMENT OR REGIONAL PUBLIC HEALTH DEPARTMENT MUST BE NOTIFIED AT LEAST 48 HOURS PRIOR TO SEALING.

MW-8

1. Ownership (Name of Controlling Party) Equilion Enterprises LLC dba Shell Oil US

2. Well Location: Well Site Address 900 South Central Ave. City Roxana Zip 62084

Lot # | Land I.D.# | County Madison | Township 5N

Range 9W | Section 34 | SE Quarter of the SE Quarter of the NE Quarter

GPS: North Degrees 38 Minutes 50 Seconds 29.52 West Degrees 90 Minutes 04 Seconds 38.83

Report decimal minutes to minutes and seconds by multiplying the decimal part of the minutes by 60, e.g. latitude 38 degrees 46.07 minutes N would be latitude 38 degrees 46 minutes 4.2 seconds (0.07 x 60 = 4.2) N. Report GPS coordinates to the nearest 0.1 second.

3. Year Drilled 2009 4. Drilling Permit Number (and date, if known

5. Type of Well Monitoring 6. Total Depth (ft.) 43 Diameter (in.) 2

7. Formation clear of obstruction yes

8. Detains of Plugging (bentonite, neat cement or other materials)

Filled with	bentonite chips	From (ft.)	43	to (ft.)	2
Kind of plug	bentonite chips	From (ft.)	2	to (ft.)	0
Filled with		From (ft.)		to (ft.)	
Kind of plug		From (ft.)		to (ft.)	
Filled with		From (ft.)		to (ft.)	
Kind of plug		From (ft.)		to (ft.)	

9. CASING RECORD Upper 2 feet of casing removed yes 10. Date well was sealed 1-10-2023

11. Licensed water well driller or other person approved by the Department performing well sealing

Name Travis Roberts Complete License Number 092-009331

Address 1107 S. Mulberry City Millstadt State Illinois Zip Code 62260

This state agency is requesting discolsure of information that is necessary to accomplish the statutory purpose as outlined under Public Act-0863. Disclosure of this information is mandatory. This form has been approved by the Forms Management Center. IL 482-0631- Revised 5/09

Questions regarding the completion of this form should be directed to the local health department or the Illinois Department of Public Health 217-782-5830, TTY (for hearing impaired only) 800-547-0466.

REDI#222169 Well#MW-8

Appendix C

Low Flow Groundwater Sampling Data Sheets

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: MMassa, JMayer

DATE: 1/13/23 WEATHER: OVERCAST 28°

MONITORING WELL ID: MW-1 SAMPLE ID: MW1-ROX-011323

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: 53.30 ft btoc	Volume of Flow Through Cell: 320* mL
Total Well Depth (btoc): 59.13 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 40.89 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): 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	Wellbore PID/FID Reading: 0.0 ppm
Screen Length: 10 ft		
Water Column Height (not including NAPL): 18.24 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	0953	40.87	clear	none	15.4	1.30	0.899 mS/cm uS/cm	6.90	161.45	17.0
300	0954	40.87			15.4	1.18	0.898 mS/cm uS/cm	6.97	161.16	15.0
600	0955	40.87			15.5	1.05	0.899 mS/cm uS/cm	6.95	160.69	13.8
900	0956	↓			15.6	0.96	0.900 mS/cm uS/cm	6.96	160.76	12.5
1200	0957				15.5	0.93	0.899 mS/cm uS/cm	6.97	160.13	10.7
1500	0958	↓	↓	↓	15.6	0.87	0.901 mS/cm uS/cm	6.99	159.41	10.0
							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			

MW1 1/13/23

Start Time: 0953 Elapsed Time (min): 5 Water Quality Meter ID & SN: YSI ProDSS -- 14713/19549

Stop Time: 0958 Average Purge Rate (mL/min): 300 Date Calibrated: 1/13/23

SAMPLING DATA

Sample Date: 1/13/23 Sample Time: 1000 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 [X] Initials: MMJM

COMMENTS:

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

Estimated Total Purge Volume: 1500 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: MMassa, JMayer

DATE: 1/13/23 WEATHER: OVERCAST 30°

MONITORING WELL ID: MW-2 SAMPLE ID: MW2-ROX-011323

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: 54.87 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): 42.13 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): 49.87 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	Wellbore PID/FID Reading: 93.5 ppm	
Screen Length: 10 ft			
Water Column Height (not including NAPL): 18.07 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): ft btoc		

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	1050	42.08	clear	moderate HC	13.8	1.16	0.8316 mS/cm uS/cm	7.30	86.60	13.11
300	1051	42.08			14.0	1.07	0.839 mS/cm uS/cm	7.30	79.10	13.20
600	1052	42.08			14.1	0.93	0.8316 mS/cm uS/cm	7.30	76.29	14.36
900	1053				14.1	0.89	0.838 mS/cm uS/cm	7.30	71.82	13.50
1200	1054				13.7	0.83	0.8391 mS/cm uS/cm	7.31	67.69	13.19
							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			

MMM 1/13/23

Start Time: 1050 Elapsed Time (min): 4 Water Quality Meter ID & SN: YSI ProDSS -- 44713/19549

Stop Time: 1054 Average Purge Rate (mL/min): 300 Date Calibrated: 1/13/23

SAMPLING DATA

Sample Date: 1/13/23 Sample Time: 1100 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: MM/M

COMMENTS:

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

Estimated Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW | PROJECT NUMBER: 60697537 - 3.1.1/2/3 | FIELD PERSONNEL: Massa Jmayer T Jenkins

DATE: 1/10/23 | WEATHER: OVERCAST 48°

MONITORING WELL ID: MW-3 | SAMPLE ID: MW3-ROX-011023

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): 27.93 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): 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 (WHIEVER IS DEEPER): — ft btoc	Wellbore PID/FID Reading: 0.0 ppm
Screen Length: 10 ft		
Water Column Height (not including NAPL): 17.07 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): — ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	0910	27.94	clear	none	16.7	2.10	1.617 (mS/cm) uS/cm	6.26	27.60	13.90
300	0911	27.94			17.0	1.48	1.618 (mS/cm) uS/cm	6.38	1.60	13.18
600	0912	27.94			17.2	1.16	1.617 (mS/cm) uS/cm	6.47	-20.39	12.81
900	0913				17.3	0.99	1.613 (mS/cm) uS/cm	6.53	-36.52	12.86
1200	0914				17.4	0.87	1.610 (mS/cm) uS/cm	6.59	-49.73	11.96
1500	0915				17.5	0.78	1.606 (mS/cm) uS/cm	6.64	-61.68	10.44
1800	0916				17.5	0.71	1.602 (mS/cm) uS/cm	6.68	-70.92	9.58
2100	0917				17.7	0.67	1.600 (mS/cm) uS/cm	6.71	-77.94	8.24
2400	0918				17.7	0.63	1.599 (mS/cm) uS/cm	6.74	-85.33	7.50
2700	0919				17.7	0.59	1.599 (mS/cm) uS/cm	6.77	-92.33	6.72
3000	0920				17.7	0.56	1.596 (mS/cm) uS/cm	6.78	-98.77	6.15
3300	0921	↓	↓	↓	17.7	0.54	1.595 (mS/cm) uS/cm	6.80	-104.07	5.82
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

JMM 1/11/23

Start Time: 0910 | Elapsed Time (min): 11 | Water Quality Meter ID & SN: YSI ProDSS -- 44713/49549

Stop Time: 0921 | Average Purge Rate (mL/min): 300 | Date Calibrated: 1/10/23

SAMPLING DATA

Sample Date: 1/10/23 | 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: MMJM

COMMENTS:

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

Estimated Total Purge Volume: 3300 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW **PROJECT NUMBER:** 60697537 - 3.1.1/2/3 **FIELD PERSONNEL:** MMassa JMayer TJenkins

DATE: 1/9/23 **WEATHER:** partly cloudy 30°

MONITORING WELL ID: MW-4 **SAMPLE ID:** MW4-ROX-010923

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): 39.25 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): 45.06 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	Wellbore PID/FID Reading: 0.3 ppm
Screen Length: 10 ft		
Water Column Height (not including NAPL): 16.14 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): — ft btoc	

PURGE DATA

Pump Type: 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)
					STABLE: (over 4 readings)	+/-0.2 mg/L or +/-10%	+/-5% or +/-2 uS/cm	+/-0.2 mg/L	+/-20 mV	Monitor Turb Readings (<50)
0	0913	39.24	clear	sulphur	15.6	1.02	1.044 mS/cm uS/cm	6.67	-34.83	6.49
300	0914	39.24	↓	↓	15.7	0.88	1.048 mS/cm uS/cm	6.71	-47.64	6.04
600	0915	39.24	↓	↓	15.9	0.80	1.051 mS/cm uS/cm	6.73	-55.14	5.41
900	0916	↓	↓	↓	16.0	0.72	1.053 mS/cm uS/cm	6.76	-64.87	5.47
1200	0917	↓	↓	↓	16.0	0.68	1.054 mS/cm uS/cm	6.77	-69.24	6.97
1500	0918	↓	↓	↓	15.9	0.63	1.056 mS/cm uS/cm	6.79	-74.43	6.81
1800	0919	↓	↓	↓	15.8	0.60	1.057 mS/cm uS/cm	6.80	-78.06	7.83
							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			

MMM 1/9/23

Start Time: 0913 Elapsed Time (min): 6 Water Quality Meter ID & SN: YSI ProDSS - 44713/49549

Stop Time: 0919 Average Purge Rate (mL/min): 300 Date Calibrated: 1/9/23

SAMPLING DATA

Sample Date: 1/9/23 Sample Time: 0925 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: MMJM

COMMENTS:

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

Estimated Total Purge Volume: 1800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: MMassa JMayer

DATE: 1/10/23 WEATHER: clear 38°

MONITORING WELL ID: MW-5 SAMPLE ID: MW5-BOX-011023

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	Volume of Flow Through Cell : 320* mL
Total Well Depth (btoc): 44.30 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 27.67 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): 33.97 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	Wellbore PID/FID Reading: 0.0 ppm
Screen Length: 10 ft		
Water Column Height (not including NAPL): 16.63 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	0914	27.69	clear	none	15.3	1.15	1.248 (mS/cm) uS/cm	6.47	-23.04	3.84
300	0915	27.69	↓	↓	15.4	1.01	1.243 (mS/cm) uS/cm	6.53	-32.28	3.76
600	0916	27.69	↓	↓	15.4	0.90	1.246 (mS/cm) uS/cm	6.58	-41.78	3.44
900	0917	↓	↓	↓	15.5	0.82	1.244 (mS/cm) uS/cm	6.62	-50.59	3.57
1200	0918				15.5	0.77	1.242 (mS/cm) uS/cm	6.64	-57.38	3.56
1600	0919				15.8	0.73	1.238 (mS/cm) uS/cm	6.67	-65.45	4.01
1800	0920				15.9	0.69	1.237 (mS/cm) uS/cm	6.69	-72.15	3.26
2100	0921				16.1	0.65	1.235 (mS/cm) uS/cm	6.70	-78.42	3.81
2400	0922	↓	↓	↓	16.1	0.62	1.237 (mS/cm) uS/cm	6.72	-83.91	3.28
							(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			

MMA 1/10/23

Start Time: 0914 Elapsed Time (min): 8 Water Quality Meter ID & SN: YSI ProDSS -- 44713/19549

Stop Time: 0922 Average Purge Rate (mL/min): 300 Date Calibrated: 1/10/23

SAMPLING DATA

Sample Date: 1/10/23 Sample Time: 0925 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 [X] Initials: MM JM

COMMENTS:

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

Estimated Total Purge Volume: 2400 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: MMassa JMayer TJenkins

DATE: 1/11/23 WEATHER: partly cloudy 54°

MONITORING WELL ID: MW-6A SAMPLE ID: MW6A-ROX-011123

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: 38.85 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): 29.75 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): 33.85 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	Wellbore PID/FID Reading: 0.0 ppm	
Screen Length: 10 ft			
Water Column Height (not including NAPL): 14.43 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): ft btoc		

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	1105	29.74	cloudy	slight HC	18.1	1.17	1.384 mS/cm uS/cm	6.64	-50.50	80.6
300	1106	29.74			18.3	1.05	1.382 mS/cm uS/cm	6.66	-54.26	74.6
600	1107	29.74			18.6	0.95	1.379 mS/cm uS/cm	6.67	-58.22	73.4
900	1108				18.6	0.86	1.375 mS/cm uS/cm	6.69	-62.18	70.8
1200	1109				18.8	0.78	1.374 mS/cm uS/cm	6.70	-65.83	60.9
1500	1110				18.9	0.72	1.371 mS/cm uS/cm	6.70	-69.10	68.4
1800	1111				18.6	0.67	1.368 mS/cm uS/cm	6.71	-71.54	81.4
2100	1112				18.9	0.62	1.363 mS/cm uS/cm	6.71	-73.48	76.4
2400	1113		clearer		19.0	0.59	1.364 mS/cm uS/cm	6.72	-75.90	57.6
2700	1114				18.9	0.56	1.360 mS/cm uS/cm	6.73	-78.05	46.1
3000	1115				18.9	0.54	1.359 mS/cm uS/cm	6.73	-79.65	36.4
3300	1116				18.9	0.53	1.356 mS/cm uS/cm	6.73	-80.65	33.3
3600	1117				18.9	0.50	1.354 mS/cm uS/cm	6.74	-81.76	27.4
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

MMM 1/11/23

Start Time: 1105 Elapsed Time (min): 12 Water Quality Meter ID & SN: YSI ProDSS -- 14713 / 19549

Stop Time: 1117 Average Purge Rate (mL/min): 300 Date Calibrated: 1/11/23

SAMPLING DATA

Sample Date: 1/11/23 Sample Time: 1120 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 [X] Initials: MMM

COMMENTS:

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

Estimated Total Purge Volume: 3680 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: MMassa JMayer TJenkins

DATE: 1/11/23 WEATHER: partly cloudy 61°

MONITORING WELL ID: MW-6B SAMPLE ID: MW6B-ROX-B11123

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: 60.55 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): 29.78 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		Wellbore PID/FID Reading: 0.0 ppm	
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		
Screen Length: 5 ft			
Water Column Height (not including NAPL): 39.600 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): ft btoc		

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	1358	29.78	clear	none	18.3	1.24	0.843 (mS/cm) uS/cm	7.04	-51.33	7.65
300	1359	29.78			18.3	1.11	0.842 (mS/cm) uS/cm	7.04	-57.10	6.64
600	1400	29.78			18.3	1.00	0.841 (mS/cm) uS/cm	7.05	-63.46	5.56
900	1401	↓			18.3	0.93	0.841 (mS/cm) uS/cm	7.06	-67.93	5.83
1200	1402				18.4	0.86	0.841 (mS/cm) uS/cm	7.07	-72.63	4.08
1500	1403				18.4	0.80	0.841 (mS/cm) uS/cm	7.08	-77.24	4.67
1800	1404	↓	↓	↓	18.4	0.76	0.840 (mS/cm) uS/cm	7.08	-80.97	4.23
							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			

MM JM 1/11/23

Start Time: 1358 Elapsed Time (min): 6 Water Quality Meter ID & SN: YSI ProDSS -- 44713/19549

Stop Time: 1404 Average Purge Rate (mL/min): 300 Date Calibrated: 1/11/23

SAMPLING DATA

Sample Date: 1/11/23 Sample Time: 1410 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: MM JM

COMMENTS:

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

Estimated Total Purge Volume: 1800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: MMassa JMayer TJenkins

DATE: 1/11/23 WEATHER: Mostly cloudy 50°

MONITORING WELL ID: MW-6C SAMPLE ID: MW6C-ROX-011123

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): 29.61 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): 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): 60.67 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): — ft btoc		

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	1010	29.61	clear	none	17.2	1.69	0.910 (mS/cm) uS/cm	6.77	4.73	9.11
300	1011	29.61			17.3	1.35	0.912 mS/cm uS/cm	6.84	-10.97	7.95
600	1012	29.61			17.4	1.15	0.915 mS/cm uS/cm	6.89	-28.26	7.92
900	1013				17.4	1.02	0.914 mS/cm uS/cm	6.93	-43.22	7.44
1200	1014				17.5	0.93	0.913 mS/cm uS/cm	6.96	-55.81	6.88
1500	1015				17.4	0.86	0.911 mS/cm uS/cm	6.98	-65.50	6.24
1800	1016				17.2	0.81	0.912 mS/cm uS/cm	7.01	-74.53	5.93
2100	1017				17.1	0.77	0.909 mS/cm uS/cm	7.03	-81.72	5.51
2400	1018				17.0	0.74	0.909 mS/cm uS/cm	7.04	-84.61	5.53
2700	1019				17.0	0.72	0.909 mS/cm uS/cm	7.04	-86.42	4.74
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

MM 1/11/23

Start Time: 1010 Elapsed Time (min): 9 Water Quality Meter ID & SN: YSI ProDSS .. 14713/19949

Stop Time: 1019 Average Purge Rate (mL/min): 300 Date Calibrated: 1/11/23

SAMPLING DATA

Sample Date: 1/11/23 Sample Time: 1025 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: MM JM

COMMENTS:

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

Estimated Total Purge Volume: 2700 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: MMassa JMayer TJennings

DATE: 1/11/23 WEATHER: clear 59°

MONITORING WELL ID: MW-6D SAMPLE ID: MW6D-ROX-011123

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): 79.40 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 (WHIEVER IS DEEPER): — ft btoc	Wellbore PID/FID Reading: 0.0 ppm
Screen Length: 5 ft		
Water Column Height (not including NAPL): 30.65 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): — ft btoc	

PURGE DATA

Pump Type: 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)
STABLE: (over 4 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	1313	79.42	clear	none	17.9	1.72	1.413 mS/cm uS/cm	6.80	-35.37	65.83
300	1314	79.42			18.0	1.47	1.398 mS/cm uS/cm	6.82	-42.16	63.45
600	1315	79.43			17.9	1.28	1.407 mS/cm uS/cm	6.86	-50.05	71.33
900	1316				17.9	1.11	1.413 mS/cm uS/cm	6.88	-61.09	82.87
1200	1317				18.0	0.99	1.399 mS/cm uS/cm	6.93	-72.46	70.50
1500	1318				18.0	0.90	1.392 mS/cm uS/cm	6.97	-81.91	63.31
1800	1319				18.0	0.83	1.394 mS/cm uS/cm	6.98	-89.83	60.93
2100	1320				18.0	0.78	1.401 mS/cm uS/cm	7.00	-94.73	51.89
2400	1321				18.1	0.73	1.409 mS/cm uS/cm	7.02	-99.59	43.97
2700	1322				18.0	0.70	1.415 mS/cm uS/cm	7.03	-102.60	40.48
3000	1323				18.1	0.68	1.423 mS/cm uS/cm	7.03	-105.52	34.41
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

MMM 1/11/23

Start Time: 1313 Elapsed Time (min): 10 Water Quality Meter ID & SN: YSI ProDSS -- 14713/14549

Stop Time: 1323 Average Purge Rate (mL/min): 300 Date Calibrated: 1/11/23

SAMPLING DATA

Sample Date: 1/11/23 Sample Time: 1325 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: MMM JM

COMMENTS:

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

Estimated Total Purge Volume: *3000 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW | PROJECT NUMBER: 60697537 - 3.1.1/2/3 | FIELD PERSONNEL: J. Mayer T. Jenkins

DATE: 1-9-23 | WEATHER: 32° Cloudy

MONITORING WELL ID: MW-7 | SAMPLE ID: MW7-ROX-010923

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): 41.19 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): 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: 0.1 ppm
Screen Length: 10 ft		
Water Column Height (not including NAPL): 11.73 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): — ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	1250	41.19	Clear	Slight	16.5	0.91	1.177 mS/cm uS/cm	6.68	-41.9	3.18
320	1251				17.0	0.75	1.171 mS/cm uS/cm	6.69	-46.4	3.51
600	1252				17.1	0.69	1.158 mS/cm uS/cm	6.71	-49.9	3.08
900	1253				17.1	0.64	1147 mS/cm uS/cm	6.72	-53.6	3.17
1200	1254	↓	↓	↓	17.3	0.59	1.130 mS/cm uS/cm	6.73	-57.0	2.66
							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 -- 44713/19549

Stop Time: 1254 | Average Purge Rate (mL/min): 300 | Date Calibrated: 1-9-2023

SAMPLING DATA

Sample Date: 1-9-2023 | Sample Time: 1300 | 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: JM

COMMENTS:

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

Estimated Total Purge Volume: 1200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: MMassa JMayer TJenkins

DATE: 1/9/23 WEATHER: partly cloudy 40°

MONITORING WELL ID: MW-8 SAMPLE ID: MW8-ROX-010923

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): 32.20 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		Wellbore PID/FID Reading: 0.0 ppm
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	
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): 7.40 ft	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): — ft btoc	

PURGE DATA

Pump Type: 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)
STABLE: (over 4 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	1131	32.20	clear	moderate	15.4	1.20	1.242 mS/cm uS/cm	6.82	-114.0	62.79
300	1132				15.4	0.98	1.244 mS/cm uS/cm	6.83	-122.31	59.78
600	1133				15.6	0.83	1.242 mS/cm uS/cm	6.84	-127.69	55.70
900	1134				15.6	0.76	1.239 mS/cm uS/cm	6.84	-129.7	52.32
1200	1135				15.8	0.69	1.235 mS/cm uS/cm	6.84	-131.5	49.39
1500	1136	↓	↓	↓	16.0	0.63	1.230 mS/cm uS/cm	6.84	-132.7	46.70
							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: 1131 Elapsed Time (min): 5 Water Quality Meter ID & SN: YSI ProDSS - 44713/49549

Stop Time: 1136 Average Purge Rate (mL/min): 300 Date Calibrated: 1/9/23

SAMPLING DATA

Sample Date: 1/9/2023 Sample Time: 1140 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: MM JM

COMMENTS:

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

Estimated Total Purge Volume: 1500 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW | PROJECT NUMBER: 60697537 - 3.1.1/2/3 | FIELD PERSONNEL: MMassa JMayer

DATE: 1/5/23 | WEATHER: Mostly cloudy 38°

MONITORING WELL ID: MW-9 | SAMPLE ID: MW9-ROX-010523

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: 51.04 ft btoc	Volume of Flow Through Cell: 320* mL
Total Well Depth (btoc): 56.37 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 42.35 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): 46.04 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): 14.05 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): — ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	1143	42.35	Clear	none	13.9	1.45	0.921 ~~mS/cm~~ uS/cm	6.87	-62.80	39.42
300	1144	42.35			13.8	1.23	0.923 ~~mS/cm~~ uS/cm	6.87	-63.54	37.06
600	1145	42.35			13.7	1.04	0.924 ~~mS/cm~~ uS/cm	6.87	-63.95	32.07
900	1146				14.3	0.89	0.921 ~~mS/cm~~ uS/cm	6.86	-65.08	31.79
1200	1147				14.5	0.78	0.930 ~~mS/cm~~ uS/cm	6.86	-66.32	25.68
1500	1148				14.5	0.74	0.933 ~~mS/cm~~ uS/cm	6.85	-66.53	23.02
1800	1149				14.6	0.70	0.935 ~~mS/cm~~ uS/cm	6.85	-67.21	22.21
							~~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			

MM JM 1/5/23

Start Time: 1143 | Elapsed Time (min): 6 | Water Quality Meter ID & SN: YSI ProDSS -- 44713/49549

Stop Time: 1149 | Average Purge Rate (mL/min): 300 | Date Calibrated: 1/5/23

SAMPLING DATA

Sample Date: 1/5/23 | Sample Time: 1155 | Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow | Sample Flow Rate (mL/min): 300 | QA/QCSamples: none

VOA Vials, No Headspace ☒ Initials: MM JM

COMMENTS:

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

Estimated Total Purge Volume: 1800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW | PROJECT NUMBER: 60697537 - 3.1.1/2/3 | FIELD PERSONNEL: Mmassa JMayer TJenkins

DATE: 1/12/23 | WEATHER: rain 40°

MONITORING WELL ID: MW-10 | SAMPLE ID: MW10-ROX-011223

INITIAL DATA

Well Diameter: 2 in	IF SCREEN ≤10 FT & WATER ABOVE TOP OF SCREEN – PUMP INTAKE AT MIDPOINT OF SCREEN: 44.43 ft btoc	Volume of Flow Through Cell: 320* mL
Total Well Depth (btoc): 54.76 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 42.30 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): 44.43 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	Wellbore PID/FID Reading: 0.0 ppm
Screen Length: 10 ft		
Water Column Height (not including NAPL): 12.46 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	1029	42.30	clear	none	14.5	1.10	1.425 mS/cm uS/cm	6.92	-62.45	66.16
300	1030	42.30			14.9	0.98	1.421 mS/cm uS/cm	6.93	-65.68	61.56
600	1031	42.30			15.0	0.88	1.428 mS/cm uS/cm	6.94	-69.43	65.39
900	1032				15.0	0.84	1.428 mS/cm uS/cm	6.94	-71.29	62.01
1200	1033				15.3	0.79	1.428 mS/cm uS/cm	6.95	-74.09	58.18
1500	1034				15.3	0.75	1.436 mS/cm uS/cm	6.96	-76.32	54.28
1800	1035				15.4	0.71	1.432 mS/cm uS/cm	6.96	~~-80.01~~ -79.23	50.14
2100	1036				15.4	0.70	1.437 mS/cm uS/cm	6.97	-80.81	50.14
2400	1037				15.2	0.67	1.441 mS/cm uS/cm	6.97	~~-82.37~~ -81.41	~~46.56~~ 46.56
2700	1038				15.2	0.67	1.440 mS/cm uS/cm	6.97	-82.37	44.81
3000	1039				15.1	0.65	1.445 mS/cm uS/cm	6.98	-84.20	41.17
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

MMM 1/12/23

Start Time: 1029 | Elapsed Time (min): 10 | Water Quality Meter ID & SN: YSI ProDSS - 44713/49549

Stop Time: 1039 | Average Purge Rate (mL/min): 300 | Date Calibrated: 1/12/23

SAMPLING DATA

Sample Date: 1/12/23 | Sample Time: 1045 | 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: MMM

COMMENTS:

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

Estimated Total Purge Volume: 3000 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: MMassa JMayer JJenkins

DATE: 1/12/23 WEATHER: rain 41°

MONITORING WELL ID: MW-11 SAMPLE ID: MW11-ROX-011223

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	Volume of Flow Through Cell : 320* mL	
Total Well Depth (btoc): 51.99 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL	
Depth to Water (btoc): 40.01 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		Wellbore PID/FID Reading: 0.0 ppm	
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): 11.98 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): — ft btoc		

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	0917	40.01	Clear	Slight HC	12.9	1.47	~~1.46~~ mS/cm uS/cm	6.46	74.16	28.6
300	0918	40.01	↓	↓	12.9	1.35	1.415 mS/cm uS/cm	6.48	67.47	27.0
600	0919	40.01	↓	↓	13.4	1.24	1.405 mS/cm uS/cm	6.50	59.36	24.8
900	0920	↓	↓	↓	13.4	1.14	1.406 mS/cm uS/cm	6.54	51.40	23.5
1200	0921				13.3	1.05	1.403 mS/cm uS/cm	6.57	43.64	22.3
1500	0922				13.4	1.00	1.397 mS/cm uS/cm	6.59	38.14	22.4
1800	0923				13.5	0.94	1.393 mS/cm uS/cm	6.61	31.90	21.3
2100	0924				13.7	0.90	1.390 mS/cm uS/cm	6.62	27.61	20.9
							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			

MW11 1/12/23

Start Time: 0917 Elapsed Time (min): 7 Water Quality Meter ID & SN: YSI ProDSS -- 14713/19C19

Stop Time: 0924 Average Purge Rate (mL/min): 300 Date Calibrated: 1/12/23

SAMPLING DATA

Sample Date: 1/12/23 Sample Time: 0930 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: MM JM

COMMENTS:

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

Estimated Total Purge Volume: 2100 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: T. Jones, SBeadle

DATE: 1/6/23 WEATHER: 30°F, clear

MONITORING WELL ID: MW-12 SAMPLE ID: MW12-ROX-010623

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	Volume of Flow Through Cell : 320* mL
Total Well Depth (btoc): 52.25 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 40.41 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): 41.92 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	Wellbore PID/FID Reading: 0.0 ppm
Screen Length: 10 ft		
Water Column Height (not including NAPL): 11.79 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	0932	40.48	clear	none	15.30	3.32	1.016 mS/cm uS/cm	10.41	98.50	2.85
300	0933				16.05	2.16	1.028 mS/cm uS/cm	10.57	89.10	2.20
600	0934				16.26	1.69	1.038 mS/cm uS/cm	10.65	79.98	2.03
900	0935				16.48	1.37	1.038 mS/cm uS/cm	10.74	75.48	1.93
1200	0936				16.49	1.16	1.032 mS/cm uS/cm	10.77	73.14	2.05
1500	0937				16.53	1.03	1.033 mS/cm uS/cm	10.79	71.75	2.36
1800	0938				16.65	0.92	1.034 mS/cm uS/cm	10.80	70.71	2.59
2100	0939				16.72	0.85	1.036 mS/cm uS/cm	10.81	70.04	2.74
2400	0940				16.49	0.80	1.041 mS/cm uS/cm	10.82	69.98	2.79
2700	0941	↓	↓	↓	16.76	0.76	1.040 mS/cm uS/cm	10.82	69.22	2.91
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
			SB	1/6/23			mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 0932 Elapsed Time (min): ~~2745~~ 9 Water Quality Meter ID & SN: YSI ProDSS -- 456081 51769

Stop Time: 0941 Average Purge Rate (mL/min): 300 Date Calibrated: 1/6/23

SAMPLING DATA

Sample Date: 1/6/23 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 [X] Initials: SB

COMMENTS:

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

Estimated Total Purge Volume: 2700 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW **PROJECT NUMBER:** 60697537 - 3.1.1/2/3 **FIELD PERSONNEL:** T. Jones, S. Beadle

DATE: 1/9/23 **WEATHER:** 30°F, clear

MONITORING WELL ID: MW-13 **SAMPLE ID:** MW13-ROX-010923

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): 35.05 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 27.88 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 31.46 ~~33.00~~ ft btoc	Ambient PID/FID Reading: 0.0 ppm
Depth to LNAPL/DNAPL (btoc): NE ft		
Depth to Top of Screen (btoc): 24.80 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	Wellbore PID/FID Reading: 0.0 ppm
Screen Length: 10 ft		
Water Column Height (not including NAPL): ~~10.75~~ 7.17 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	0923	27.88	blackcloudy	moderate	17.17	2.79	1.079 mS/cm uS/cm	6.31	57.66	619.87
2400	0931	27.88	cloudy		16.80	3.10	1.072 mS/cm uS/cm	6.49	2.05	271.17
2700	0932	27.87	↓		16.73	1.58	1.075 mS/cm uS/cm	6.47	-2.06	239.51
3000	0933	27.87	↓		16.56	1.12	1.075 mS/cm uS/cm	6.49	-5.72	194.80
3300	0934	27.87	clear		16.39	0.91	1.076 mS/cm uS/cm	6.50	-9.40	167.79
3600	0935	↓	↓		16.81	0.80	1.078 mS/cm uS/cm	6.51	-13.08	145.28
3900	0936				16.85	0.72	1.078 mS/cm uS/cm	6.52	-16.54	120.39
4200	0937				16.93	0.66	1.078 mS/cm uS/cm	6.53	-19.57	100.47
57000 (SB) ~~4500~~	0941				18.72	0.55	1.082 mS/cm uS/cm	6.56	-32.19	50.54
5700	0942				18.68	0.53	1.080 mS/cm uS/cm	6.57	-35.06	43.75
6000	0943				18.72	0.51	1.082 mS/cm uS/cm	6.57	-37.23	36.73
6300	0944				18.95	0.50	1.080 mS/cm uS/cm	6.58	-39.26	32.08
6600	0945	↓	↓	↓	18.96	0.49	1.080 mS/cm uS/cm	6.56	-41.14	29.30
							mS/cm uS/cm			
			SB				mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 0923 **Elapsed Time (min):** 22 **Water Quality Meter ID & SN:** YSI ProDSS -- 456088/517769

Stop Time: 0945 **Average Purge Rate (mL/min):** 300 **Date Calibrated:** 1/9/23

SAMPLING DATA

Sample Date: 1/9/23 **Sample Time:** 0950 **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:** SB

COMMENTS:

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

Water was coming out black & cloudy. allowed to purge for ~8 minutes before collecting readings.

Estimated Total Purge Volume: 6600 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: T. Jones, S. Beadle

DATE: 1/9/23 WEATHER: 35°F, clear

MONITORING WELL ID: MW-14 SAMPLE ID: MW14-ROX-010923

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		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 32.01 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): 33.42 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	Wellbore PID/FID Reading: 62.3 ppm
Screen Length: 10 ft		
Water Column Height (not including NAPL): 11.99 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	1135	32.01	clear	strong	16.95	2.47	1.147 mS/cm uS/cm	6.79	-44.27	38.87
300	1136	32.01			16.98	1.63	1.147 mS/cm uS/cm	6.72	-36.99	33.13
600	1137	32.01			17.31	1.29	1147 mS/cm uS/cm	6.70	-32.57	30.66
900	1138				17.59	1.07	1.143 mS/cm uS/cm	6.69	-29.54	28.79
1200	1139				17.64	0.93	1.151 mS/cm uS/cm	6.68	-27.62	25.58
1500	1140				17.73	0.83	1.160 mS/cm uS/cm	6.68	-26.32	21.82
1800	1141				17.73	0.75	1.169 mS/cm uS/cm	6.68	-25.56	19.26
2100	1142				17.76	0.70	1.174 mS/cm uS/cm	6.68	-25.21	17.73
2400	1143				17.80	0.66	1.178 mS/cm uS/cm	6.69	-25.23	16.19
2700	1144	↓	↓	↓	17.86	0.62	1.185 mS/cm uS/cm	6.69	-25.50	14.20
							mS/cm uS/cm			
							mS/cm uS/cm			
		SB	1/9/23				mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 1135 Elapsed Time (min): 9 Water Quality Meter ID & SN: YSI ProDSS -- 456608/17769

Stop Time: 1144 Average Purge Rate (mL/min): 300 Date Calibrated: 1/9/23

SAMPLING DATA

Sample Date: 1/9/23 Sample Time: 1145 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: SB

COMMENTS:

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

Estimated Total Purge Volume: 2700 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: MMassa JMayer

DATE: 1/5/23 WEATHER: Mostly cloudy 36°

MONITORING WELL ID: MW-16 SAMPLE ID: MW16-ROX-010523

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): 41.49 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 44.62 ft btoc	Ambient PID/FID Reading: 0.0 ppm	
Depth to LNAPL/DNAPL (btoc): NE ft			
Depth to Top of Screen (btoc): 37.50 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): 6.26 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): ft btoc		

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	0931	41.49	clear	none	13.5	1.83	0.871 mS/cm uS/cm	6.64	145.19	50.46
300	0932	41.49			13.7	1.56	0.858 mS/cm uS/cm	6.62	138.12	43.61
600	0933	41.49			13.8	1.40	0.856 mS/cm uS/cm	6.61	130.56	40.82
900	0934				14.2	1.31	0.850 mS/cm uS/cm	6.61	119.64	39.50
1200	0935				14.8	1.24	0.850 mS/cm uS/cm	6.61	105.58	34.83
1500	0936				15.1	1.15	0.846 mS/cm uS/cm	6.63	92.54	31.26
1800	0937				15.3	1.09	0.847 mS/cm uS/cm	6.64	79.40	27.48
2100	0938				15.6	1.05	0.846 mS/cm uS/cm	6.65	68.57	23.87
2400	0939				15.7	1.00	0.846 mS/cm uS/cm	6.67	58.69	19.88
2700	0940				15.7	0.98	0.844 mS/cm uS/cm	6.69	52.30	16.70
3000	0941				15.7	0.96	0.847 mS/cm uS/cm	6.69	46.22	13.97
3300	0942				15.8	0.94	0.846 mS/cm uS/cm	6.70	40.20	12.13
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

1/5/23

Start Time: 0931 Elapsed Time (min): 11 Water Quality Meter ID & SN: YSI ProDSS - 44713/49549

Stop Time: 0942 Average Purge Rate (mL/min): 300 Date Calibrated: 1/5/23

SAMPLING DATA

Sample Date: 1/5/23 Sample Time: 0945 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 [X] Initials: MM JM

COMMENTS:

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

Estimated Total Purge Volume: 3300 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: T. Jones, S. Beadle

DATE: 1/10/23 WEATHER: 35°F, clear

MONITORING WELL ID: MW-22 SAMPLE ID: MW22-ROX-011023

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): 48.68 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 40.13 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 44.40 ft btoc	Ambient PID/FID Reading: 0.0 ppm
Depth to LNAPL/DNAPL (btoc): NE ft		
Depth to Top of Screen (btoc): 38.43 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): 8.55 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	0940	40.14	clear	moderate	16.75	4.06	1,300 (mS/cm) uS/cm	6.54	137.29	6.68
300	0941	40.13			17.45	2.56	1,327 (mS/cm) uS/cm	6.59	125.55	10.64
600	0942	40.13			17.27	1.93	1,325 (mS/cm) uS/cm	6.65	118.13	10.18
900	0943	40.13			17.39	1.59	1,323 (mS/cm) uS/cm	6.69	112.40	9.55
1200	0944				17.30	1.34	1,331 (mS/cm) uS/cm	6.73	106.55	11.41
1500	0945				17.41	1.17	1,315 (mS/cm) uS/cm	6.75	100.66	10.70
1800	0946				17.30	1.06	1,317 (mS/cm) uS/cm	6.78	94.68	10.01
2100	0947				17.53	0.97	1,312 (mS/cm) uS/cm	6.80	88.70	9.37
2400	0948				17.57	0.91	1,312 (mS/cm) uS/cm	6.82	82.50	8.43
2700	0949				17.55	0.86	1,309 (mS/cm) uS/cm	6.84	76.23	7.74
3000	0950	↓	↓	↓	17.65	0.81	1,308 (mS/cm) uS/cm	6.85	70.00	6.62
							mS/cm uS/cm			
							mS/cm uS/cm			
		SB	1/10/23				mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 0940 Elapsed Time (min): 10 Water Quality Meter ID & SN: YSI ProDSS -- 456088/17709

Stop Time: 0950 Average Purge Rate (mL/min): 300 Date Calibrated: 1/10/23

SAMPLING DATA

Sample Date: 1/10/23 Sample Time: 0955 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: SB

COMMENTS:

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

Estimated Total Purge Volume: 3000 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: MMassa JMayer TJenkins

DATE: 1/10/23 WEATHER: Clear 50°

MONITORING WELL ID: MW-23 SAMPLE ID: MW23-ROX-011023

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): 39.27 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 29.23 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 34.25 ft btoc	Ambient PID/FID Reading: 0.0 ppm
Depth to LNAPL/DNAPL (btoc): NE ft		
Depth to Top of Screen (btoc): 29.02 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	Wellbore PID/FID Reading: 0.1 ppm
Screen Length: 10 ft		
Water Column Height (not including NAPL): 10.04 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): — ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	1203	29.23	Clear	Slight HC	16.7	0.90	1.233 mS/cm uS/cm	6.43	-9.42	21.19
300	1204	29.23	↓	↓	16.7	0.79	1.228 mS/cm uS/cm	6.45	-16.62	25.46
600	1205	29.23	↓	↓	16.8	0.73	1.224 mS/cm uS/cm	6.47	-24.00	20.41
900	1206	↓	↓	↓	16.8	0.68	1.225 mS/cm uS/cm	6.48	-31.25	19.80
1200	1207	↓	↓	↓	16.7	0.64	1.224 mS/cm uS/cm	6.49	-38.24	20.52
1500	1208	↓	↓	↓	16.8	0.60	1.224 mS/cm uS/cm	6.50	-43.53	23.57
							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			

MMM 1/10/23

Start Time: 1203 Elapsed Time (min): 5 Water Quality Meter ID & SN: YSI ProDSS -- 44713/49549

Stop Time: 1208 Average Purge Rate (mL/min): 300 Date Calibrated: 1/10/23

SAMPLING DATA

Sample Date: 1/10/23 Sample Time: 1210 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 [X] Initials: MM JM

COMMENTS:

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

Estimated Total Purge Volume: 1500 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: Mmassa JMayer TJenkins

DATE: 1/12/23 WEATHER: OVERCAST 40°

MONITORING WELL ID: MW-24 SAMPLE ID: MW24-ROX-011224

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): 49.86 ft	
Depth to Water (btoc): 41.34 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 45.64 ft btoc
Depth to LNAPL/DNAPL (btoc): NE ft	
Depth to Top of Screen (btoc): 39.61 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): 8.52 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): 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 Pump

STABLE: (over 4 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	1345	41.34	cloudy	none	15.3	1.12	1.503 ~~mS/cm~~ uS/cm	6.81	61.91	89.44
300	1346	41.34			15.3	1.06	1.501 ~~mS/cm~~ uS/cm	6.80	62.35	101.03
600	1347	41.34			15.2	1.01	1.502 ~~mS/cm~~ uS/cm	6.80	62.58	93.07
900	1348	↓			14.7	0.97	1.507 ~~mS/cm~~ uS/cm	6.81	62.93	55.54
1200	1349				14.5	0.963m	1.501 ~~mS/cm~~ uS/cm	6.81	63.30	51.57
1500	1350				14.6	0.90	1.496 ~~mS/cm~~ uS/cm	6.81	63.52	49.61
1800	1351				15.8	0.87	1.497 ~~mS/cm~~ uS/cm	6.80	63.55	45.50
2100	1352				15.6	0.84	1.504 ~~mS/cm~~ uS/cm	6.80	63.87	39.90
2400	1353	↓		↓	15.6	0.81	1.505 ~~mS/cm~~ uS/cm	6.81	64.21	35.70
							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			

MM 1/12/23

Start Time: 1345 Elapsed Time (min): 8 Water Quality Meter ID & SN: YSI ProDSS - 14713/19549

Stop Time: 1353 Average Purge Rate (mL/min): 300 Date Calibrated: 1/12/23

SAMPLING DATA

Sample Date: 1/12/23 Sample Time: 1355 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: MMJM

COMMENTS:

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

Estimated Total Purge Volume: 2400 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: Mmassa JMayer TJenkins

DATE: 1/9/23 WEATHER: partly cloudy

MONITORING WELL ID: MW-25 SAMPLE ID: MW25-ROX-010923

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): 45.84 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 36.39 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 41.12 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: 94.7 ppm
Screen Length: 10 ft		
Water Column Height (not including NAPL): 9.45 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): — ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 readings) | Monitor Temp. +/-0.2 mg/L or +/-10% | Spec. Cond. +/-5% or +/-2 uS/cm | DO +/-0.2 mg/L | ORP +/-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	1021	36.41	cloudy black	slight HC	16.3	1.33	0.918 mS/cm uS/cm	6.85	-57.36	105.6
300	1022	36.41			15.9	1.10	0.915 mS/cm uS/cm	6.87	-66.91	97.0
600	1023	36.41			15.8	0.93	0.912 mS/cm uS/cm	6.89	-74.64	94.9
900	1024	36.41			15.9	0.83	0.910 mS/cm uS/cm	6.90	-80.54	88.4
1200	1025				15.9	0.75	0.910 mS/cm uS/cm	6.91	-86.26	84.1
1500	1026				16.2	0.69	0.908 mS/cm uS/cm	6.91	-90.77	81.2
1800	1027				17.1	0.64	0.904 mS/cm uS/cm	6.91	-95.31	77.0
2100	1028				17.5	0.59	0.911 mS/cm uS/cm	6.92	-100.41	75.3
2400	1029				17.7	0.55	0.908 mS/cm uS/cm	6.92	-103.94	71.8
2700	1030				17.7	0.52	0.908 mS/cm uS/cm	6.92	-106.65	68.7
3000	1031				17.5	0.50	0.907 mS/cm uS/cm	6.92	-109.10	64.1
3300	1032				17.7	0.48	0.908 mS/cm uS/cm	6.93	-111.26	59.7
3600	1033				17.7	0.46	0.907 mS/cm uS/cm	6.93	-113.23	56.6
3900	1034				17.6	0.44	0.905 mS/cm uS/cm	6.94	-115.33	59.2
4200	1035				17.7	0.43	0.906 mS/cm uS/cm	6.93	-116.01	56.0
4500	1036				17.5	0.42	0.906 mS/cm uS/cm	6.94	~~-117.95~~ -116.98 mV	~~44.~~ 52.2

Start Time: 1021 Elapsed Time (min): 19 Water Quality Meter ID & SN: YSI ProDSS - 14713/19549

Stop Time: 1040 Average Purge Rate (mL/min): 300 Date Calibrated: 1/9/23

SAMPLING DATA

Sample Date: 1/9/23 Sample Time: 1045 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: MMJM

COMMENTS:

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

Estimated Total Purge Volume: 5700 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537-3.1.1/2/3 FIELD PERSONNEL: MMassa JMayer TJenkins

DATE: 1/9/2023 MONITORING WELL ID: MW-25 SAMPLE ID: MW25-ROX-010923

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C)	DO (mg/L)	Spec. Cond.	pH	ORP (mV)	Turb (NTU)
				STABLE: (over 4 readings)	Monitor Temp.	+/-0.2 mg/L or +/-10%	+/-5% or +/-2 uS/cm	+/-0.2 mg/L	+/-20 mV	Monitor Turb Readings (<50)
4800	1037	38.41	clear	slight HC	17.5	0.41	0.903 mS/cm (circled) uS/cm	6.94	-117.95	47.95
5100	1038	↓	↓	↓	17.6	0.40	0.902 mS/cm (circled) uS/cm	6.94	-118.98	44.01
5400	1039				17.5	0.39	0.901 mS/cm (circled) uS/cm	6.94	-119.81	41.41
5700	1040				17.6	0.38	0.898 mS/cm (circled) uS/cm	6.94	-120.56	38.48
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
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MM 1/9/23

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW | PROJECT NUMBER: 60697537 - 3.1.1/2/3 | FIELD PERSONNEL: Mmassa Mayer

DATE: 1/6/23 | WEATHER: partly cloudy 35°

MONITORING WELL ID: MW-26 | SAMPLE ID: MW26-RDX-010623

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): 48.40 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 39.14 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 43.77 ft btoc	Ambient PID/FID Reading: 0.0 ppm
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	Wellbore PID/FID Reading: 0.1 ppm
Screen Length: 10 ft		
Water Column Height (not including NAPL): 9.26 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): ___ ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	1034	39.14	Clear	none	14.6	1.24	1.389 mS/cm uS/cm	6.67	173.60	47.01
300	1035	39.14			14.7	1.14	1.383 mS/cm uS/cm	6.67	173.13	42.00
1000	1036	39.14			14.9	1.06	0.717 mS/cm uS/cm	6.67	172.72	32.31
900	1037				16.2	1.59	1.367 mS/cm uS/cm	6.66	172.36	40.86
1200	1038				16.2	1.14	1.388 mS/cm uS/cm	6.66	171.29	42.28
1500	1039				15.8	0.96	1.402 mS/cm uS/cm	6.67	169.82	34.41
1800	1040				15.9	0.84	1.407 mS/cm uS/cm	6.67	169.24	25.24
2100	1041				15.4	0.76	1.412 mS/cm uS/cm	6.67	167.66	18.61
2400	1042				15.9	0.71	1.415 mS/cm uS/cm	6.68	165.94	14.63
2700	1043	↓	↓	↓	15.7	0.68	1.416 mS/cm uS/cm	6.68	164.44	11.84
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
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							mS/cm uS/cm			
							mS/cm uS/cm			

MM 1/6/23

Start Time: 1034 | Elapsed Time (min): 9 | Water Quality Meter ID & SN: YSI ProDSS - 44713/19549

Stop Time: 1043 | Average Purge Rate (mL/min): 300 | Date Calibrated: 1/6/23

SAMPLING DATA

Sample Date: 1/6/23 | Sample Time: 1045 | 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: MM JM

COMMENTS:

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

Estimated Total Purge Volume: 2700 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW **PROJECT NUMBER:** 60697537 - 3.1.1/2/3 **FIELD PERSONNEL:** MMassa JMayer

DATE: 1/6/23 **WEATHER:** partly cloudy 42°

MONITORING WELL ID: MW-27 **SAMPLE ID:** MW27-ROX-010623

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): 39.96 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): 39.79 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	Wellbore PID/FID Reading: 0.0 ppm
Screen Length: 10 ft		
Water Column Height (not including NAPL): 10.08 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): — ft btoc	

PURGE DATA

Pump Type: 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)
					STABLE: (over 4 readings)	+/-0.2 mg/L or +/-10%	+/-5% or +/-2 uS/cm	+/-0.2 mg/L	+/-20 mV	Monitor Turb Readings (<50)
0	1257	40.09	slight cloudy	none	16.2	2.58	0.812 mS/cm uS/cm	6.88	162.59	19.4
300	1258	40.09			16.1	1.87	0.809 mS/cm uS/cm	6.85	153.69	14.3
600	1259	40.09			16.0	1.48	0.808 mS/cm uS/cm	6.83	142.49	28.3
900	1300				16.1	1.24	0.807 mS/cm uS/cm	6.82	132.83	23.4
1200	1301				16.0	1.08	0.808 mS/cm uS/cm	6.81	121.77	19.2
1500	1302				16.1	1.00	0.808 mS/cm uS/cm	6.81	112.37	14.3
1800	1303				16.1	0.91	0.810 mS/cm uS/cm	6.81	104.97	10.3
2100	1304				16.2	0.85	0.809 mS/cm uS/cm	6.80	96.32	8.4
2400	1305				16.3	0.79	0.808 mS/cm uS/cm	6.80	89.17	6.6
2700	1306				16.3	0.75	0.807 mS/cm uS/cm	6.80	~~75.35~~ 81.52	~~8.5~~ 5.9
3000	1307				16.5	0.72	0.806 mS/cm uS/cm	6.80	75.~~69.35~~	~~18.7~~ 8.5
3300	1308				16.3	0.70	0.807 mS/cm uS/cm	6.80	69.35	18.7
3600	1309				16.4	0.67	0.807 mS/cm uS/cm	6.80	65.12	14.5
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

MM 1/6/23

Start Time: 1257 Elapsed Time (min): 12 Water Quality Meter ID & SN: YSI ProDSS -- 44713 / 49549

Stop Time: 1309 Average Purge Rate (mL/min): 300 Date Calibrated: 1/6/23

SAMPLING DATA

Sample Date: 1/6/23 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: mm JM

COMMENTS:

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

Estimated Total Purge Volume: 3600 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: T. Jones, S. Bradley

DATE: 1/5/23 WEATHER: 35°F, partly cloudy

MONITORING WELL ID: MW-28 SAMPLE ID: MW28-ROX-010523

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): 43.86 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL	
Depth to Water (btoc): 39.24 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 41.55 ft btoc	Ambient PID/FID Reading: 0.0 ppm	
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 (WHIEVER IS DEEPER): ft btoc	Wellbore PID/FID Reading: 0.0 ppm	
Screen Length: 10 ft			
Water Column Height (not including NAPL): 4.62 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): ft btoc		

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	1256	39.26	cloudy	none	15.11	4.43	1.031 mS/cm uS/cm	7.30	-10.31	237.85
300	1257				15.74	3.59	1.057 mS/cm uS/cm	7.05	-12.91	187.17
600	1258				16.22	1.92	1.071 mS/cm uS/cm	6.93	-3.01	159.99
900	1259				16.21	1.49	1.069 mS/cm uS/cm	6.87	0.00	110.24
1200	~~1300~~ 1300				16.43	1.27	1.100 mS/cm uS/cm	6.84	2.10	93.77
1500	1301				16.51	1.12	1.114 mS/cm uS/cm	6.82	3.69	69.79
1800	1302				16.49	1.00	1.134 mS/cm uS/cm	6.80	4.55	59.03
2100	1303				16.62	0.91	1.138 mS/cm uS/cm	6.79	4.77	45.10
2400	1304				16.64	0.83	1.148 mS/cm uS/cm	6.78	4.85	37.45
2700	1305				16.61	0.77	1.154 mS/cm uS/cm	↓	4.105	29.34
3000	1306	↓	↓	↓	16.79	0.71	1.163 mS/cm uS/cm	↓	4.24	35.39
							mS/cm uS/cm			
			SB	1/5/23			mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 1256 Elapsed Time (min): 10 Water Quality Meter ID & SN: YSI ProDSS -- 45608/517169

Stop Time: 1306 Average Purge Rate (mL/min): 300 Date Calibrated: 1/5/23

SAMPLING DATA

Sample Date: 1/5/23 Sample Time: 1310 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: SB

COMMENTS:

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

Estimated Total Purge Volume: 3000 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: MMassa JMayer

DATE: 1/6/2023 WEATHER: partly cloudy 32°

MONITORING WELL ID: P-54 SAMPLE ID: P54-BOX-010623

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): 40.12 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 (WHIEVER IS DEEPER): 45.12 ft btoc	Wellbore PID/FID Reading: 0.0 ppm
Screen Length: 25 ft		
Water Column Height (not including NAPL): 22.88 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	0924	40.07	clear	none	15.0	5.49	1.254 (mS/cm) uS/cm	6.66	165.77	17.0
300	0925	40.07			14.9	5.25	1,246 (mS/cm) uS/cm	6.69	162.34	15.3
600	0926	40.07			15.2	5.05	1,248 (mS/cm) uS/cm	6.70	159.97	13.7
900	0927				15.4	4.91	1.256 (mS/cm) uS/cm	6.71	158.05	13.5
1200	0928				15.4	4.81	1.258 (mS/cm) uS/cm	6.72	156.32	12.6
1500	0929				15.5	4.73	1.259 (mS/cm) uS/cm	6.73	154.73	12.6
1800	0930				15.7	4.64	1.262 (mS/cm) uS/cm	6.74	153.23	12.5
2100	0931				15.6	4.57	1.268 (mS/cm) uS/cm	6.75	151.90	12.0
2400	0932				15.8	4.51	1.267 (mS/cm) uS/cm	6.75	150.86	11.4
2700	0933				15.9	4.43	1.275 (mS/cm) uS/cm	6.76	149.91	10.9
3000	0934				16.0	4.38	1.277 (mS/cm) uS/cm	6.76	149.00	10.2
3300	0935	↓	↓	↓	16.1	4.33	1.285 (mS/cm) uS/cm	6.77	148.36	9.72
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

MMA 1/6/23

Start Time: 0924 Elapsed Time (min): 11 Water Quality Meter ID & SN: YSI ProDSS - 4471 3/ 49549

Stop Time: 0935 Average Purge Rate (mL/min): 300 Date Calibrated: 1/6/23

SAMPLING DATA

Sample Date: 1/6/23 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 [X] Initials: MM JM

COMMENTS:

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

Estimated Total Purge Volume: 3500 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: T. Jones, S. Beadle

DATE: 1/11/23 WEATHER: 60°F / Clear

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

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): 50.68 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL	
Depth to Water (btoc): 39.18 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): 39.40 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 (WHIEVER IS DEEPER): ___ ft btoc	Wellbore PID/FID Reading: 134.4 ppm	
Screen Length: 10 ft			
Water Column Height (not including NAPL): 11.02 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): ___ ft btoc		

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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)
							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			

NA SB 1/11/23

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

Stop Time: NA Average Purge Rate (mL/min): NA Date Calibrated: NA

SAMPLING DATA

Sample Date: NA Sample Time: NA Lab Analysis: VOC, SVOC, PAH

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

VOA Vials, No Headspace ☐ Initials: ___

COMMENTS:

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

Not Sampled due to presence of LNAPL

Estimated Total Purge Volume: N/A mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW **PROJECT NUMBER:** 60697537 - 3.1.1/2/3 **FIELD PERSONNEL:** T. Jones, S. Beadle

DATE: 1/9/22 **WEATHER:** 35°F, clear

MONITORING WELL ID: P56 **SAMPLE ID:** P56 - ROX-010923

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): 65.82 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 44.40 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): 40.82 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHIEVER IS DEEPER): 44.40 ft btoc	Wellbore PID/FID Reading: 9.2 ppm
Screen Length: 25 ft		
Water Column Height (not including NAPL): 21.42 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	1323	44.41	cloudy	strong	18.25	2.04	1.121 (mS/cm) uS/cm	7.36	-24.97	15.82
300	1324	44.41	↓	↓	17.90	1.72	1.111 mS/cm uS/cm	7.28	-22.11	12.10
600	1325	44.40	↓	↓	17.81	1.54	1.110 mS/cm uS/cm	7.24	-20.35	10.32
900	1326	44.40	clear	↓	17.97	1.11	1.110 mS/cm uS/cm	7.23	-19.35	8.90
1200	1327	~~44.40~~	↓	↓	17.86	0.96	1.110 mS/cm uS/cm	7.22	-18.75	8.20
1500	1328	↓	↓	↓	17.88	0.86	1.107 mS/cm uS/cm	7.21	-18.64	7.44
1800	1329	↓	↓	↓	17.94	0.78	1.107 mS/cm uS/cm	7.21	-18.96	8.04
2100	1330	↓	↓	↓	17.96	0.72	1.103 mS/cm uS/cm	7.21	-19.55	6.87
2400	1331	↓	↓	↓	17.89	0.67	1.101 (mS/cm) uS/cm	7.22	-20.30	6.39
2700	1332	↓	↓	↓	18.00 17.97	0.64	1.047 (mS/cm) uS/cm	7.22	-21.20	6.61
3000	1333	↓	↓	↓	18.01	0.61	1.096 (mS/cm) uS/cm	7.22	-22.33	6.91
							mS/cm uS/cm			
							mS/cm uS/cm			
			SB	1/9/23			mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 1323 **Elapsed Time (min):** 10 **Water Quality Meter ID & SN:** YSI ProDSS - 456008/57769

Stop Time: 1333 **Average Purge Rate (mL/min):** 300 **Date Calibrated:** 1/9/23

SAMPLING DATA

Sample Date: 1/9/23 **Sample Time:** _____ **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:** SB

COMMENTS:

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

Estimated Total Purge Volume: _____ mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: T. Jones, S. Beadle

DATE: 1/10/23 WEATHER: 50°F, clear

MONITORING WELL ID: P-57 SAMPLE ID: P57 - ROX - 011023

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): 54.19 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 45.08 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 49.62 ft btoc	Ambient PID/FID Reading: 0.0 ppm
Depth to LNAPL/DNAPL (btoc): NE 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 (WHIEVER IS DEEPER): ft btoc	Wellbore PID/FID Reading: 105.4 ppm
Screen Length: 10 ft		
Water Column Height (not including NAPL): 9.08 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	1320	45.43	clear	moderate	18.23	2.08	1.118 (mS/cm) uS/cm	6.72	77	1.08
300	1329	45.48			18.34	1.69	1.135 (mS/cm) uS/cm	6.75	69.80	1.44
600	1330	45.51			18.49	1.29	1.138 (mS/cm) uS/cm	6.77	63.34	1.47
900	1331	45.53			18.61	1.08	1.140 (mS/cm) uS/cm	6.79	57.01	1.05
1200 ~~1100~~	1332	45.53			18.72	0.92	1.142 (mS/cm) uS/cm	6.80	50.11	0.69
1500 ~~2400~~	1333	45.53			18.75	0.82	1.144 (mS/cm) uS/cm	6.81	43.11	0.716
1800 ~~2700~~	1334				18.77	0.75	1.144 (mS/cm) uS/cm	6.82	36.19	0.67
2100 ~~3000~~	1335				18.76	0.69	1.145 (mS/cm) uS/cm	6.83	29.60	0.64
2400	1336				18.82	0.65	1.148 (mS/cm) uS/cm	6.83	23.09	0.43
2700	1337				18.82	0.61	1.149 (mS/cm) uS/cm	6.84	16.03	0.70
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
		SB 1/10/23					mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 1328 Elapsed Time (min): 9 Water Quality Meter ID & SN: YSI ProDSS - 15A08/51769

Stop Time: 1337 Average Purge Rate (mL/min): 300 Date Calibrated: 1/10/23

SAMPLING DATA

Sample Date: 1/10/23 Sample Time: 1340 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 [X] Initials: SB

COMMENTS:

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

Estimated Total Purge Volume: ~~2700~~ mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: T. Jones, S. Beadle

DATE: 1/11/23 WEATHER: 60°F, clear

MONITORING WELL ID: P-58 SAMPLE ID: NA

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): 65.21 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 43.91 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): 42.90 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 (WHIEVER IS DEEPER): — ft btoc	Wellbore PID/FID Reading: 0.4 ppm
Screen Length: 25 ft		
Water Column Height (not including NAPL): 22.30 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): — ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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)
							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			
							mS/cm uS/cm			

NA SD 01/11/23

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

Stop Time: NA Average Purge Rate (mL/min): NA Date Calibrated: NA

SAMPLING DATA

Sample Date: NA Sample Time: NA Lab Analysis: VOC, SVOC, PAH

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

VOA Vials, No Headspace ☐ Initials: —

COMMENTS:

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

Not sampled due to presence of LNAPL

Estimated Total Purge Volume: NA mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: T. Jones, S. Beadle

DATE: 1/11/23 WEATHER: 55°F, partly cloudy

MONITORING WELL ID: P-59 SAMPLE ID: P59 - ROX- 011123

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	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): 45.09 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	Ambient PID/FID Reading: 0.0 ppm
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	Wellbore PID/FID Reading: 149.3 ppm
Depth to Top of Screen (btoc): 47.91 ft	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): — ft btoc	
Screen Length: 25 ft		
Water Column Height (not including NAPL): 27.82 ft		

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	1055	45.08	clear	moderate	19.88	1.80	1.587 ~~mS/cm~~ uS/cm	6.72	24.35	~~0.20~~ 0.00
300	1056	45.08			19.68	1.31	1.584 ~~mS/cm~~ uS/cm	6.69	21.27	0.00
600	1057	45.08			19.48	1.11	1.576 ~~mS/cm~~ uS/cm	6.68	18.23	0.00
900	1058				14.54	0.99	1.569 ~~mS/cm~~ uS/cm	6.68	15.10	0.00
1200	1059				19.81	0.89	1.562 ~~mS/cm~~ uS/cm	6.67	11.69	0.00
1500	1100				19.88	0.81	1.562 ~~mS/cm~~ uS/cm	6.67	8.37	0.00
1800	1101				19.81	0.76	1.559 ~~mS/cm~~ uS/cm	6.666	5.12	0.18
2100	1102				19.82	0.72	1.554 ~~mS/cm~~ uS/cm	6.666	2.54	0.31
							mS/cm uS/cm			
							mS/cm uS/cm			
							~~mS/cm~~ uS/cm			
			SB 1/11/23				mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 1055 Elapsed Time (min): 7 Water Quality Meter ID & SN: YSI ProDSS - 456008/57769

Stop Time: 1102 Average Purge Rate (mL/min): 300 Date Calibrated: 1/11/23

SAMPLING DATA

Sample Date: 1/11/23 Sample Time: 1105 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: SB

COMMENTS:

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

Estimated Total Purge Volume: 2100 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: T. Jones, S. Bradle

DATE: 1/9/23 WEATHER: 35°F, clear

MONITORING WELL ID: P-66 SAMPLE ID: NA

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): 35.91 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): 34.41 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 (WHIEVER IS DEEPER): ft btoc	Wellbore PID/FID Reading: 248.7 ppm
Screen Length: 25 ft		
Water Column Height (not including NAPL): 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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)
							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			
							mS/cm uS/cm			

NA SB 1/9/23

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

Stop Time: NA Average Purge Rate (mL/min): NA Date Calibrated: NA

SAMPLING DATA

Sample Date: NA Sample Time: NA Lab Analysis: VOC, SVOC, PAH

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

VOA Vials, No Headspace ☐ Initials:

COMMENTS:

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

Product in well, not sampled

Estimated Total Purge Volume: NA mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: T. Jones, S. Beadle

DATE: 1/11/23 WEATHER: 50°F, clear

MONITORING WELL ID: P-68 SAMPLE ID: NA

INITIAL DATA

Well Diameter: 4 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): 68.76 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 43.14 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): 43.06 ft		
Depth to Top of Screen (btoc): 43.76 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: 149.7 ppm
Screen Length: 25 ft		
Water Column Height (not including NAPL): 25.62 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): — ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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)
							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			

NA SB 1/11/23

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

Stop Time: NA Average Purge Rate (mL/min): NA Date Calibrated: NA

SAMPLING DATA

Sample Date: NA Sample Time: NA Lab Analysis: VOC, SVOC, PAH

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

VOA Vials, No Headspace ☐ Initials: —

COMMENTS:

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

Not sampled due to presence of LNAPL

Estimated Total Purge Volume: NA mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW | PROJECT NUMBER: 60697537 - 3.1.1/2/3 | FIELD PERSONNEL: T. Jones, S. Beadle

DATE: 1/10/23 | WEATHER: 50°F, clear

MONITORING WELL ID: P-74 | SAMPLE ID: P74-ROX-011023

INITIAL DATA

Well Diameter: 4 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): 68.83 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 41.08 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): 43.83 ft	IF SCREEN & WATER COLUMN >10 FT – PUMP INTAKE AT 5 FT BELOW TOP OF SCREEN OR TOP OF WATER (WHICHEVER IS DEEPER): 48.83 ft btoc	Wellbore PID/FID Reading: 0.0 ppm
Screen Length: 25 ft		
Water Column Height (not including NAPL): 27.75 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	1232	41.38	clear	slight	18.93	2.64	0.197 mS/cm uS/cm	8.03	8.33	14.98
300	1233	41.35			18.87	2.16	0.196 mS/cm uS/cm	7.84	13.18	13.67
600	1234	41.34			18.99	1.92	0.196 mS/cm uS/cm	7.72	15.98	12.60
900	1235	41.34			18.87	1.75	0.195 mS/cm uS/cm	7.63	18.45	12.30
1200	1236	41.34			19.18	1.63	0.196 mS/cm uS/cm	7.55	20.28	11.94
1500	1237				19.17	1.55	0.196 mS/cm uS/cm	7.49	21.86	11.31
1800	1238				19.24	1.48	0.195 mS/cm uS/cm	7.44	23.25	11.[illegible]
2100	1239				19.34	1.42	0.195 mS/cm uS/cm	7.39	24.42	10.99
2400	1240				19.22	1.38	0.195 mS/cm uS/cm	7.325	26.34	10.34
2700	1241				19.29	1.34	0.195 mS/cm uS/cm	7.302	27.12	10.46
3000	1242				19.22	1.33	mS/cm uS/cm	7.[illegible]	27.76	9.93
3300	1243				19.37	1.30	mS/cm uS/cm	7.27	27.98	9.27
3600	1244				19.39	1.29	mS/cm uS/cm	7.25	28.23	9.01
			SB 1/10/23				mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 1232 | Elapsed Time (min): 12 | Water Quality Meter ID & SN: YSI ProDSS -- 4570857769

Stop Time: 1244 | Average Purge Rate (mL/min): 300 | Date Calibrated: 1/10/23

SAMPLING DATA

Sample Date: 1/10/22 | Sample Time: 1245 | 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: SB

COMMENTS:

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

Estimated Total Purge Volume: 3600 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW **PROJECT NUMBER:** 60697537 - 3.1.1/2/3 **FIELD PERSONNEL:** T. Jones, S. Bradle

DATE: 1/5/23 **WEATHER:** 35°F, partly cloudy

MONITORING WELL ID: P-93A **SAMPLE ID:** P-93A-1RQX-010523

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): 43.36 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 48.22 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 (WHIEVER IS DEEPER): ft btoc
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): 9.71 ft	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): 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 Pump

STABLE: (over 4 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	0922	43.45	Clear	none	16.11	1.54	1.227 mS/cm uS/cm	6.23	105.57	~~1.15~~ 0 (SB)
300	0923	43.45			16.68	1.27	1.230 mS/cm uS/cm	6.24	102.56	0
600	0924	43.45			16.67	1.10	1.229 mS/cm uS/cm	6.25	100.59	0
900	0925				16.104	1.00	1.230 mS/cm uS/cm	6.26	99.63	0
1200	0926				16.54	0.94	1.227 mS/cm uS/cm	6.27	97.39	0
1500	0927				16.519	0.93	1.225 mS/cm uS/cm	6.28	95.94	0
1800	0928				16.53	0.84	1.226 mS/cm uS/cm	6.29	94.61	0
2100	0929	↓	↓	↓	16.42	0.81	1.224 mS/cm uS/cm	6.30	93.44	0
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
			SB	1/5/23			mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 0922 Elapsed Time (min): 7 Water Quality Meter ID & SN: YSI ProDSS -- 45608/51769

Stop Time: (SB) ~~0930~~ 0929 Average Purge Rate (mL/min): 300 Date Calibrated: 1/5/23

SAMPLING DATA

Sample Date: (SB) ~~0930~~ 1/5/23 Sample Time: 0930 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: SB

COMMENTS:

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

Estimated Total Purge Volume: 2100 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: T. Jones, S. Beadle

DATE: 1/11/23 WEATHER: 55°F, clear

MONITORING WELL ID: P-93B SAMPLE ID: P93B - ROX - 011123

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): 76.78 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 44.56 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): 74.78 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): 32.22 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): 75.78 ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	1227	44.58	Clear	Strong	17.73	2.88	1.393 (mS/cm) uS/cm	6.86	24.69	18.70
300	1228				17.87	1.53	1.427 (mS/cm) uS/cm	6.78	23.54	11.57
600	1229				17.90	1.12	1.439 (mS/cm) uS/cm	6.76	22.40	8.17
900	1230				18.04	0.89	1.442 (mS/cm) uS/cm	6.76	20.78	5.63
1200	1231				18.04	0.75	1.445 (mS/cm) uS/cm	6.75	18.85	4.24
1500	1232				18.05	0.65	1.446 (mS/cm) uS/cm	6.75	16.39	3.70
1800	1233				18.07	0.58	1.449 (mS/cm) uS/cm	6.75	13.73	3.04
2100	1234				18.17	0.53	1.450 (mS/cm) uS/cm	6.76	10.70	2.37
2400	1235				18.22	0.49	1.452 (mS/cm) uS/cm	6.75	7.59	2.13
2700	1236	↓	↓	↓	18.28	0.46	1.453 (mS/cm) uS/cm	6.76	4.27	2.18
							mS/cm uS/cm			
							mS/cm uS/cm			
		SB	1/11/23				mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 1227 Elapsed Time (min): 9 Water Quality Meter ID & SN: YSI ProDSS -- 45608 | 51769

Stop Time: 1236 Average Purge Rate (mL/min): 300 Date Calibrated: 1/11/23

SAMPLING DATA

Sample Date: 1/11/23 Sample Time: 1240 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: SB

COMMENTS:

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

Estimated Total Purge Volume: 2700 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: T. Jones, S. Bradle

DATE: 1/5/23 WEATHER: 35°F, partly cloudy

MONITORING WELL ID: P-93C SAMPLE ID: ~~P-93~~ (SB) P93C - ROX - 010523

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): 44.54 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): 92.88 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	Wellbore PID/FID Reading: 0.0 ppm
Screen Length: 2 ft		
Water Column Height (not including NAPL): 53.34 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): 93.88 ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	1020	44.54	clear	slight	14.91	2.85	1,033 mS/cm uS/cm	6.86	44.17	2.46
300	1021	"	"	"	14.87	1.90	1.042 mS/cm uS/cm	6.92	14.76	1.49
600	1022	"	"	"	14.95	1.47	1.041 mS/cm uS/cm	6.92	2.30	1.00
900	1023	"	"	"	15.01	1.26	1.045 mS/cm uS/cm	6.91	-6.102	0.37
1200	1024	"	"	"	15.14	1.08	1.043 mS/cm uS/cm	"	-13.97	0
1500	1025	"	"	"	15.04	1.00	1.046 mS/cm uS/cm	"	-17.96	"
1800	1026	"	"	"	15.01	0.91	1.044 mS/cm uS/cm	6.92	-23.44	"
2100	1027	"	"	"	14.94	0.87	1.045 mS/cm uS/cm	6.92	-24.36	"
2400	1028	"	"	"	14.96	0.82	1.047 mS/cm uS/cm	6.93	-27.07	"
2700	1029	"	"	"	15.14	0.78	1.043 mS/cm uS/cm	6.92	-29.33	"
							mS/cm uS/cm			
							mS/cm uS/cm			
		SB 1/5/23					mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 1020 Elapsed Time (min): 9 Water Quality Meter ID & SN: YSI ProDSS - 456008/517769

Stop Time: 1029 Average Purge Rate (mL/min): 300 Date Calibrated: 1/5/23

SAMPLING DATA

Sample Date: 1/5/23 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 [X] Initials: SB

COMMENTS:

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

Estimated Total Purge Volume: 2700 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW **PROJECT NUMBER:** 60697537 - 3.1.1/2/3 **FIELD PERSONNEL:** T. Jones, S. Beadle

DATE: 1/5/23 **WEATHER:** 35°F, partly cloudy

MONITORING WELL ID: P-93D **SAMPLE ID:** P93D - ROX - 010523

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): 127.91 ft	
Depth to Water (btoc): 44.92 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): 125.66 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: 2 ft	
Water Column Height (not including NAPL): 82.99 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): 126.66 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: 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 4 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	1152	44.94	clear	Slight	15.37	5.34	1.139 mS/cm uS/cm	7.41	20.91	0
300	1153				15.66	3.39	1.146 mS/cm uS/cm	7.26	7.65	2.19
600	1154				15.40	2.38	1.149 mS/cm uS/cm	7.18	0.19	3.21
900	1155				15.71	1.76	1.144 mS/cm uS/cm	7.13	-4.77	3.15
1200	1156				15.77	1.38	1.142 mS/cm uS/cm	7.10	-8.15	2.3
1500	1157				15.85	1.14	1.139 mS/cm uS/cm	7.09	-11.35	2.0
1800	1158				15.88	0.99	1.136 mS/cm uS/cm	7.08	-14.45	2.16
2100	1159				15.90	0.88	1.134 mS/cm uS/cm	7.08	-17.24	2.4
2400	1200				15.96	0.81	" mS/cm uS/cm	7.07	-19.61	1.7
2700	1201	↓	↓	↓	15.95	0.75	↓ mS/cm uS/cm	7.07	-21.56	3.7
							mS/cm uS/cm			
							mS/cm uS/cm			
			SB	1/5/23			mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 1152 **Elapsed Time (min):** 9 **Water Quality Meter ID & SN:** YSI ProDSS -- 45605 / 5176

Stop Time: 1201 **Average Purge Rate (mL/min):** 300 **Date Calibrated:** 1/5/23

SAMPLING DATA

Sample Date: 1/5/23 **Sample Time:** 1205 **Lab Analysis:** VOC, SVOC, PAH

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

VOA Vials, No Headspace ☒ **Initials:** SB

COMMENTS:

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

Estimated Total Purge Volume: 2700 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW | PROJECT NUMBER: 60697537 - 3.1.1/2/3 | FIELD PERSONNEL: T. Jones, S. Beadle

DATE: 1/6/23 | WEATHER: 35°F, clear

MONITORING WELL ID: P-114R | SAMPLE ID: P114R - ROX - 010623

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): 27.010 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 30.18 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: 0.0 ppm
Screen Length: 10 ft		
Water Column Height (not including NAPL): 10.25 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): ____ ft btoc	

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	1245	27.16	Cloudy	Strong	20.38	1.608	0.884 (mS/cm) uS/cm	6.81	-23.96	531.03
300	1246				20.61	1.314	0.884 (mS/cm) uS/cm	6.74	-32.39	453.24
600	1247				20.73	1.07	0.882 (mS/cm) uS/cm	6.71	-38.86	386.00
900	1248				20.95	0.91	0.881 (mS/cm) uS/cm	6.70	-44.39	327.56
1200	1249				21.02	0.82	0.881 (mS/cm) uS/cm	6.69	-49.09	279.592
1500	1250				21.01	0.75	0.879 (mS/cm) uS/cm	6.69	-53.11	241.57
2100	1252				21.15	0.696	0.875 (mS/cm) uS/cm	6.69	-59.29	289.15
2400	1253				21.52	0.60	0.877 (mS/cm) uS/cm	1	-62.94	290.29
2700	1254				21.38	0.57	0.875 (mS/cm) uS/cm	↓	-65.95	223.71
3000	1255				21.23	0.54	0.876 (mS/cm) uS/cm	6.70	-68.64	183.217
3300	1256				21.10	0.52	0.873 (mS/cm) uS/cm	6.70	-71.05	160.68
3600	1257				21.11	0.51	0.873 (mS/cm) uS/cm	6.71	-73.31	141.44
~~3900~~	1258				21.15	0.49	0.872 (mS/cm) uS/cm	6.71	-75.41	121.61
4200	1259				21.15	0.48	0.872 (mS/cm) uS/cm	6.71	-77.25	105.47
4500	1300				21.19	0.47	0.872 (mS/cm) uS/cm	6.71	-79.11	90.016
4800	1301	↓	↓	↓	21.11	0.46	0.871 (mS/cm) uS/cm	6.72	-80.85	83.12

Start Time: 1245 | Elapsed Time (min): ~~1315~~ (SB) 25 | Water Quality Meter ID & SN: YSI ProDSS -- 456009/517169

Stop Time: 1310 | Average Purge Rate (mL/min): 300 | Date Calibrated: 1/6/23

SAMPLING DATA

Sample Date: 1/6/23 | 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 [X] Initials: SB

COMMENTS:

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

Estimated Total Purge Volume: 7500 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW **PROJECT NUMBER:** 60697537 **FIELD PERSONNEL:** T. Jones, S. Beadle

DATE: 1/6/23 **MONITORING WELL ID:** P-114R **SAMPLE ID:** P114R-ROX-010623

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor (STABLE: over 4 readings)	Temp (°C) (Monitor Temp.)	DO (mg/L) (+/-0.2 mg/L or +/-10%)	Spec. Cond. (+/-5% or +/-2 uS/cm)	pH (+/-0.2 mg/L)	ORP (mV) (+/-20 mV)	Turb (NTU) (Monitor Turb Readings (<50))
5100	1302	27.16	Cloudy	Strong	21.05	0.44	0.871 (mS/cm) uS/cm	6.72	-82.43	69.71
5400	1303	↓	↓	↓	21.24	0.43	0.870 (mS/cm) uS/cm	6.72	-84.09	67.79
5700	1304	↓	↓	↓	21.20	0.42	0.871 (mS/cm) uS/cm	6.72	-85.60	55.35
6000	1305	↓	↓	↓	21.35	0.42	0.869 (mS/cm) uS/cm	6.72	-87.02	53.59
6300	1306	↓	↓	↓	21.28	0.41	0.868 (mS/cm) uS/cm	6.73	-88.46	53.30
6600	1307	↓	↓	↓	21.33	0.41	0.867 (mS/cm) uS/cm	↓	-89.72	49.93
6900	1308	↓	↓	↓	21.37	0.39	0.867 (mS/cm) uS/cm	↓	-91.00	43.90
7200	1309	↓	↓	↓	21.26	0.39	0.867 (mS/cm) uS/cm	↓	-92.15	38.94
7500	1310	↓	↓	↓	21.34	0.38	0.864 (mS/cm) uS/cm	↓	-93.29	36.19
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
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SB 1/6/23

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: MMassa JMayer

DATE: 1/5/23 WEATHER: Mostly cloudy 37°

MONITORING WELL ID: ROST-3-MW SAMPLE ID: ROST3MW-ROX-010523

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): 39.98 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 44.02 ft btoc	Ambient PID/FID Reading: 0.0 ppm	
Depth to LNAPL/DNAPL (btoc): NE ft		Wellbore PID/FID Reading: 9.3 ppm	
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		
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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): ___ ft btoc		

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	1039	40.02	Clear	None	13.4	2.00	~~1.150~~ mS/cm uS/cm	~~6.63~~	-69.39	16.0
300	1040	40.02			14.1	1.35	1.147 mS/cm uS/cm	6.67	-82.51	16.0
600	1041	48.02			14.3	1.09	1.150 mS/cm uS/cm	6.68	-86.89	15.5
900	1042				14.1	0.91	1.147 mS/cm uS/cm	6.69	-89.88	14.6
1200	1043				14.2	0.85	1.143 mS/cm uS/cm	6.69	-90.88	16.4
1500	1044				14.2	0.77	1.149 mS/cm uS/cm	6.70	-92.51	16.5
1800	1045				14.3	0.70	1.146 mS/cm uS/cm	6.70	-94.34	15.0
2100	1046				14.6	0.65	1.144 mS/cm uS/cm	6.70	-96.00	12.6
2400	1047				14.7	0.61	1.149 mS/cm uS/cm	6.70	-97.69	12.1
							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			

MMM 1/5/23

Start Time: 1039 Elapsed Time (min): 8 Water Quality Meter ID & SN: YSI ProDSS -- 44713/49549

Stop Time: 1047 Average Purge Rate (mL/min): 300 Date Calibrated: 1/5/23

SAMPLING DATA

Sample Date: 1/5/23 Sample Time: 1050 Lab Analysis: VOC, SVOC, PAH

Sample Method: Stainless Steel Submersible Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: None

VOA Vials, No Headspace ☒ Initials: MM JM

COMMENTS:

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

Estimated Total Purge Volume: 2400 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW **PROJECT NUMBER:** 60697537 - 3.1.1/2/3 **FIELD PERSONNEL:** MMassa JMayer

DATE: 1/13/23 **WEATHER:** overcast 31°

MONITORING WELL ID: ROST-4-PZ(C) **SAMPLE ID:** ROST4PZC-BOX-011323

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): 45.20 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL
Depth to Water (btoc): 39.97 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 42.585 ft btoc	Ambient PID/FID Reading: 0.0 ppm
Depth to LNAPL/DNAPL (btoc): NE 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	Wellbore PID/FID Reading: 0.0 ppm
Screen Length: 10 ft		
Water Column Height (not including NAPL): 5.23 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): — ft btoc	

PURGE DATA

Pump Type: 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)
					STABLE: (over 4 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	1159	40.26	cloudy, black	Slight HO	14.0	1.37	1.263 mS/cm uS/cm	6.88	22.69	28.52
300	1200	40.26	↓	↓	13.9	1.18	1.271 mS/cm uS/cm	6.89	18.39	22.38
600	1201	40.26	↓	↓	13.9	1.05	1.269 mS/cm uS/cm	6.90	14.30	19.15
900	1202	↓	↓	↓	14.2	0.94	1.267 mS/cm uS/cm	6.90	10.10	16.20
1200	1203	↓	↓	↓	14.3	0.86	1.268 mS/cm uS/cm	6.91	5.73	14.20
1500	1204	↓	↓	↓	14.0	0.80	1.271 mS/cm uS/cm	6.91	2.57	11.83
1800	1205	↓	↓	↓	14.3	0.75	1.266 mS/cm uS/cm	6.91	-0.84	9.86
							mS/cm uS/cm			
							mS/cm uS/cm			
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MMM 1/13/23

Start Time: 1159 Elapsed Time (min): 6 Water Quality Meter ID & SN: YSI ProDSS - 44713 | 49549

Stop Time: 1205 Average Purge Rate (mL/min): 300 Date Calibrated: 1/13/23

SAMPLING DATA

Sample Date: 1/13/23 Sample Time: 1210 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: JMMM

COMMENTS:

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

Estimated Total Purge Volume: 1800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: T. Jones, S. Beadle

DATE: 1/10/23 WEATHER: 45°F, clear

MONITORING WELL ID: ROST-4-PZ(E) SAMPLE ID: ROSTAPZE-ROX-011023

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): 38.02 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 41.81 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	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): 10.38 ft	IF SCREEN AND/OR WATER COLUMN HEIGHT <4 FT – PUMP INTAKE AT 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): 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 Pump

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	Temp (°C) (STABLE: over 4 readings)	DO (mg/L) (+/-0.2 mg/L or +/-10%)	Spec. Cond. (+/-5% or +/-2 uS/cm)	pH (+/-0.2 mg/L)	ORP (mV) (+/-20 mV)	Turb (NTU) (Monitor Turb Readings (<50))
0	1037	38.97	cloudy	moderate	17.65	2.69	1.772 mS/cm uS/cm	6.91	33.00	32.20
300	1038	38.94			17.59	1.79	1.796 mS/cm uS/cm	6.84	32.70	25.31
600	1039	38.93			17.58	1.42	1.814 mS/cm uS/cm	6.81	31.94	20.74
900	1040	38.92			17.76	1.18	1.826 mS/cm uS/cm	6.80	30.63	21.12
1200	1041	38.92			17.79	1.02	1.836 mS/cm uS/cm	6.80	29.26	18.02
1500	1042				17.75	0.83 0.91	1.857 mS/cm uS/cm	6.79	26.24	15.77
1800	1043				17.7084	0.8770.83	1.8601 mS/cm uS/cm	6.79	24.58	13.27 14.63
2100	1044				17.8876	0.7227	1.8608 mS/cm uS/cm	6.79	22.71	13.27
2400	1045				17.88	0.72	1.8608 mS/cm uS/cm	6.71	22.71	13.27
2700	1046				17.93	0.68	1.875 mS/cm uS/cm	6.80	20.86	12.31
							mS/cm uS/cm			
							mS/cm uS/cm			
			SB	1/10/23			mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			
							mS/cm uS/cm			

Start Time: 1037 Elapsed Time (min): 9 Water Quality Meter ID & SN: YSI ProDSS -- 456081577 69

Stop Time: 1046 Average Purge Rate (mL/min): 300 Date Calibrated: 1/10/23

SAMPLING DATA

Sample Date: 1/10/23 Sample Time: 1050 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 [X] Initials: SB

COMMENTS:

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

Estimated Total Purge Volume: 2700 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: T. Jones, S. Beadle

DATE: 1/6/23 WEATHER: 35°F, clear

MONITORING WELL ID: ROST-4-PZ(G) SAMPLE ID: ROST4PZG - ROX - 010623

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): 44.53 ft		Minimum Purge Volume = (3 x Flow Cell Volume): 960 mL	
Depth to Water (btoc): 40.02 ft	IF SCREEN ≤10 FT & WATER WITHIN SCREEN – PUMP INTAKE AT MIDPOINT OF WATER COLUMN HEIGHT: 42.27 ft btoc	Ambient PID/FID Reading: 0.0 ppm	
Depth to LNAPL/DNAPL (btoc): NA ft			
Depth to Top of Screen (btoc): 34.28 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): 4.51 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): ft btoc		

PURGE DATA

Pump Type: Stainless Steel Submersible Pump

STABLE: (over 4 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	1035	40.05	cloudy	moderate	16.62	3.32	1.306 mS/cm uS/cm	6.91	32.14	71.57
300	1036				16.48	2.05	1.313 mS/cm uS/cm	6.87	19.76	59.36
600	1037				16.70	1.52	1.322 mS/cm uS/cm	6.87	10.25	53.40
900	1038				16.88	1.24	1.329 mS/cm uS/cm	6.88	2.05	45.26
1200	1039				16.71	1.07	1.339 mS/cm uS/cm	6.89	-5.14	42.47
1500	1040				16.94	0.94	1.341 mS/cm uS/cm	6.90	-12.07	39.99
1800	1041				16.99	0.84	1.351 mS/cm uS/cm	6.90	-18.14	32.72
2100	1042				17.03	0.78	1.360 mS/cm uS/cm	6.91	-23.49	30.45
2400	1043				17.02	0.73	1.368 mS/cm uS/cm	6.91	-28.15	26.80
2700	1044				17.09	0.69	1.376 mS/cm uS/cm	6.92	-32.50	22.66
3000	1045				17.36	0.65	1.381 mS/cm uS/cm	6.92	-36.49	20.03
3300	1046				17.34	0.62	1.395 mS/cm uS/cm	6.92	-39.78	16.79
3600	1047				17.30	0.59	1.403 mS/cm uS/cm	6.92	-43.48	13.06
3900	1048				17.31	0.58	1.406 mS/cm uS/cm	6.93	-45.24	11.42
4200	1049				17.36	0.56	1.411 mS/cm uS/cm		-47.28	9.20
4500	1050				17.35	0.54	1.414 mS/cm uS/cm		-49.84	7.42

Start Time: 1035 Elapsed Time (min): ~~25~~ 15 Water Quality Meter ID & SN: YSI ProDSS - 16608 | 17769

Stop Time: 1050 Average Purge Rate (mL/min): 300 Date Calibrated: 1/6/23

SAMPLING DATA

Sample Date: 1/6/23 Sample Time: 1055 Lab Analysis: VOC, SVOC, PAH

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

VOA Vials, No Headspace ☒ Initials: SB

COMMENTS:

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

Estimated Total Purge Volume: 4500 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q23 GW PROJECT NUMBER: 60697537 - 3.1.1/2/3 FIELD PERSONNEL: T. Jones, S. Beadle

DATE: 1/11/23 WEATHER: 50°F, Overcast

MONITORING WELL ID: T-12 SAMPLE ID: T12-ROX-011023

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): 42.90 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): NR 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 (WHIEVER IS DEEPER): 51.83 ft btoc	Wellbore PID/FID Reading: 7.5 ppm
Screen Length: 26 ft		
Water Column Height (not including NAPL): 29.93 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 1 FT BELOW TOP OF SCREEN OR WATER (WHICHEVER IS DEEPER): — ft btoc	

PURGE DATA

Pump Type: 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)
		STABLE: (over 4 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	0940	42.94	clear	moderate	17.42	3.81	1.919 ~~mS/cm~~ uS/cm	6.35	97.05	0.00
300	0941				17.92	2.23	1.946 ~~mS/cm~~ uS/cm	6.48	80.59	0.00
600	0942				18.18	1.83	1.951 ~~mS/cm~~ uS/cm	6.52	74.21	0.07
900	0943				18.19	1.38	1.9556 ~~mS/cm~~ uS/cm	6.57	69.20	0.00
1200	0944				18.24	1.16	1.956 ~~mS/cm~~ uS/cm	6.64	57.51	0.00
1500	0945				18.45	1.01	1.956 ~~mS/cm~~ uS/cm	6.67	51.14	0.03
1800	0946				18.37	0.90	1.960 ~~mS/cm~~ uS/cm	6.69	45.49	0.06
2100	0947				18.42	0.82	1.956 ~~mS/cm~~ uS/cm	6.71	39.99	0.00
2400	0948				18.40	0.76	1.958 ~~mS/cm~~ uS/cm	6.73	34.71	0.00
2700	0949	↓	↓	↓	18.43	0.71	1.958 ~~mS/cm~~ uS/cm	6.74	29.57	0.00
							~~mS/cm~~ uS/cm			
							~~mS/cm~~ uS/cm			
							~~mS/cm~~ uS/cm			
							~~mS/cm~~ uS/cm			
							~~mS/cm~~ uS/cm			
							~~mS/cm~~ uS/cm			

SB 1/11/23

Start Time: 0940 Elapsed Time (min): 9 Water Quality Meter ID & SN: YSI ProDSS -- 456DB/57709

Stop Time: 0949 Average Purge Rate (mL/min): 300 Date Calibrated: 1/11/23

SAMPLING DATA

Sample Date: 1/11/23 Sample Time: 0950 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: SB

COMMENTS:

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

Estimated Total Purge Volume: 2700 mL

Appendix D

Data Review/Validation Forms and Laboratory Analytical Reports

Roxana Groundwater Quarterly – 1st Quarter 2023 Data Review

Laboratory SDG: 400-231397-1-Rev.3

Data Reviewer: Andreia Vladimirescu

Peer Reviewer: Cheyana Cokley

Date Reviewed: 03/08/2023

Guidance: USEPA National Functional Guidelines for Organic Superfund Methods Data Review 2020

Sample Identification	Sample Identification
TB-ROX-010523-8260-A	TB-ROX-010523-8011-A
MW16-ROX-010523-EB	MW16-ROX-010523
ROST3MW-ROX-010523	MW9-ROX-010523
TB-ROX-010523-8260-B	TB-ROX-010523-8011-B
P93A-ROX-010523-EB	P93A-ROX-010523
P93C-ROX-010523	P93D-ROX-010523
MW28-ROX-010523	

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 that several PAHs in sample P93A-ROX-010523 and P93D-ROX-010523 were re-extracted outside of the extraction time criteria. 2-Butanone (MEK) was detected in equipment blank P93A-ROX-010523-EB, and benzo[b]fluoranthene and dibenz(a,h)anthracene were detected in a method blank. Several SVOC and VOC by 8011 LCS/LCSD recoveries were outside evaluation criteria. Surrogate recoveries for PAH 2-fluorophenol in samples MW16-ROX-010523, MW9-ROX-010523, and P93D-ROX-010523 were outside criteria. MS/MSD recoveries and MS/MSD RPDs for 2-chloroethyl vinyl ether, several SVOCs, and 1,2-dibromo-3-chloropropane were outside evaluation criteria in sample MW28-ROX-010523. The continuing calibration verification (CCV) for pyridine and benzyl alcohol were outside evaluation criteria, biased low. These issues are addressed further in the appropriate sections of this data review. The laboratory report was revised on March 3, 2023, to report confirmation PAH results for several samples; both original and reanalysis results are reported. The laboratory report was revised on March 10, 2023, and March 16, 2023 to include missing ICV data associated with PAHs. The laboratory report was revised on March 24, 2023, to include missing CCVIS data.

Three of 70 (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?

No, several PAHs in samples P93A-ROX-010523 and P93D-ROX-010523 were re-extracted 21 days outside extraction time criteria (7 days) and then re-analyzed due to initial analysis results that were not consistent with historical data; the re-extracted and re-analyzed samples were out of hold time and the results were non-detect. Both sets of data are reported. With regard to initial P93A-ROX-010523 and P93D-ROX-010523 PAH data, the laboratory issued a Corrective Action Report (CAR) stating that through confirmation analyses, many previous detections were not confirmed and were therefore deemed laboratory contamination. Based on professional judgement, the results from the re-analysis were used for the purposes of this report. Data requiring qualification is summarized in the following table.

Sample ID	Parameter	Analyte	Qualification
P93A-ROX-010523 – RE	PAHs	Benzo[b]fluoranthene	**UJ**
P93D-ROX-010523 – RE	PAHs	Benzo[a]anthracene	**UJ**
P93D-ROX-010523 – RE	PAHs	Benzo[b]fluoranthene	**UJ**
P93D-ROX-010523 – RE	PAHs	Benzo[k]fluoranthene	**UJ**
P93D-ROX-010523 – RE	PAHs	Chrysene	**UJ**
P93D-ROX-010523 – RE	PAHs	Dibenz(a,h)anthracene	**UJ**
P93D-ROX-010523 – RE	PAHs	Pyrene	**UJ**

4.0 Blank Contamination

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

Yes

Blank ID	Parameter	Analyte	Concentration /Amount
P93A-ROX-010523-EB	VOCs	2-Butanone (MEK)	3.6 µg/L
MB 400-610934/1-A	PAHs	Benzo[b]fluoranthene	0.0960 µg/L
MB 400-610934/1-A	PAHs	Dibenz(a,h)anthracene	0.0971 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.

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 400-607741/2-A	SVOCs	Quinoline	**42**	NA	49-130
LCS/LCSD 400-607741/5-A/6-A	SVOCs	Benzenethiol	**4/3**	18	10-120/30
LCS 400-608226/2-A/3-A	VOCs by 8011	1,2-Dibromo-3-Chloropropane	**145/147**	1	60-140/30
LCS 400-608226/2-A/3-A	VOCs by 8011	1,2-Dibromoethane	**159/151**	5	60-140/30

Analytical data that required qualification based on LCS/LCSD data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Professional judgment was used to qualify, however not reject, data associated with benzenethiol below evaluation criteria; benzenethiol has been identified as a poor performing analyte under Method 8270.

Sample ID	Parameter	Analyte	Qualification
MW16-ROX-010523	SVOCs	Quinoline	**UJ**
ROST3MW-ROX-010523	SVOCs	Quinoline	**UJ**
MW9-ROX-010523	SVOCs	Quinoline	**UJ**
P93A-ROX-010523	SVOCs	Quinoline	**UJ**
P93C-ROX-010523	SVOCs	Quinoline	**UJ**
P93D-ROX-010523	SVOCs	Quinoline	**UJ**
MW28-ROX-010523	SVOCs	Quinoline	**UJ**
MW16-ROX-010523	SVOCs	Benzenethiol	**UJ**
ROST3MW-ROX-010523	SVOCs	Benzenethiol	**UJ**
MW9-ROX-010523	SVOCs	Benzenethiol	**UJ**
P93A-ROX-010523	SVOCs	Benzenethiol	**UJ**
P93C-ROX-010523	SVOCs	Benzenethiol	**UJ**
P93D-ROX-010523	SVOCs	Benzenethiol	**UJ**
MW28-ROX-010523	SVOCs	Benzenethiol	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
MW16-ROX-010523	SVOCs	2-Fluorophenol	**8**	13-113
MW9-ROX-010523	SVOCs	2-Fluorophenol	**8**	13-113
P93D-ROX-010523	SVOCs	2-Fluorophenol	**11**	13-113

Qualifications due to surrogate recoveries were not required if only one of three base/neutral and/or acid surrogate recoveries were outside evaluation criteria; 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-010523 was spiked and analyzed for VOCs, SVOCs, PAHs, and VOC by 8011.

Were MS/MSD recoveries within evaluation criteria?

No

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
MW28-ROX-010523 – MS/MSD	VOCs	2-Chloroethyl vinyl ether	26/**7**	**112**	10-150/50
MW28-ROX-010523 – MS/MSD	SVOCs	Aniline	**0**/63	NC	10-120/63
MW28-ROX-010523 – MS/MSD	SVOCs	Bis(2-chloroethyl)ether	**146**/86	**53**	42-120/42
MW28-ROX-010523 – MS/MSD	SVOCs	Dibenz[a,h]acridine	**46/46**	1	50-150/40
MW28-ROX-010523 – MS/MSD	SVOCs	1,4-Dioxane	53/**48**	**10**	50-150/40
MW28-ROX-010523 – MS/MSD	SVOCs	Quinoline	**46/45**	2	51-120/40
MW28-ROX-010523 – MS/MSD	VOCs by 8011	1,2-Dibromo-3-Chloropropane	**156/154**	6	10-150/20

Analytical data that required qualification based on MS/MSD data are included in the table below. Analytical data reported as non-detect and associated with MS/MSD recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Quinoline in sample MW28-ROX-010523 was previously qualified in Section 5.0 of this data review due to LCS recovery outside evaluation criteria; no further qualification is required.

Sample ID	Parameter	Analyte	Qualification
MW28-ROX-010523	VOCs	2-Chloroethyl vinyl ether	**UJ**
MW28-ROX-010523	SVOCs	Aniline	**UJ**
MW28-ROX-010523	SVOCs	Dibenz[a,h]acridine	**UJ**
MW28-ROX-010523	SVOCs	1,4-Dioxane	**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 verification for pyridine and benzyl alcohol were outside evaluation criteria, biased low. Analytes are qualified as summarized in the following table.

Sample ID	Parameter	Analyte	Qualification
MW16-ROX-010523	SVOCs	Pyridine	**UJ**
MW16-ROX-010523	SVOCs	Benzyl alcohol	**UJ**
ROST3MW-ROX-010523	SVOCs	Pyridine	**UJ**
ROST3MW-ROX-010523	SVOCs	Benzyl alcohol	**UJ**
MW9-ROX-010523	SVOCs	Pyridine	**UJ**
MW9-ROX-010523	SVOCs	Benzyl alcohol	**UJ**
P93A-ROX-010523	SVOCs	Pyridine	**UJ**
P93A-ROX-010523	SVOCs	Benzyl alcohol	**UJ**
P93C-ROX-010523	SVOCs	Pyridine	**UJ**
P93C-ROX-010523	SVOCs	Benzyl alcohol	**UJ**
P93D-ROX-010523	SVOCs	Pyridine	**UJ**
P93D-ROX-010523	SVOCs	Benzyl alcohol	**UJ**
MW28-ROX-010523	SVOCs	Pyridine	**UJ**
MW28-ROX-010523	SVOCs	Benzyl alcohol	**UJ**

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

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JOB DESCRIPTION

ROXANA QUARTERLY GW

JOB NUMBER

400-231397-1

Eurofins Pensacola
3355 McLemore Drive
Pensacola FL 32514

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet all NELAP requirements for accredited parameters, unless otherwise noted, and relate only to the referenced samples. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval from the laboratory. For questions please contact the Project Manager at the e-mail address listed on this page, or the telephone number at the bottom of the page. Eurofins Environment Testing Southeast LLC, Pensacola Certifications and Approvals: Alabama (40150), Arizona (AZ0710), Arkansas (88-0689), Florida (E81010), Illinois (200041), Iowa (367), Kansas (E-10253), Kentucky UST (53), Louisiana (30748), Maryland (233), Massachusetts (M-FL094), Michigan (9912), New Hampshire (250510), New Jersey (FL006), North Carolina (314), Oklahoma (9810), Pennsylvania (68-00467), Rhode Island (LAO00307), South Carolina (96026), Tennessee (TN02907), Texas (T104704286-10-2), Virginia (00008), Washington (C2043), West Virginia (136), USDA Foreign Soil Permit (P330-08-00006).

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Job ID: 400-231397-1

Laboratory: Eurofins Pensacola

Narrative

Job Narrative
400-231397-1

Comments
Revised Report
Report revised to correct 8270 data.
Supersedes report dated 1-20-2023.

The 8270 data for this job was reviewed when it was determined the original results did not match historical data. Confirmation analyses of the initial extract and in some instances analysis of re-extracted samples were performed. The results of these re-analyses confirm in some cases and are reported again in the revision. The difference in a result that does not confirm is most likely due to trace level contamination. The result with the highest confidence level is currently reported when all results are in hold. In instances where a confirmation analysis was performed outside of holding time both the initial and out of hold results are reported.

Receipt
The samples were received on 1/6/2023 8:58 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.0º C and 1.7º C.

GC/MS VOA
Method 8260B: The matrix spike duplicate (MSD) recovery for analytical batch 400-607812 was outside control limits for 2-Chloroethyl vinyl ether due to the acidic nature of the parent sample.

Method 8260B: The matrix spike / matrix spike duplicate (MS/MSD) precision for analytical batch 400-607812 was outside cont limits for 2-Chloroethyl vinyl ether due to the acidic nature of the parent sample.

Method 8260B: The preservative used in the sample containers provided is not compatible with some of the Method 8260 analyt requested. The following samples were received preserved with hydrochloric acid: TB-ROX-010523-8260-A (400-231397-1), MW16-ROX-010523-EB (400-231397-3), MW16-ROX-010523 (400-231397-4), ROST3MW-ROX-010523 (400-231397-5), MW9-ROX-010523 (400-231397-6), TB-ROX-010523-8260-B (400-231397-7), P93A-ROX-010523-EB (400-231397-9), P93A-ROX-010523 (400-231397-10), P93C-ROX-010523 (400-231397-11), P93D-ROX-010523 (400-231397-12) and MW28-ROX-010523 (400-231397-13). The requested target analyte list include 2-chloroethyl vinyl ether, Acrolein and Acrylonit which are acid-labile compounds that degrade in an acidic medium.

Method 8260B: Sample P93A-ROX-010523-EB (400-231397-9) contained 2-Butanone (MEK) between the method detection lim and the reporting limit. 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 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: MW16-ROX-010523 (400-231397-4), MW9-ROX-010523 (400-231397-6) and P93D-ROX-010523 (400-231397-12). These results have been reported and qualified.

Method 8270D: The continuing calibration verification (CCV) associated with batch 400-607924 recovered above the upper cont limit for Bis(2-ethylhexyl) phthalate and Butyl benzyl phthalate. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8270D: The continuing calibration verification (CCV) associated with batch 400-607924 recovered outside acceptance criteria, low biased, for Benzyl alcohol and Pyridine. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8270D: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch

Job ID: 400-231397-1 (Continued)

Laboratory: Eurofins Pensacola (Continued)

400-607741 and analytical batch 400-607924 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 ha been reported and qualified.

Method 8270D: The following analyte(s) recovered outside control limits for the LCS associated with preparation batch 400-607741 and analytical batch 400-607924: Quinoline. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Method 8270D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 400-607741 and analytical batch 400-607924 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8270D: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 400-607741 and analytical batch 400-607924 was outside control limits. Sample matrix interference and/or non-homogeneity a suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8270D: The initial calibration verification (ICV) analyzed in batch 400-601870 was outside method criteria for the followi analyte(s): Benzenethiol. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D LL: The method blank for preparation batch 400-610934 and analytical batch 400-611182 Benzo[b]fluoranthene, Benzo[k]fluoranthene and Benzo[a]anthracene above the method detection limit. This target analyte concentration was less tha the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8270D LL: The method blank for preparation batch 400-610934 and analytical batch 400-614729 contained Benzo[b]fluoranthene and Dibenz(a,h)anthracene 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.

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

GC Semi VOA

Method 8011: The continuing calibration verification (CCV) associated with batch 400-608261 recovered above the upper contro 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.

Method 8011: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 400-608226 and analytical batch 400-608261 recovered outside control limits for the following analytes: 1,2-Dibromo-3-Chloropropane and Ethylene Dibromide. These analytes were biased high in the LCS and were not detected in t associated samples; therefore, the data have been reported.

Method 8011: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 400-608226 and analytical batch 400-608261 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are 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.

Job ID: 400-231397-1 (Continued)

Laboratory: Eurofins Pensacola (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 GW

Job ID: 400-231397-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-231397-1	TB-ROX-010523-8260-A	Water	01/05/23 12:00	01/07/23 09:10
400-231397-2	TB-ROX-010523-8011-A	Water	01/05/23 12:00	01/07/23 09:10
400-231397-3	MW16-ROX-010523-EB	Water	01/05/23 08:30	01/06/23 08:58
400-231397-4	MW16-ROX-010523	Water	01/05/23 09:45	01/06/23 08:58
400-231397-5	ROST3MW-ROX-010523	Water	01/05/23 10:50	01/06/23 08:58
400-231397-6	MW9-ROX-010523	Water	01/05/23 11:55	01/06/23 08:58
400-231397-7	TB-ROX-010523-8260-B	Water	01/05/23 12:00	01/07/23 09:10
400-231397-8	TB-ROX-010523-8011-B	Water	01/05/23 12:00	01/07/23 09:10
400-231397-9	P93A-ROX-010523-EB	Water	01/05/23 08:15	01/06/23 08:58
400-231397-10	P93A-ROX-010523	Water	01/05/23 09:30	01/07/23 09:10
400-231397-11	P93C-ROX-010523	Water	01/05/23 10:30	01/07/23 09:10
400-231397-12	P93D-ROX-010523	Water	01/05/23 12:05	01/06/23 08:58
400-231397-13	MW28-ROX-010523	Water	01/05/23 13:10	01/06/23 08:58

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: TB-ROX-010523-8260-A — Lab Sample ID: 400-231397-1

No Detections.

Client Sample ID: TB-ROX-010523-8011-A — Lab Sample ID: 400-231397-2

No Detections.

Client Sample ID: MW16-ROX-010523-EB — Lab Sample ID: 400-231397-3

No Detections.

Client Sample ID: MW16-ROX-010523 — Lab Sample ID: 400-231397-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Methylnaphthalene	0.11	J	0.21	0.064	ug/L	1		8270D LL	Total/NA

Client Sample ID: ROST3MW-ROX-010523 — Lab Sample ID: 400-231397-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	0.22		0.21	0.077	ug/L	1		8270D LL	Total/NA

Client Sample ID: MW9-ROX-010523 — Lab Sample ID: 400-231397-6

No Detections.

Client Sample ID: TB-ROX-010523-8260-B — Lab Sample ID: 400-231397-7

No Detections.

Client Sample ID: TB-ROX-010523-8011-B — Lab Sample ID: 400-231397-8

No Detections.

Client Sample ID: P93A-ROX-010523-EB — Lab Sample ID: 400-231397-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	3.6	J	25	2.6	ug/L	1		8260B	Total/NA

Client Sample ID: P93A-ROX-010523 — Lab Sample ID: 400-231397-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene - RA	0.29		0.19	0.033	ug/L	1		8270D LL	Total/NA

Client Sample ID: P93C-ROX-010523 — Lab Sample ID: 400-231397-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	1.9		1.0	0.22	ug/L	1		8260B	Total/NA
Fluoranthene	0.16	J	0.19	0.066	ug/L	1		8270D LL	Total/NA
Pyrene	0.072	J	0.19	0.039	ug/L	1		8270D LL	Total/NA

Client Sample ID: P93D-ROX-010523 — Lab Sample ID: 400-231397-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	0.61	J	1.0	0.22	ug/L	1		8260B	Total/NA
Benzo[a]anthracene	0.22		0.19	0.043	ug/L	1		8270D LL	Total/NA
Benzo[b]fluoranthene	0.33		0.19	0.032	ug/L	1		8270D LL	Total/NA
Benzo[k]fluoranthene	0.26		0.19	0.094	ug/L	1		8270D LL	Total/NA
Chrysene	0.21		0.19	0.070	ug/L	1		8270D LL	Total/NA
Fluoranthene	0.18	J	0.19	0.064	ug/L	1		8270D LL	Total/NA
Pyrene	0.15	J	0.19	0.038	ug/L	1		8270D LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: MW28-ROX-010523 — Lab Sample ID: 400-231397-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.38	J	1.0	0.13	ug/L	1		8260B	Total/NA
Methyl tert-butyl ether	2.6		1.0	0.22	ug/L	1		8260B	Total/NA
Diethyl phthalate	1.0	J	9.8	0.23	ug/L	1		8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: TB-ROX-010523-8260-A
Date Collected: 01/05/23 12:00
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231397-1
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/10/23 11:43	1
Acrolein	ND		20	3.3	ug/L			01/10/23 11:43	1
Acrylonitrile	ND		10	2.8	ug/L			01/10/23 11:43	1
Benzene	ND		1.0	0.13	ug/L			01/10/23 11:43	1
Bromobenzene	ND		1.0	0.54	ug/L			01/10/23 11:43	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/10/23 11:43	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/10/23 11:43	1
Bromoform	ND		5.0	0.25	ug/L			01/10/23 11:43	1
Bromomethane	ND		1.0	0.98	ug/L			01/10/23 11:43	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/10/23 11:43	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/10/23 11:43	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/10/23 11:43	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/10/23 11:43	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/10/23 11:43	1
Chloroethane	ND		1.0	0.76	ug/L			01/10/23 11:43	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/10/23 11:43	1
Chloroform	ND		1.0	1.0	ug/L			01/10/23 11:43	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/10/23 11:43	1
Chloromethane	ND		1.0	0.32	ug/L			01/10/23 11:43	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/10/23 11:43	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/10/23 11:43	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/10/23 11:43	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/10/23 11:43	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/10/23 11:43	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/10/23 11:43	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/10/23 11:43	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/10/23 11:43	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/10/23 11:43	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 11:43	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 11:43	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 11:43	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/10/23 11:43	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/10/23 11:43	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/10/23 11:43	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/10/23 11:43	1
2-Hexanone	ND		25	1.4	ug/L			01/10/23 11:43	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/10/23 11:43	1
Methylene bromide	ND		5.0	0.22	ug/L			01/10/23 11:43	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/10/23 11:43	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/10/23 11:43	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/10/23 11:43	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/10/23 11:43	1
Naphthalene	ND		5.0	3.0	ug/L			01/10/23 11:43	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/10/23 11:43	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/10/23 11:43	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/10/23 11:43	1
o-Xylene	ND		5.0	0.60	ug/L			01/10/23 11:43	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/10/23 11:43	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/10/23 11:43	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: TB-ROX-010523-8260-A
Date Collected: 01/05/23 12:00
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231397-1
Matrix: Water

Method: SW846 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			01/10/23 11:43	1
Styrene	ND		1.0	1.0	ug/L			01/10/23 11:43	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/10/23 11:43	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/10/23 11:43	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/10/23 11:43	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/10/23 11:43	1
Toluene	ND		1.0	0.41	ug/L			01/10/23 11:43	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/10/23 11:43	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/10/23 11:43	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/10/23 11:43	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/10/23 11:43	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/10/23 11:43	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/10/23 11:43	1
Trichloroethene	ND		1.0	0.15	ug/L			01/10/23 11:43	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/10/23 11:43	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/10/23 11:43	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/10/23 11:43	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/10/23 11:43	1
Vinyl acetate	ND		25	0.93	ug/L			01/10/23 11:43	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/10/23 11:43	1
Xylenes, Total	ND		10	1.6	ug/L			01/10/23 11:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*		*72 - 119*		*01/10/23 11:43*	*1*
Dibromofluoromethane	*99*		*75 - 126*		*01/10/23 11:43*	*1*
Toluene-d8 (Surr)	*95*		*64 - 132*		*01/10/23 11:43*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: TB-ROX-010523-8011-A
Date Collected: 01/05/23 12:00
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231397-2
Matrix: Water

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.030	0.017	ug/L		01/12/23 13:01	01/13/23 10:49	1
1,2-D bromoethane	ND	*+	0.020	0.015	ug/L		01/12/23 13:01	01/13/23 10:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*	*p*	*51 - 149*	*01/12/23 13:01*	*01/13/23 10:49*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: MW16-ROX-010523-EB
Date Collected: 01/05/23 08:30
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-3
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/10/23 09:27	1
Acrolein	ND		20	3.3	ug/L			01/10/23 09:27	1
Acrylonitrile	ND		10	2.8	ug/L			01/10/23 09:27	1
Benzene	ND		1.0	0.13	ug/L			01/10/23 09:27	1
Bromobenzene	ND		1.0	0.54	ug/L			01/10/23 09:27	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/10/23 09:27	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/10/23 09:27	1
Bromoform	ND		5.0	0.25	ug/L			01/10/23 09:27	1
Bromomethane	ND		1.0	0.98	ug/L			01/10/23 09:27	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/10/23 09:27	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/10/23 09:27	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/10/23 09:27	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/10/23 09:27	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/10/23 09:27	1
Chloroethane	ND		1.0	0.76	ug/L			01/10/23 09:27	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/10/23 09:27	1
Chloroform	ND		1.0	1.0	ug/L			01/10/23 09:27	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/10/23 09:27	1
Chloromethane	ND		1.0	0.32	ug/L			01/10/23 09:27	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/10/23 09:27	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/10/23 09:27	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/10/23 09:27	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/10/23 09:27	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/10/23 09:27	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/10/23 09:27	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/10/23 09:27	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/10/23 09:27	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/10/23 09:27	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 09:27	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 09:27	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 09:27	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/10/23 09:27	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/10/23 09:27	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/10/23 09:27	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/10/23 09:27	1
2-Hexanone	ND		25	1.4	ug/L			01/10/23 09:27	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/10/23 09:27	1
Methylene bromide	ND		5.0	0.22	ug/L			01/10/23 09:27	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/10/23 09:27	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/10/23 09:27	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/10/23 09:27	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/10/23 09:27	1
Naphthalene	ND		5.0	3.0	ug/L			01/10/23 09:27	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/10/23 09:27	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/10/23 09:27	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/10/23 09:27	1
o-Xylene	ND		5.0	0.60	ug/L			01/10/23 09:27	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/10/23 09:27	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/10/23 09:27	1

Client Sample ID: MW16-ROX-010523-EB
Date Collected: 01/05/23 08:30
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-3
Matrix: Water

Method: SW846 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			01/10/23 09:27	1
Styrene	ND		1.0	1.0	ug/L			01/10/23 09:27	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/10/23 09:27	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/10/23 09:27	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/10/23 09:27	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/10/23 09:27	1
Toluene	ND		1.0	0.41	ug/L			01/10/23 09:27	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/10/23 09:27	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/10/23 09:27	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/10/23 09:27	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/10/23 09:27	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/10/23 09:27	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/10/23 09:27	1
Trichloroethene	ND		1.0	0.15	ug/L			01/10/23 09:27	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/10/23 09:27	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/10/23 09:27	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/10/23 09:27	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/10/23 09:27	1
Vinyl acetate	ND		25	0.93	ug/L			01/10/23 09:27	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/10/23 09:27	1
Xylenes, Total	ND		10	1.6	ug/L			01/10/23 09:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*103*		*72 - 119*		*01/10/23 09:27*	*1*
Dibromofluoromethane	*101*		*75 - 126*		*01/10/23 09:27*	*1*
Toluene-d8 (Surr)	*96*		*64 - 132*		*01/10/23 09:27*	*1*

Method: SW846 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	0.034	ug/L		01/09/23 10:42	01/10/23 17:48	1
Acenaphthylene	ND		0.21	0.047	ug/L		01/09/23 10:42	01/10/23 17:48	1
Anthracene	ND		0.21	0.034	ug/L		01/09/23 10:42	01/10/23 17:48	1
Benzo[a]anthracene	ND		0.21	0.048	ug/L		01/09/23 10:42	01/10/23 17:48	1
Benzo[a]pyrene	ND		0.21	0.044	ug/L		01/09/23 10:42	01/10/23 17:48	1
Benzo[b]fluoranthene	ND		0.21	0.036	ug/L		01/09/23 10:42	01/10/23 17:48	1
Benzo[g,h,i]perylene	ND		0.21	0.14	ug/L		01/09/23 10:42	01/10/23 17:48	1
Benzo[k]fluoranthene	ND		0.21	0.11	ug/L		01/09/23 10:42	01/10/23 17:48	1
Chrysene	ND		0.21	0.078	ug/L		01/09/23 10:42	01/10/23 17:48	1
Dibenz(a,h)anthracene	ND		0 21	0 053	ug/L		01/09/23 10 42	01/10/23 17 48	1
Fluoranthene	ND		0.21	0.071	ug/L		01/09/23 10:42	01/10/23 17:48	1
Fluorene	ND		0.21	0.12	ug/L		01/09/23 10:42	01/10/23 17:48	1
Indeno[1,2,3-cd]pyrene	ND		0.21	0.045	ug/L		01/09/23 10:42	01/10/23 17:48	1
1-Methylnaphthalene	ND		0.21	0.078	ug/L		01/09/23 10:42	01/10/23 17:48	1
2-Methylnaphthalene	ND		0.21	0.063	ug/L		01/09/23 10:42	01/10/23 17:48	1
Phenanthrene	ND		0.21	0.038	ug/L		01/09/23 10:42	01/10/23 17:48	1
Pyrene	ND		0.21	0.042	ug/L		01/09/23 10:42	01/10/23 17:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*105*		*15 - 122*	*01/09/23 10:42*	*01/10/23 17:48*	*1*
Nitrobenzene-d5	*69*		*19 - 130*	*01/09/23 10:42*	*01/10/23 17:48*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: MW16-ROX-010523-EB
Date Collected: 01/05/23 08:30
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-3
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*125*		*33 - 138*	*01/09/23 10:42*	*01/10/23 17:48*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		11	4.0	ug/L		01/09/23 10:42	01/10/23 18:24	1
Benzenethiol	ND	*-	11	1.8	ug/L		01/09/23 10:42	01/10/23 18:24	1
Benzoic acid	ND		32	7.7	ug/L		01/09/23 10:42	01/10/23 18:24	1
Benzyl alcohol	ND		11	2.1	ug/L		01/09/23 10:42	01/10/23 18:24	1
Bis(2-chloroethoxy)methane	ND		11	0.17	ug/L		01/09/23 10:42	01/10/23 18:24	1
Bis(2-chloroethyl)ether	ND		11	2.8	ug/L		01/09/23 10:42	01/10/23 18:24	1
bis (2-chloroisopropyl) ether	ND		11	0.17	ug/L		01/09/23 10:42	01/10/23 18:24	1
Bis(2-ethylhexyl) phthalate	ND		11	5.3	ug/L		01/09/23 10:42	01/10/23 18:24	1
4-Bromophenyl phenyl ether	ND		11	0.21	ug/L		01/09/23 10:42	01/10/23 18:24	1
Butyl benzyl phthalate	ND		11	0.20	ug/L		01/09/23 10:42	01/10/23 18:24	1
4-Chloroaniline	ND		11	3.6	ug/L		01/09/23 10:42	01/10/23 18:24	1
4-Chloro-3-methylphenol	ND		11	4.0	ug/L		01/09/23 10:42	01/10/23 18:24	1
2-Chloronaphthalene	ND		11	0.15	ug/L		01/09/23 10:42	01/10/23 18:24	1
2-Chlorophenol	ND		11	2.3	ug/L		01/09/23 10:42	01/10/23 18:24	1
4-Chlorophenyl phenyl ether	ND		11	2.1	ug/L		01/09/23 10:42	01/10/23 18:24	1
Dibenz[a,h]acridine	ND		11	1.1	ug/L		01/09/23 10:42	01/10/23 18:24	1
Dibenzofuran	ND		11	0.18	ug/L		01/09/23 10:42	01/10/23 18:24	1
3,3'-Dichlorobenzidine	ND		11	2.7	ug/L		01/09/23 10:42	01/10/23 18:24	1
2,4-Dichlorophenol	ND		11	3.2	ug/L		01/09/23 10:42	01/10/23 18:24	1
Diethyl phthalate	ND		11	0.25	ug/L		01/09/23 10:42	01/10/23 18:24	1
2,4-Dimethylphenol	ND		11	3.7	ug/L		01/09/23 10:42	01/10/23 18:24	1
Dimethyl phthalate	ND		11	0.18	ug/L		01/09/23 10:42	01/10/23 18:24	1
Di-n-butyl phthalate	ND		11	2.8	ug/L		01/09/23 10:42	01/10/23 18:24	1
4,6-Dinitro-ortho-cresol	ND		11	1.7	ug/L		01/09/23 10:42	01/10/23 18:24	1
2,4-Dinitrophenol	ND		32	3.6	ug/L		01/09/23 10:42	01/10/23 18:24	1
2,4-Dinitrotoluene	ND		11	2.0	ug/L		01/09/23 10:42	01/10/23 18:24	1
2,6-Dinitrotoluene	ND		11	2.0	ug/L		01/09/23 10:42	01/10/23 18:24	1
Di-n-octyl phthalate	ND		11	0.18	ug/L		01/09/23 10:42	01/10/23 18:24	1
1,4-Dioxane	ND		11	1.1	ug/L		01/09/23 10:42	01/10/23 18:24	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		11	1.1	ug/L		01/09/23 10:42	01/10/23 18:24	1
Hexachlorobenzene	ND		11	0.18	ug/L		01/09/23 10:42	01/10/23 18:24	1
Hexachlorocyclopentadiene	ND		21	2.7	ug/L		01/09/23 10:42	01/10/23 18:24	1
Hexachloroethane	ND		11	4.4	ug/L		01/09/23 10:42	01/10/23 18:24	1
Indene	ND		11	1.1	ug/L		01/09/23 10:42	01/10/23 18:24	1
Isophorone	ND		11	0.15	ug/L		01/09/23 10:42	01/10/23 18:24	1
2-Methylphenol	ND		11	1.9	ug/L		01/09/23 10:42	01/10/23 18:24	1
3 & 4 Methylphenol	ND		21	0.41	ug/L		01/09/23 10:42	01/10/23 18:24	1
2-Nitroaniline	ND		11	2.3	ug/L		01/09/23 10:42	01/10/23 18:24	1
3-Nitroaniline	ND		11	1.9	ug/L		01/09/23 10:42	01/10/23 18:24	1
4-Nitroaniline	ND		11	1.6	ug/L		01/09/23 10:42	01/10/23 18:24	1
Nitrobenzene	ND		11	0.14	ug/L		01/09/23 10:42	01/10/23 18:24	1
2-Nitrophenol	ND		11	5.5	ug/L		01/09/23 10:42	01/10/23 18:24	1
4-Nitrophenol	ND		11	2.2	ug/L		01/09/23 10:42	01/10/23 18:24	1
N-Nitrosodimethylamine	ND		11	3.7	ug/L		01/09/23 10:42	01/10/23 18:24	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: MW16-ROX-010523-EB

Lab Sample ID: 400-231397-3

Date Collected: 01/05/23 08:30

Matrix: Water

Date Received: 01/06/23 08:58

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		11	3.5	ug/L		01/09/23 10:42	01/10/23 18:24	1
N-Nitrosodiphenylamine	ND		11	0.19	ug/L		01/09/23 10:42	01/10/23 18:24	1
Pentachlorophenol	ND		21	1.5	ug/L		01/09/23 10:42	01/10/23 18:24	1
Phenol	ND		11	2.7	ug/L		01/09/23 10:42	01/10/23 18:24	1
Pyridine	ND		11	3.4	ug/L		01/09/23 10:42	01/10/23 18:24	1
Quinoline	ND	*-	11	4.7	ug/L		01/09/23 10:42	01/10/23 18:24	1
2,4,5-Trichlorophenol	ND		11	3.9	ug/L		01/09/23 10:42	01/10/23 18:24	1
2,4,6-Trichlorophenol	ND		11	3.7	ug/L		01/09/23 10:42	01/10/23 18:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*106*		*46 - 124*	*01/09/23 10:42*	*01/10/23 18:24*	*1*
2-Fluorophenol	*36*		*13 - 113*	*01/09/23 10:42*	*01/10/23 18:24*	*1*
Nitrobenzene-d5	*72*		*36 - 126*	*01/09/23 10:42*	*01/10/23 18:24*	*1*
Phenol-d5	*61*		*17 - 127*	*01/09/23 10:42*	*01/10/23 18:24*	*1*
Terphenyl-d14	*125*		*44 - 149*	*01/09/23 10:42*	*01/10/23 18:24*	*1*
2,4,6-Tribromophenol	*90*		*26 - 150*	*01/09/23 10:42*	*01/10/23 18:24*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.030	0.017	ug/L		01/12/23 13:01	01/13/23 11:10	1
1,2-D bromoethane	ND	*+	0.020	0.015	ug/L		01/12/23 13:01	01/13/23 11:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*111*	*p*	*51 - 149*	*01/12/23 13:01*	*01/13/23 11:10*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: MW16-ROX-010523
Date Collected: 01/05/23 09:45
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-4
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/10/23 12:29	1
Acrolein	ND		20	3.3	ug/L			01/10/23 12:29	1
Acrylonitrile	ND		10	2.8	ug/L			01/10/23 12:29	1
Benzene	ND		1.0	0.13	ug/L			01/10/23 12:29	1
Bromobenzene	ND		1.0	0.54	ug/L			01/10/23 12:29	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/10/23 12:29	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/10/23 12:29	1
Bromoform	ND		5.0	0.25	ug/L			01/10/23 12:29	1
Bromomethane	ND		1.0	0.98	ug/L			01/10/23 12:29	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/10/23 12:29	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/10/23 12:29	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/10/23 12:29	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/10/23 12:29	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/10/23 12:29	1
Chloroethane	ND		1.0	0.76	ug/L			01/10/23 12:29	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/10/23 12:29	1
Chloroform	ND		1.0	1.0	ug/L			01/10/23 12:29	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/10/23 12:29	1
Chloromethane	ND		1.0	0.32	ug/L			01/10/23 12:29	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/10/23 12:29	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/10/23 12:29	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/10/23 12:29	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/10/23 12:29	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/10/23 12:29	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/10/23 12:29	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/10/23 12:29	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/10/23 12:29	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/10/23 12:29	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 12:29	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 12:29	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 12:29	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/10/23 12:29	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/10/23 12:29	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/10/23 12:29	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/10/23 12:29	1
2-Hexanone	ND		25	1.4	ug/L			01/10/23 12:29	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/10/23 12:29	1
Methylene bromide	ND		5.0	0.22	ug/L			01/10/23 12:29	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/10/23 12:29	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/10/23 12:29	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/10/23 12:29	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/10/23 12:29	1
Naphthalene	ND		5.0	3.0	ug/L			01/10/23 12:29	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/10/23 12:29	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/10/23 12:29	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/10/23 12:29	1
o-Xylene	ND		5.0	0.60	ug/L			01/10/23 12:29	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/10/23 12:29	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/10/23 12:29	1

Client Sample ID: MW16-ROX-010523
Date Collected: 01/05/23 09:45
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-4
Matrix: Water

Method: SW846 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			01/10/23 12:29	1
Styrene	ND		1.0	1.0	ug/L			01/10/23 12:29	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/10/23 12:29	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/10/23 12:29	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/10/23 12:29	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/10/23 12:29	1
Toluene	ND		1.0	0.41	ug/L			01/10/23 12:29	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/10/23 12:29	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/10/23 12:29	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/10/23 12:29	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/10/23 12:29	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/10/23 12:29	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/10/23 12:29	1
Trichloroethene	ND		1.0	0.15	ug/L			01/10/23 12:29	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/10/23 12:29	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/10/23 12:29	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/10/23 12:29	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/10/23 12:29	1
Vinyl acetate	ND		25	0.93	ug/L			01/10/23 12:29	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/10/23 12:29	1
Xylenes, Total	ND		10	1.6	ug/L			01/10/23 12:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*		*72 - 119*		*01/10/23 12:29*	*1*
Dibromofluoromethane	*100*		*75 - 126*		*01/10/23 12:29*	*1*
Toluene-d8 (Surr)	*95*		*64 - 132*		*01/10/23 12:29*	*1*

Method: SW846 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	0.034	ug/L		01/09/23 10:42	01/10/23 18:05	1
Acenaphthylene	ND		0.21	0.048	ug/L		01/09/23 10:42	01/10/23 18:05	1
Anthracene	ND		0.21	0.034	ug/L		01/09/23 10:42	01/10/23 18:05	1
Benzo[a]anthracene	ND		0.21	0.049	ug/L		01/09/23 10:42	01/10/23 18:05	1
Benzo[a]pyrene	ND		0.21	0.045	ug/L		01/09/23 10:42	01/10/23 18:05	1
Benzo[b]fluoranthene	ND		0.21	0.036	ug/L		01/09/23 10:42	01/10/23 18:05	1
Benzo[g,h,i]perylene	ND		0.21	0.14	ug/L		01/09/23 10:42	01/10/23 18:05	1
Benzo[k]fluoranthene	ND		0.21	0.11	ug/L		01/09/23 10:42	01/10/23 18:05	1
Chrysene	ND		0.21	0.078	ug/L		01/09/23 10:42	01/10/23 18:05	1
Dibenz(a,h)anthracene	ND		0 21	0 053	ug/L		01/09/23 10 42	01/10/23 18 05	1
Fluoranthene	ND		0.21	0.072	ug/L		01/09/23 10:42	01/10/23 18:05	1
Fluorene	ND		0.21	0.12	ug/L		01/09/23 10:42	01/10/23 18:05	1
Indeno[1,2,3-cd]pyrene	ND		0.21	0.046	ug/L		01/09/23 10:42	01/10/23 18:05	1
1-Methylnaphthalene	ND		0.21	0.078	ug/L		01/09/23 10:42	01/10/23 18:05	1
2-Methylnaphthalene	**0.11**	**J**	0.21	0.064	ug/L		01/09/23 10:42	01/10/23 18:05	1
Phenanthrene	ND		0.21	0.038	ug/L		01/09/23 10:42	01/10/23 18:05	1
Pyrene	ND		0.21	0.042	ug/L		01/09/23 10:42	01/10/23 18:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*96*		*15 - 122*	*01/09/23 10:42*	*01/10/23 18:05*	*1*
Nitrobenzene-d5	*62*		*19 - 130*	*01/09/23 10:42*	*01/10/23 18:05*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: MW16-ROX-010523
Date Collected: 01/05/23 09:45
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-4
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*120*		*33 - 138*	*01/09/23 10:42*	*01/10/23 18:05*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		11	4.0	ug/L		01/09/23 10:42	01/10/23 18:49	1
Benzenethiol	ND	*-	11	1.8	ug/L		01/09/23 10:42	01/10/23 18:49	1
Benzoic acid	ND		32	7.7	ug/L		01/09/23 10:42	01/10/23 18:49	1
Benzyl alcohol	ND		11	2.1	ug/L		01/09/23 10:42	01/10/23 18:49	1
Bis(2-chloroethoxy)methane	ND		11	0.17	ug/L		01/09/23 10:42	01/10/23 18:49	1
Bis(2-chloroethyl)ether	ND		11	2.9	ug/L		01/09/23 10:42	01/10/23 18:49	1
bis (2-chloroisopropyl) ether	ND		11	0.17	ug/L		01/09/23 10:42	01/10/23 18:49	1
Bis(2-ethylhexyl) phthalate	ND		11	5.3	ug/L		01/09/23 10:42	01/10/23 18:49	1
4-Bromophenyl phenyl ether	ND		11	0.21	ug/L		01/09/23 10:42	01/10/23 18:49	1
Butyl benzyl phthalate	ND		11	0.20	ug/L		01/09/23 10:42	01/10/23 18:49	1
4-Chloroaniline	ND		11	3.6	ug/L		01/09/23 10:42	01/10/23 18:49	1
4-Chloro-3-methylphenol	ND		11	4.0	ug/L		01/09/23 10:42	01/10/23 18:49	1
2-Chloronaphthalene	ND		11	0.15	ug/L		01/09/23 10:42	01/10/23 18:49	1
2-Chlorophenol	ND		11	2.3	ug/L		01/09/23 10:42	01/10/23 18:49	1
4-Chlorophenyl phenyl ether	ND		11	2.1	ug/L		01/09/23 10:42	01/10/23 18:49	1
Dibenz[a,h]acridine	ND		11	1.1	ug/L		01/09/23 10:42	01/10/23 18:49	1
Dibenzofuran	ND		11	0.18	ug/L		01/09/23 10:42	01/10/23 18:49	1
3,3'-Dichlorobenzidine	ND		11	2.8	ug/L		01/09/23 10:42	01/10/23 18:49	1
2,4-Dichlorophenol	ND		11	3.2	ug/L		01/09/23 10:42	01/10/23 18:49	1
Diethyl phthalate	ND		11	0.25	ug/L		01/09/23 10:42	01/10/23 18:49	1
2,4-Dimethylphenol	ND		11	3.7	ug/L		01/09/23 10:42	01/10/23 18:49	1
Dimethyl phthalate	ND		11	0.18	ug/L		01/09/23 10:42	01/10/23 18:49	1
Di-n-butyl phthalate	ND		11	2.9	ug/L		01/09/23 10:42	01/10/23 18:49	1
4,6-Dinitro-ortho-cresol	ND		11	1.7	ug/L		01/09/23 10:42	01/10/23 18:49	1
2,4-Dinitrophenol	ND		32	3.6	ug/L		01/09/23 10:42	01/10/23 18:49	1
2,4-Dinitrotoluene	ND		11	2.0	ug/L		01/09/23 10:42	01/10/23 18:49	1
2,6-Dinitrotoluene	ND		11	2.0	ug/L		01/09/23 10:42	01/10/23 18:49	1
Di-n-octyl phthalate	ND		11	0.18	ug/L		01/09/23 10:42	01/10/23 18:49	1
1,4-Dioxane	ND		11	1.1	ug/L		01/09/23 10:42	01/10/23 18:49	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		11	1.1	ug/L		01/09/23 10:42	01/10/23 18:49	1
Hexachlorobenzene	ND		11	0.18	ug/L		01/09/23 10:42	01/10/23 18:49	1
Hexachlorocyclopentadiene	ND		21	2.8	ug/L		01/09/23 10:42	01/10/23 18:49	1
Hexachloroethane	ND		11	4.5	ug/L		01/09/23 10:42	01/10/23 18:49	1
Indene	ND		11	1.1	ug/L		01/09/23 10:42	01/10/23 18:49	1
Isophorone	ND		11	0.15	ug/L		01/09/23 10:42	01/10/23 18:49	1
2-Methylphenol	ND		11	1.9	ug/L		01/09/23 10:42	01/10/23 18:49	1
3 & 4 Methylphenol	ND		21	0.41	ug/L		01/09/23 10:42	01/10/23 18:49	1
2-Nitroaniline	ND		11	2.3	ug/L		01/09/23 10:42	01/10/23 18:49	1
3-Nitroaniline	ND		11	1.9	ug/L		01/09/23 10:42	01/10/23 18:49	1
4-Nitroaniline	ND		11	1.6	ug/L		01/09/23 10:42	01/10/23 18:49	1
Nitrobenzene	ND		11	0.14	ug/L		01/09/23 10:42	01/10/23 18:49	1
2-Nitrophenol	ND		11	5.5	ug/L		01/09/23 10:42	01/10/23 18:49	1
4-Nitrophenol	ND		11	2.2	ug/L		01/09/23 10:42	01/10/23 18:49	1
N-Nitrosodimethylamine	ND		11	3.7	ug/L		01/09/23 10:42	01/10/23 18:49	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: MW16-ROX-010523
Date Collected: 01/05/23 09:45
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-4
Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		11	3.5	ug/L		01/09/23 10:42	01/10/23 18:49	1
N-Nitrosodiphenylamine	ND		11	0.19	ug/L		01/09/23 10:42	01/10/23 18:49	1
Pentachlorophenol	ND		21	1.5	ug/L		01/09/23 10:42	01/10/23 18:49	1
Phenol	ND		11	2.8	ug/L		01/09/23 10:42	01/10/23 18:49	1
Pyridine	ND		11	3.4	ug/L		01/09/23 10:42	01/10/23 18:49	1
Quinoline	ND	*-	11	4.8	ug/L		01/09/23 10:42	01/10/23 18:49	1
2,4,5-Trichlorophenol	ND		11	3.9	ug/L		01/09/23 10:42	01/10/23 18:49	1
2,4,6-Trichlorophenol	ND		11	3.7	ug/L		01/09/23 10:42	01/10/23 18:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*97*		*46 - 124*	*01/09/23 10:42*	*01/10/23 18:49*	*1*
2-Fluorophenol	*8*	*S1-*	*13 - 113*	*01/09/23 10:42*	*01/10/23 18:49*	*1*
Nitrobenzene-d5	*64*		*36 - 126*	*01/09/23 10:42*	*01/10/23 18:49*	*1*
Phenol-d5	*27*		*17 - 127*	*01/09/23 10:42*	*01/10/23 18:49*	*1*
Terphenyl-d14	*124*		*44 - 149*	*01/09/23 10:42*	*01/10/23 18:49*	*1*
2,4,6-Tribromophenol	*53*		*26 - 150*	*01/09/23 10:42*	*01/10/23 18:49*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.030	0.017	ug/L		01/12/23 13:01	01/13/23 11:30	1
1,2-D bromoethane	ND	*+	0.020	0.015	ug/L		01/12/23 13:01	01/13/23 11:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*105*	*p*	*51 - 149*	*01/12/23 13:01*	*01/13/23 11:30*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: ROST3MW-ROX-010523
Date Collected: 01/05/23 10:50
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-5
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/10/23 12:53	1
Acrolein	ND		20	3.3	ug/L			01/10/23 12:53	1
Acrylonitrile	ND		10	2.8	ug/L			01/10/23 12:53	1
Benzene	ND		1.0	0.13	ug/L			01/10/23 12:53	1
Bromobenzene	ND		1.0	0.54	ug/L			01/10/23 12:53	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/10/23 12:53	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/10/23 12:53	1
Bromoform	ND		5.0	0.25	ug/L			01/10/23 12:53	1
Bromomethane	ND		1.0	0.98	ug/L			01/10/23 12:53	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/10/23 12:53	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/10/23 12:53	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/10/23 12:53	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/10/23 12:53	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/10/23 12:53	1
Chloroethane	ND		1.0	0.76	ug/L			01/10/23 12:53	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/10/23 12:53	1
Chloroform	ND		1.0	1.0	ug/L			01/10/23 12:53	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/10/23 12:53	1
Chloromethane	ND		1.0	0.32	ug/L			01/10/23 12:53	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/10/23 12:53	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/10/23 12:53	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/10/23 12:53	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/10/23 12:53	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/10/23 12:53	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/10/23 12:53	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/10/23 12:53	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/10/23 12:53	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/10/23 12:53	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 12:53	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 12:53	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 12:53	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/10/23 12:53	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/10/23 12:53	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/10/23 12:53	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/10/23 12:53	1
2-Hexanone	ND		25	1.4	ug/L			01/10/23 12:53	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/10/23 12:53	1
Methylene bromide	ND		5.0	0.22	ug/L			01/10/23 12:53	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/10/23 12:53	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/10/23 12:53	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/10/23 12:53	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/10/23 12:53	1
Naphthalene	ND		5.0	3.0	ug/L			01/10/23 12:53	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/10/23 12:53	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/10/23 12:53	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/10/23 12:53	1
o-Xylene	ND		5.0	0.60	ug/L			01/10/23 12:53	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/10/23 12:53	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/10/23 12:53	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: ROST3MW-ROX-010523

Date Collected: 01/05/23 10:50
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-5

Matrix: Water

Method: SW846 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			01/10/23 12:53	1
Styrene	ND		1.0	1.0	ug/L			01/10/23 12:53	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/10/23 12:53	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/10/23 12:53	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/10/23 12:53	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/10/23 12:53	1
Toluene	ND		1.0	0.41	ug/L			01/10/23 12:53	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/10/23 12:53	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/10/23 12:53	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/10/23 12:53	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/10/23 12:53	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/10/23 12:53	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/10/23 12:53	1
Trichloroethene	ND		1.0	0.15	ug/L			01/10/23 12:53	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/10/23 12:53	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/10/23 12:53	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/10/23 12:53	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/10/23 12:53	1
Vinyl acetate	ND		25	0.93	ug/L			01/10/23 12:53	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/10/23 12:53	1
Xylenes, Total	ND		10	1.6	ug/L			01/10/23 12:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*103*		*72 - 119*		*01/10/23 12:53*	*1*
Dibromofluoromethane	*102*		*75 - 126*		*01/10/23 12:53*	*1*
Toluene-d8 (Surr)	*96*		*64 - 132*		*01/10/23 12:53*	*1*

Method: SW846 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	0.033	ug/L		01/09/23 10:42	01/10/23 18:22	1
Acenaphthylene	ND		0.21	0.047	ug/L		01/09/23 10:42	01/10/23 18:22	1
Anthracene	ND		0.21	0.033	ug/L		01/09/23 10:42	01/10/23 18:22	1
Benzo[a]anthracene	ND		0.21	0.048	ug/L		01/09/23 10:42	01/10/23 18:22	1
Benzo[a]pyrene	ND		0.21	0.044	ug/L		01/09/23 10:42	01/10/23 18:22	1
Benzo[b]fluoranthene	ND		0.21	0.035	ug/L		01/09/23 10:42	01/10/23 18:22	1
Benzo[g,h,i]perylene	ND		0.21	0.13	ug/L		01/09/23 10:42	01/10/23 18:22	1
Benzo[k]fluoranthene	ND		0.21	0.10	ug/L		01/09/23 10:42	01/10/23 18:22	1
Chrysene	ND		0.21	0.077	ug/L		01/09/23 10:42	01/10/23 18:22	1
Dibenz(a,h)anthracene	ND		0 21	0 052	ug/L		01/09/23 10 42	01/10/23 18 22	1
Fluoranthene	ND		0.21	0.071	ug/L		01/09/23 10:42	01/10/23 18:22	1
Fluorene	ND		0.21	0.11	ug/L		01/09/23 10:42	01/10/23 18:22	1
Indeno[1,2,3-cd]pyrene	ND		0.21	0.045	ug/L		01/09/23 10:42	01/10/23 18:22	1
1-Methylnaphthalene	**0.22**		0.21	0.077	ug/L		01/09/23 10:42	01/10/23 18:22	1
2-Methylnaphthalene	ND		0.21	0.062	ug/L		01/09/23 10:42	01/10/23 18:22	1
Phenanthrene	ND		0.21	0.037	ug/L		01/09/23 10:42	01/10/23 18:22	1
Pyrene	ND		0.21	0.041	ug/L		01/09/23 10:42	01/10/23 18:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*77*		*15 - 122*	*01/09/23 10:42*	*01/10/23 18:22*	*1*
Nitrobenzene-d5	*51*		*19 - 130*	*01/09/23 10:42*	*01/10/23 18:22*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: ROST3MW-ROX-010523
Date Collected: 01/05/23 10:50
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-5
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	80		33 - 138	01/09/23 10:42	01/10/23 18:22	1

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.9	ug/L		01/09/23 10:42	01/10/23 19:15	1
Benzenethiol	ND	*-	10	1.8	ug/L		01/09/23 10:42	01/10/23 19:15	1
Benzoic acid	ND		31	7.6	ug/L		01/09/23 10:42	01/10/23 19:15	1
Benzyl alcohol	ND		10	2.1	ug/L		01/09/23 10:42	01/10/23 19:15	1
Bis(2-chloroethoxy)methane	ND		10	0.17	ug/L		01/09/23 10:42	01/10/23 19:15	1
Bis(2-chloroethyl)ether	ND		10	2.8	ug/L		01/09/23 10:42	01/10/23 19:15	1
bis (2-chloroisopropyl) ether	ND		10	0.17	ug/L		01/09/23 10:42	01/10/23 19:15	1
Bis(2-ethylhexyl) phthalate	ND		10	5.2	ug/L		01/09/23 10:42	01/10/23 19:15	1
4-Bromophenyl phenyl ether	ND		10	0.21	ug/L		01/09/23 10:42	01/10/23 19:15	1
Butyl benzyl phthalate	ND		10	0.20	ug/L		01/09/23 10:42	01/10/23 19:15	1
4-Chloroaniline	ND		10	3.5	ug/L		01/09/23 10:42	01/10/23 19:15	1
4-Chloro-3-methylphenol	ND		10	3.9	ug/L		01/09/23 10:42	01/10/23 19:15	1
2-Chloronaphthalene	ND		10	0.15	ug/L		01/09/23 10:42	01/10/23 19:15	1
2-Chlorophenol	ND		10	2.3	ug/L		01/09/23 10:42	01/10/23 19:15	1
4-Chlorophenyl phenyl ether	ND		10	2.1	ug/L		01/09/23 10:42	01/10/23 19:15	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/09/23 10:42	01/10/23 19:15	1
Dibenzofuran	ND		10	0.18	ug/L		01/09/23 10:42	01/10/23 19:15	1
3,3'-Dichlorobenzidine	ND		10	2.7	ug/L		01/09/23 10:42	01/10/23 19:15	1
2,4-Dichlorophenol	ND		10	3.1	ug/L		01/09/23 10:42	01/10/23 19:15	1
Diethyl phthalate	ND		10	0.25	ug/L		01/09/23 10:42	01/10/23 19:15	1
2,4-Dimethylphenol	ND		10	3.6	ug/L		01/09/23 10:42	01/10/23 19:15	1
Dimethyl phthalate	ND		10	0.18	ug/L		01/09/23 10:42	01/10/23 19:15	1
Di-n-butyl phthalate	ND		10	2.8	ug/L		01/09/23 10:42	01/10/23 19:15	1
4,6-Dinitro-ortho-cresol	ND		10	1.7	ug/L		01/09/23 10:42	01/10/23 19:15	1
2,4-Dinitrophenol	ND		31	3.5	ug/L		01/09/23 10:42	01/10/23 19:15	1
2,4-Dinitrotoluene	ND		10	2.0	ug/L		01/09/23 10:42	01/10/23 19:15	1
2,6-Dinitrotoluene	ND		10	2.0	ug/L		01/09/23 10:42	01/10/23 19:15	1
Di-n-octyl phthalate	ND		10	0.18	ug/L		01/09/23 10:42	01/10/23 19:15	1
1,4-Dioxane	ND		10	1.0	ug/L		01/09/23 10:42	01/10/23 19:15	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/09/23 10:42	01/10/23 19:15	1
Hexachlorobenzene	ND		10	0.18	ug/L		01/09/23 10:42	01/10/23 19:15	1
Hexachlorocyclopentadiene	ND		21	2.7	ug/L		01/09/23 10:42	01/10/23 19:15	1
Hexachloroethane	ND		10	4.4	ug/L		01/09/23 10:42	01/10/23 19:15	1
Indene	ND		10	1.0	ug/L		01/09/23 10:42	01/10/23 19:15	1
Isophorone	ND		10	0.15	ug/L		01/09/23 10:42	01/10/23 19:15	1
2-Methylphenol	ND		10	1.9	ug/L		01/09/23 10:42	01/10/23 19:15	1
3 & 4 Methylphenol	ND		21	0.40	ug/L		01/09/23 10:42	01/10/23 19:15	1
2-Nitroaniline	ND		10	2.3	ug/L		01/09/23 10:42	01/10/23 19:15	1
3-Nitroaniline	ND		10	1.9	ug/L		01/09/23 10:42	01/10/23 19:15	1
4-Nitroaniline	ND		10	1.6	ug/L		01/09/23 10:42	01/10/23 19:15	1
Nitrobenzene	ND		10	0.13	ug/L		01/09/23 10:42	01/10/23 19:15	1
2-Nitrophenol	ND		10	5.4	ug/L		01/09/23 10:42	01/10/23 19:15	1
4-Nitrophenol	ND		10	2.2	ug/L		01/09/23 10:42	01/10/23 19:15	1
N-Nitrosodimethylamine	ND		10	3.6	ug/L		01/09/23 10:42	01/10/23 19:15	1

Client Sample ID: ROST3MW-ROX-010523
Date Collected: 01/05/23 10:50
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-5
Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		10	3.4	ug/L		01/09/23 10:42	01/10/23 19:15	1
N-Nitrosodiphenylamine	ND		10	0.19	ug/L		01/09/23 10:42	01/10/23 19:15	1
Pentachlorophenol	ND		21	1.5	ug/L		01/09/23 10:42	01/10/23 19:15	1
Phenol	ND		10	2.7	ug/L		01/09/23 10:42	01/10/23 19:15	1
Pyridine	ND		10	3.3	ug/L		01/09/23 10:42	01/10/23 19:15	1
Quinoline	ND	*-	10	4.7	ug/L		01/09/23 10:42	01/10/23 19:15	1
2,4,5-Trichlorophenol	ND		10	3.8	ug/L		01/09/23 10:42	01/10/23 19:15	1
2,4,6-Trichlorophenol	ND		10	3.6	ug/L		01/09/23 10:42	01/10/23 19:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*82*		*46 - 124*	*01/09/23 10:42*	*01/10/23 19:15*	*1*
2-Fluorophenol	*36*		*13 - 113*	*01/09/23 10:42*	*01/10/23 19:15*	*1*
Nitrobenzene-d5	*58*		*36 - 126*	*01/09/23 10:42*	*01/10/23 19:15*	*1*
Phenol-d5	*49*		*17 - 127*	*01/09/23 10:42*	*01/10/23 19:15*	*1*
Terphenyl-d14	*91*		*44 - 149*	*01/09/23 10:42*	*01/10/23 19:15*	*1*
2,4,6-Tribromophenol	*66*		*26 - 150*	*01/09/23 10:42*	*01/10/23 19:15*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.030	0.017	ug/L		01/12/23 13:01	01/13/23 11:50	1
1,2-D bromoethane	ND	*+	0.020	0.015	ug/L		01/12/23 13:01	01/13/23 11:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*116*		*51 - 149*	*01/12/23 13:01*	*01/13/23 11:50*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: MW9-ROX-010523
Date Collected: 01/05/23 11:55
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-6
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/10/23 13:18	1
Acrolein	ND		20	3.3	ug/L			01/10/23 13:18	1
Acrylonitrile	ND		10	2.8	ug/L			01/10/23 13:18	1
Benzene	ND		1.0	0.13	ug/L			01/10/23 13:18	1
Bromobenzene	ND		1.0	0.54	ug/L			01/10/23 13:18	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/10/23 13:18	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/10/23 13:18	1
Bromoform	ND		5.0	0.25	ug/L			01/10/23 13:18	1
Bromomethane	ND		1.0	0.98	ug/L			01/10/23 13:18	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/10/23 13:18	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/10/23 13:18	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/10/23 13:18	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/10/23 13:18	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/10/23 13:18	1
Chloroethane	ND		1.0	0.76	ug/L			01/10/23 13:18	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/10/23 13:18	1
Chloroform	ND		1.0	1.0	ug/L			01/10/23 13:18	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/10/23 13:18	1
Chloromethane	ND		1.0	0.32	ug/L			01/10/23 13:18	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/10/23 13:18	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/10/23 13:18	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/10/23 13:18	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/10/23 13:18	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/10/23 13:18	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/10/23 13:18	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/10/23 13:18	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/10/23 13:18	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/10/23 13:18	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 13:18	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 13:18	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 13:18	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/10/23 13:18	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/10/23 13:18	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/10/23 13:18	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/10/23 13:18	1
2-Hexanone	ND		25	1.4	ug/L			01/10/23 13:18	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/10/23 13:18	1
Methylene bromide	ND		5.0	0.22	ug/L			01/10/23 13:18	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/10/23 13:18	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/10/23 13:18	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/10/23 13:18	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/10/23 13:18	1
Naphthalene	ND		5.0	3.0	ug/L			01/10/23 13:18	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/10/23 13:18	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/10/23 13:18	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/10/23 13:18	1
o-Xylene	ND		5.0	0.60	ug/L			01/10/23 13:18	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/10/23 13:18	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/10/23 13:18	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: MW9-ROX-010523
Date Collected: 01/05/23 11:55
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-6
Matrix: Water

Method: SW846 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			01/10/23 13:18	1
Styrene	ND		1.0	1.0	ug/L			01/10/23 13:18	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/10/23 13:18	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/10/23 13:18	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/10/23 13:18	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/10/23 13:18	1
Toluene	ND		1.0	0.41	ug/L			01/10/23 13:18	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/10/23 13:18	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/10/23 13:18	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/10/23 13:18	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/10/23 13:18	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/10/23 13:18	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/10/23 13:18	1
Trichloroethene	ND		1.0	0.15	ug/L			01/10/23 13:18	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/10/23 13:18	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/10/23 13:18	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/10/23 13:18	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/10/23 13:18	1
Vinyl acetate	ND		25	0.93	ug/L			01/10/23 13:18	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/10/23 13:18	1
Xylenes, Total	ND		10	1.6	ug/L			01/10/23 13:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*		*72 - 119*		*01/10/23 13:18*	*1*
Dibromofluoromethane	*101*		*75 - 126*		*01/10/23 13:18*	*1*
Toluene-d8 (Surr)	*96*		*64 - 132*		*01/10/23 13:18*	*1*

Method: SW846 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	0.033	ug/L		01/09/23 10:42	01/10/23 18:39	1
Acenaphthylene	ND		0.21	0.046	ug/L		01/09/23 10:42	01/10/23 18:39	1
Anthracene	ND		0.21	0.033	ug/L		01/09/23 10:42	01/10/23 18:39	1
Benzo[a]anthracene	ND		0.21	0.047	ug/L		01/09/23 10:42	01/10/23 18:39	1
Benzo[a]pyrene	ND		0.21	0.043	ug/L		01/09/23 10:42	01/10/23 18:39	1
Benzo[b]fluoranthene	ND		0.21	0.035	ug/L		01/09/23 10:42	01/10/23 18:39	1
Benzo[g,h,i]perylene	ND		0.21	0.13	ug/L		01/09/23 10:42	01/10/23 18:39	1
Benzo[k]fluoranthene	ND		0.21	0.10	ug/L		01/09/23 10:42	01/10/23 18:39	1
Chrysene	ND		0.21	0.076	ug/L		01/09/23 10:42	01/10/23 18:39	1
Dibenz(a,h)anthracene	ND		0 21	0 051	ug/L		01/09/23 10 42	01/10/23 18 39	1
Fluoranthene	ND		0.21	0.070	ug/L		01/09/23 10:42	01/10/23 18:39	1
Fluorene	ND		0.21	0.11	ug/L		01/09/23 10:42	01/10/23 18:39	1
Indeno[1,2,3-cd]pyrene	ND		0.21	0.044	ug/L		01/09/23 10:42	01/10/23 18:39	1
1-Methylnaphthalene	ND		0.21	0.076	ug/L		01/09/23 10:42	01/10/23 18:39	1
2-Methylnaphthalene	ND		0.21	0.062	ug/L		01/09/23 10:42	01/10/23 18:39	1
Phenanthrene	ND		0.21	0.037	ug/L		01/09/23 10:42	01/10/23 18:39	1
Pyrene	ND		0.21	0.041	ug/L		01/09/23 10:42	01/10/23 18:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*91*		*15 - 122*	*01/09/23 10:42*	*01/10/23 18:39*	*1*
Nitrobenzene-d5	*62*		*19 - 130*	*01/09/23 10:42*	*01/10/23 18:39*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: MW9-ROX-010523
Date Collected: 01/05/23 11:55
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-6
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*109*		*33 - 138*	*01/09/23 10:42*	*01/10/23 18:39*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.9	ug/L		01/09/23 10:42	01/10/23 19:40	1
Benzenethiol	ND	*-	10	1.7	ug/L		01/09/23 10:42	01/10/23 19:40	1
Benzoic acid	ND		31	7.5	ug/L		01/09/23 10:42	01/10/23 19:40	1
Benzyl alcohol	ND		10	2.1	ug/L		01/09/23 10:42	01/10/23 19:40	1
Bis(2-chloroethoxy)methane	ND		10	0.16	ug/L		01/09/23 10:42	01/10/23 19:40	1
Bis(2-chloroethyl)ether	ND		10	2.8	ug/L		01/09/23 10:42	01/10/23 19:40	1
bis (2-chloroisopropyl) ether	ND		10	0.16	ug/L		01/09/23 10:42	01/10/23 19:40	1
Bis(2-ethylhexyl) phthalate	ND		10	5.1	ug/L		01/09/23 10:42	01/10/23 19:40	1
4-Bromophenyl phenyl ether	ND		10	0.21	ug/L		01/09/23 10:42	01/10/23 19:40	1
Butyl benzyl phthalate	ND		10	0.20	ug/L		01/09/23 10:42	01/10/23 19:40	1
4-Chloroaniline	ND		10	3.5	ug/L		01/09/23 10:42	01/10/23 19:40	1
4-Chloro-3-methylphenol	ND		10	3.9	ug/L		01/09/23 10:42	01/10/23 19:40	1
2-Chloronaphthalene	ND		10	0.14	ug/L		01/09/23 10:42	01/10/23 19:40	1
2-Chlorophenol	ND		10	2.3	ug/L		01/09/23 10:42	01/10/23 19:40	1
4-Chlorophenyl phenyl ether	ND		10	2.1	ug/L		01/09/23 10:42	01/10/23 19:40	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/09/23 10:42	01/10/23 19:40	1
Dibenzofuran	ND		10	0.17	ug/L		01/09/23 10:42	01/10/23 19:40	1
3,3'-Dichlorobenzidine	ND		10	2.7	ug/L		01/09/23 10:42	01/10/23 19:40	1
2,4-Dichlorophenol	ND		10	3.1	ug/L		01/09/23 10:42	01/10/23 19:40	1
Diethyl phthalate	ND		10	0.25	ug/L		01/09/23 10:42	01/10/23 19:40	1
2,4-Dimethylphenol	ND		10	3.6	ug/L		01/09/23 10:42	01/10/23 19:40	1
Dimethyl phthalate	ND		10	0.17	ug/L		01/09/23 10:42	01/10/23 19:40	1
Di-n-butyl phthalate	ND		10	2.8	ug/L		01/09/23 10:42	01/10/23 19:40	1
4,6-Dinitro-ortho-cresol	ND		10	1.6	ug/L		01/09/23 10:42	01/10/23 19:40	1
2,4-Dinitrophenol	ND		31	3.5	ug/L		01/09/23 10:42	01/10/23 19:40	1
2,4-Dinitrotoluene	ND		10	2.0	ug/L		01/09/23 10:42	01/10/23 19:40	1
2,6-Dinitrotoluene	ND		10	2.0	ug/L		01/09/23 10:42	01/10/23 19:40	1
Di-n-octyl phthalate	ND		10	0.17	ug/L		01/09/23 10:42	01/10/23 19:40	1
1,4-Dioxane	ND		10	1.0	ug/L		01/09/23 10:42	01/10/23 19:40	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/09/23 10:42	01/10/23 19:40	1
Hexachlorobenzene	ND		10	0.17	ug/L		01/09/23 10:42	01/10/23 19:40	1
Hexachlorocyclopentadiene	ND		21	2.7	ug/L		01/09/23 10:42	01/10/23 19:40	1
Hexachloroethane	ND		10	4.3	ug/L		01/09/23 10:42	01/10/23 19:40	1
Indene	ND		10	1.0	ug/L		01/09/23 10:42	01/10/23 19:40	1
Isophorone	ND		10	0.14	ug/L		01/09/23 10:42	01/10/23 19:40	1
2-Methylphenol	ND		10	1.8	ug/L		01/09/23 10:42	01/10/23 19:40	1
3 & 4 Methylphenol	ND		21	0.40	ug/L		01/09/23 10:42	01/10/23 19:40	1
2-Nitroaniline	ND		10	2.3	ug/L		01/09/23 10:42	01/10/23 19:40	1
3-Nitroaniline	ND		10	1.8	ug/L		01/09/23 10:42	01/10/23 19:40	1
4-Nitroaniline	ND		10	1.5	ug/L		01/09/23 10:42	01/10/23 19:40	1
Nitrobenzene	ND		10	0.13	ug/L		01/09/23 10:42	01/10/23 19:40	1
2-Nitrophenol	ND		10	5.3	ug/L		01/09/23 10:42	01/10/23 19:40	1
4-Nitrophenol	ND		10	2.2	ug/L		01/09/23 10:42	01/10/23 19:40	1
N-Nitrosodimethylamine	ND		10	3.6	ug/L		01/09/23 10:42	01/10/23 19:40	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: MW9-ROX-010523
Date Collected: 01/05/23 11:55
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-6
Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		10	3.4	ug/L		01/09/23 10:42	01/10/23 19:40	1
N-Nitrosodiphenylamine	ND		10	0.18	ug/L		01/09/23 10:42	01/10/23 19:40	1
Pentachlorophenol	ND		21	1.4	ug/L		01/09/23 10:42	01/10/23 19:40	1
Phenol	ND		10	2.7	ug/L		01/09/23 10:42	01/10/23 19:40	1
Pyridine	ND		10	3.3	ug/L		01/09/23 10:42	01/10/23 19:40	1
Quinoline	ND	*-	10	4.6	ug/L		01/09/23 10:42	01/10/23 19:40	1
2,4,5-Trichlorophenol	ND		10	3.8	ug/L		01/09/23 10:42	01/10/23 19:40	1
2,4,6-Trichlorophenol	ND		10	3.6	ug/L		01/09/23 10:42	01/10/23 19:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*91*		*46 - 124*	*01/09/23 10:42*	*01/10/23 19:40*	*1*
2-Fluorophenol	*8*	*S1-*	*13 - 113*	*01/09/23 10:42*	*01/10/23 19:40*	*1*
Nitrobenzene-d5	*64*		*36 - 126*	*01/09/23 10:42*	*01/10/23 19:40*	*1*
Phenol-d5	*27*		*17 - 127*	*01/09/23 10:42*	*01/10/23 19:40*	*1*
Terphenyl-d14	*125*		*44 - 149*	*01/09/23 10:42*	*01/10/23 19:40*	*1*
2,4,6-Tribromophenol	*51*		*26 - 150*	*01/09/23 10:42*	*01/10/23 19:40*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.030	0.017	ug/L		01/12/23 13:01	01/13/23 12:10	1
1,2-D bromoethane	ND	*+	0.020	0.015	ug/L		01/12/23 13:01	01/13/23 12:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*112*	*p*	*51 - 149*	*01/12/23 13:01*	*01/13/23 12:10*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: TB-ROX-010523-8260-B
Date Collected: 01/05/23 12:00
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231397-7
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/10/23 12:04	1
Acrolein	ND		20	3.3	ug/L			01/10/23 12:04	1
Acrylonitrile	ND		10	2.8	ug/L			01/10/23 12:04	1
Benzene	ND		1.0	0.13	ug/L			01/10/23 12:04	1
Bromobenzene	ND		1.0	0.54	ug/L			01/10/23 12:04	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/10/23 12:04	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/10/23 12:04	1
Bromoform	ND		5.0	0.25	ug/L			01/10/23 12:04	1
Bromomethane	ND		1.0	0.98	ug/L			01/10/23 12:04	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/10/23 12:04	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/10/23 12:04	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/10/23 12:04	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/10/23 12:04	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/10/23 12:04	1
Chloroethane	ND		1.0	0.76	ug/L			01/10/23 12:04	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/10/23 12:04	1
Chloroform	ND		1.0	1.0	ug/L			01/10/23 12:04	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/10/23 12:04	1
Chloromethane	ND		1.0	0.32	ug/L			01/10/23 12:04	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/10/23 12:04	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/10/23 12:04	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/10/23 12:04	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/10/23 12:04	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/10/23 12:04	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/10/23 12:04	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/10/23 12:04	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/10/23 12:04	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/10/23 12:04	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 12:04	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 12:04	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 12:04	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/10/23 12:04	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/10/23 12:04	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/10/23 12:04	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/10/23 12:04	1
2-Hexanone	ND		25	1.4	ug/L			01/10/23 12:04	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/10/23 12:04	1
Methylene bromide	ND		5.0	0.22	ug/L			01/10/23 12:04	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/10/23 12:04	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/10/23 12:04	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/10/23 12:04	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/10/23 12:04	1
Naphthalene	ND		5.0	3.0	ug/L			01/10/23 12:04	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/10/23 12:04	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/10/23 12:04	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/10/23 12:04	1
o-Xylene	ND		5.0	0.60	ug/L			01/10/23 12:04	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/10/23 12:04	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/10/23 12:04	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: TB-ROX-010523-8260-B
Date Collected: 01/05/23 12:00
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231397-7
Matrix: Water

Method: SW846 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			01/10/23 12:04	1
Styrene	ND		1.0	1.0	ug/L			01/10/23 12:04	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/10/23 12:04	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/10/23 12:04	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/10/23 12:04	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/10/23 12:04	1
Toluene	ND		1.0	0.41	ug/L			01/10/23 12:04	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/10/23 12:04	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/10/23 12:04	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/10/23 12:04	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/10/23 12:04	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/10/23 12:04	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/10/23 12:04	1
Trichloroethene	ND		1.0	0.15	ug/L			01/10/23 12:04	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/10/23 12:04	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/10/23 12:04	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/10/23 12:04	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/10/23 12:04	1
Vinyl acetate	ND		25	0.93	ug/L			01/10/23 12:04	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/10/23 12:04	1
Xylenes, Total	ND		10	1.6	ug/L			01/10/23 12:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*		*72 - 119*		*01/10/23 12:04*	*1*
Dibromofluoromethane	*103*		*75 - 126*		*01/10/23 12:04*	*1*
Toluene-d8 (Surr)	*96*		*64 - 132*		*01/10/23 12:04*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: TB-ROX-010523-8011-B
Date Collected: 01/05/23 12:00
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231397-8
Matrix: Water

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.030	0.017	ug/L		01/12/23 13:01	01/13/23 12:30	1
1,2-D bromoethane	ND	*+	0.020	0.015	ug/L		01/12/23 13:01	01/13/23 12:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*	*p*	*51 - 149*	*01/12/23 13:01*	*01/13/23 12:30*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: P93A-ROX-010523-EB
Date Collected: 01/05/23 08:15
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-9
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/10/23 09:49	1
Acrolein	ND		20	3.3	ug/L			01/10/23 09:49	1
Acrylonitrile	ND		10	2.8	ug/L			01/10/23 09:49	1
Benzene	ND		1.0	0.13	ug/L			01/10/23 09:49	1
Bromobenzene	ND		1.0	0.54	ug/L			01/10/23 09:49	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/10/23 09:49	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/10/23 09:49	1
Bromoform	ND		5.0	0.25	ug/L			01/10/23 09:49	1
Bromomethane	ND		1.0	0.98	ug/L			01/10/23 09:49	1
2-Butanone (MEK)	**3.6**	**J**	25	2.6	ug/L			01/10/23 09:49	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/10/23 09:49	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/10/23 09:49	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/10/23 09:49	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/10/23 09:49	1
Chloroethane	ND		1.0	0.76	ug/L			01/10/23 09:49	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/10/23 09:49	1
Chloroform	ND		1.0	1.0	ug/L			01/10/23 09:49	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/10/23 09:49	1
Chloromethane	ND		1.0	0.32	ug/L			01/10/23 09:49	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/10/23 09:49	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/10/23 09:49	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/10/23 09:49	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/10/23 09:49	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/10/23 09:49	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/10/23 09:49	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/10/23 09:49	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/10/23 09:49	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/10/23 09:49	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 09:49	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 09:49	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 09:49	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/10/23 09:49	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/10/23 09:49	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/10/23 09:49	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/10/23 09:49	1
2-Hexanone	ND		25	1.4	ug/L			01/10/23 09:49	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/10/23 09:49	1
Methylene bromide	ND		5.0	0.22	ug/L			01/10/23 09:49	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/10/23 09:49	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/10/23 09:49	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/10/23 09:49	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/10/23 09:49	1
Naphthalene	ND		5.0	3.0	ug/L			01/10/23 09:49	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/10/23 09:49	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/10/23 09:49	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/10/23 09:49	1
o-Xylene	ND		5.0	0.60	ug/L			01/10/23 09:49	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/10/23 09:49	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/10/23 09:49	1

Client Sample ID: P93A-ROX-010523-EB

Lab Sample ID: 400-231397-9

Date Collected: 01/05/23 08:15

Matrix: Water

Date Received: 01/06/23 08:58

Method: SW846 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			01/10/23 09:49	1
Styrene	ND		1.0	1.0	ug/L			01/10/23 09:49	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/10/23 09:49	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/10/23 09:49	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/10/23 09:49	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/10/23 09:49	1
Toluene	ND		1.0	0.41	ug/L			01/10/23 09:49	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/10/23 09:49	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/10/23 09:49	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/10/23 09:49	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/10/23 09:49	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/10/23 09:49	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/10/23 09:49	1
Trichloroethene	ND		1.0	0.15	ug/L			01/10/23 09:49	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/10/23 09:49	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/10/23 09:49	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/10/23 09:49	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/10/23 09:49	1
Vinyl acetate	ND		25	0.93	ug/L			01/10/23 09:49	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/10/23 09:49	1
Xylenes, Total	ND		10	1.6	ug/L			01/10/23 09:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*103*		*72 - 119*		*01/10/23 09:49*	*1*
Dibromofluoromethane	*103*		*75 - 126*		*01/10/23 09:49*	*1*
Toluene-d8 (Surr)	*96*		*64 - 132*		*01/10/23 09:49*	*1*

Method: SW846 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	0.031	ug/L		01/09/23 10:42	01/10/23 18:56	1
Acenaphthylene	ND		0.19	0.043	ug/L		01/09/23 10:42	01/10/23 18:56	1
Anthracene	ND		0.19	0.031	ug/L		01/09/23 10:42	01/10/23 18:56	1
Benzo[a]anthracene	ND		0.19	0.044	ug/L		01/09/23 10:42	01/10/23 18:56	1
Benzo[a]pyrene	ND		0.19	0.040	ug/L		01/09/23 10:42	01/10/23 18:56	1
Benzo[b]fluoranthene	ND		0.19	0.033	ug/L		01/09/23 10:42	01/10/23 18:56	1
Benzo[g,h,i]perylene	ND		0.19	0.12	ug/L		01/09/23 10:42	01/10/23 18:56	1
Benzo[k]fluoranthene	ND		0.19	0.096	ug/L		01/09/23 10:42	01/10/23 18:56	1
Chrysene	ND		0.19	0.071	ug/L		01/09/23 10:42	01/10/23 18:56	1
Dibenz(a,h)anthracene	ND		0 19	0 048	ug/L		01/09/23 10 42	01/10/23 18 56	1
Fluoranthene	ND		0.19	0.065	ug/L		01/09/23 10:42	01/10/23 18:56	1
Fluorene	ND		0.19	0.11	ug/L		01/09/23 10:42	01/10/23 18:56	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.041	ug/L		01/09/23 10:42	01/10/23 18:56	1
1-Methylnaphthalene	ND		0.19	0.071	ug/L		01/09/23 10:42	01/10/23 18:56	1
2-Methylnaphthalene	ND		0.19	0.058	ug/L		01/09/23 10:42	01/10/23 18:56	1
Phenanthrene	ND		0.19	0.035	ug/L		01/09/23 10:42	01/10/23 18:56	1
Pyrene	ND		0.19	0.038	ug/L		01/09/23 10:42	01/10/23 18:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*100*		*15 - 122*	*01/09/23 10:42*	*01/10/23 18:56*	*1*
Nitrobenzene-d5	*69*		*19 - 130*	*01/09/23 10:42*	*01/10/23 18:56*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: P93A-ROX-010523-EB

Date Collected: 01/05/23 08:15
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-9

Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*117*		*33 - 138*	*01/09/23 10:42*	*01/10/23 18:56*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.6	3.6	ug/L		01/09/23 10:42	01/10/23 20:06	1
Benzenethiol	ND	*-	9.6	1.6	ug/L		01/09/23 10:42	01/10/23 20:06	1
Benzoic acid	ND		29	7.0	ug/L		01/09/23 10:42	01/10/23 20:06	1
Benzyl alcohol	ND		9.6	1.9	ug/L		01/09/23 10:42	01/10/23 20:06	1
Bis(2-chloroethoxy)methane	ND		9.6	0.15	ug/L		01/09/23 10:42	01/10/23 20:06	1
Bis(2-chloroethyl)ether	ND		9.6	2.6	ug/L		01/09/23 10:42	01/10/23 20:06	1
bis (2-chloroisopropyl) ether	ND		9.6	0.15	ug/L		01/09/23 10:42	01/10/23 20:06	1
Bis(2-ethylhexyl) phthalate	ND		9.6	4.8	ug/L		01/09/23 10:42	01/10/23 20:06	1
4-Bromophenyl phenyl ether	ND		9.6	0.19	ug/L		01/09/23 10:42	01/10/23 20:06	1
Butyl benzyl phthalate	ND		9.6	0.18	ug/L		01/09/23 10:42	01/10/23 20:06	1
4-Chloroaniline	ND		9.6	3.3	ug/L		01/09/23 10:42	01/10/23 20:06	1
4-Chloro-3-methylphenol	ND		9.6	3.6	ug/L		01/09/23 10:42	01/10/23 20:06	1
2-Chloronaphthalene	ND		9.6	0.13	ug/L		01/09/23 10:42	01/10/23 20:06	1
2-Chlorophenol	ND		9.6	2.1	ug/L		01/09/23 10:42	01/10/23 20:06	1
4-Chlorophenyl phenyl ether	ND		9.6	1.9	ug/L		01/09/23 10:42	01/10/23 20:06	1
Dibenz[a,h]acridine	ND		9.6	0.96	ug/L		01/09/23 10:42	01/10/23 20:06	1
Dibenzofuran	ND		9.6	0.16	ug/L		01/09/23 10:42	01/10/23 20:06	1
3,3'-Dichlorobenzidine	ND		9.6	2.5	ug/L		01/09/23 10:42	01/10/23 20:06	1
2,4-Dichlorophenol	ND		9.6	2.9	ug/L		01/09/23 10:42	01/10/23 20:06	1
Diethyl phthalate	ND		9.6	0.23	ug/L		01/09/23 10:42	01/10/23 20:06	1
2,4-Dimethylphenol	ND		9.6	3.4	ug/L		01/09/23 10:42	01/10/23 20:06	1
Dimethyl phthalate	ND		9.6	0.16	ug/L		01/09/23 10:42	01/10/23 20:06	1
Di-n-butyl phthalate	ND		9.6	2.6	ug/L		01/09/23 10:42	01/10/23 20:06	1
4,6-Dinitro-ortho-cresol	ND		9.6	1.5	ug/L		01/09/23 10:42	01/10/23 20:06	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		01/09/23 10:42	01/10/23 20:06	1
2,4-Dinitrotoluene	ND		9.6	1.8	ug/L		01/09/23 10:42	01/10/23 20:06	1
2,6-Dinitrotoluene	ND		9.6	1.8	ug/L		01/09/23 10:42	01/10/23 20:06	1
Di-n-octyl phthalate	ND		9.6	0.16	ug/L		01/09/23 10:42	01/10/23 20:06	1
1,4-Dioxane	ND		9.6	0.96	ug/L		01/09/23 10:42	01/10/23 20:06	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.6	0.96	ug/L		01/09/23 10:42	01/10/23 20:06	1
Hexachlorobenzene	ND		9.6	0.16	ug/L		01/09/23 10:42	01/10/23 20:06	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		01/09/23 10:42	01/10/23 20:06	1
Hexachloroethane	ND		9.6	4.0	ug/L		01/09/23 10:42	01/10/23 20:06	1
Indene	ND		9.6	0.96	ug/L		01/09/23 10:42	01/10/23 20:06	1
Isophorone	ND		9.6	0.13	ug/L		01/09/23 10:42	01/10/23 20:06	1
2-Methylphenol	ND		9.6	1.7	ug/L		01/09/23 10:42	01/10/23 20:06	1
3 & 4 Methylphenol	ND		19	0.37	ug/L		01/09/23 10:42	01/10/23 20:06	1
2-Nitroaniline	ND		9.6	2.1	ug/L		01/09/23 10:42	01/10/23 20:06	1
3-Nitroaniline	ND		9.6	1.7	ug/L		01/09/23 10:42	01/10/23 20:06	1
4-Nitroaniline	ND		9.6	1.4	ug/L		01/09/23 10:42	01/10/23 20:06	1
Nitrobenzene	ND		9.6	0.12	ug/L		01/09/23 10:42	01/10/23 20:06	1
2-Nitrophenol	ND		9.6	5.0	ug/L		01/09/23 10:42	01/10/23 20:06	1
4-Nitrophenol	ND		9.6	2.0	ug/L		01/09/23 10:42	01/10/23 20:06	1
N-Nitrosodimethylamine	ND		9.6	3.4	ug/L		01/09/23 10:42	01/10/23 20:06	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: P93A-ROX-010523-EB

Date Collected: 01/05/23 08:15
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-9

Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.6	3.2	ug/L		01/09/23 10:42	01/10/23 20:06	1
N-Nitrosodiphenylamine	ND		9.6	0.17	ug/L		01/09/23 10:42	01/10/23 20:06	1
Pentachlorophenol	ND		19	1.3	ug/L		01/09/23 10:42	01/10/23 20:06	1
Phenol	ND		9.6	2.5	ug/L		01/09/23 10:42	01/10/23 20:06	1
Pyridine	ND		9.6	3.1	ug/L		01/09/23 10:42	01/10/23 20:06	1
Quinoline	ND	*-	9.6	4.3	ug/L		01/09/23 10:42	01/10/23 20:06	1
2,4,5-Trichlorophenol	ND		9.6	3.5	ug/L		01/09/23 10:42	01/10/23 20:06	1
2,4,6-Trichlorophenol	ND		9.6	3.4	ug/L		01/09/23 10:42	01/10/23 20:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*94*		*46 - 124*	*01/09/23 10:42*	*01/10/23 20:06*	*1*
2-Fluorophenol	*22*		*13 - 113*	*01/09/23 10:42*	*01/10/23 20:06*	*1*
Nitrobenzene-d5	*65*		*36 - 126*	*01/09/23 10:42*	*01/10/23 20:06*	*1*
Phenol-d5	*48*		*17 - 127*	*01/09/23 10:42*	*01/10/23 20:06*	*1*
Terphenyl-d14	*121*		*44 - 149*	*01/09/23 10:42*	*01/10/23 20:06*	*1*
2,4,6-Tribromophenol	*61*		*26 - 150*	*01/09/23 10:42*	*01/10/23 20:06*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.030	0.017	ug/L		01/12/23 13:01	01/13/23 15:48	1
1,2-D bromoethane	ND	*+	0.020	0.015	ug/L		01/12/23 13:01	01/13/23 15:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*109*	*p*	*51 - 149*	*01/12/23 13:01*	*01/13/23 15:48*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: P93A-ROX-010523
Date Collected: 01/05/23 09:30
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231397-10
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/10/23 13:42	1
Acrolein	ND		20	3.3	ug/L			01/10/23 13:42	1
Acrylonitrile	ND		10	2.8	ug/L			01/10/23 13:42	1
Benzene	ND		1.0	0.13	ug/L			01/10/23 13:42	1
Bromobenzene	ND		1.0	0.54	ug/L			01/10/23 13:42	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/10/23 13:42	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/10/23 13:42	1
Bromoform	ND		5.0	0.25	ug/L			01/10/23 13:42	1
Bromomethane	ND		1.0	0.98	ug/L			01/10/23 13:42	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/10/23 13:42	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/10/23 13:42	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/10/23 13:42	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/10/23 13:42	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/10/23 13:42	1
Chloroethane	ND		1.0	0.76	ug/L			01/10/23 13:42	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/10/23 13:42	1
Chloroform	ND		1.0	1.0	ug/L			01/10/23 13:42	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/10/23 13:42	1
Chloromethane	ND		1.0	0.32	ug/L			01/10/23 13:42	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/10/23 13:42	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/10/23 13:42	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/10/23 13:42	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/10/23 13:42	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/10/23 13:42	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/10/23 13:42	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/10/23 13:42	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/10/23 13:42	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/10/23 13:42	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 13:42	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 13:42	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 13:42	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/10/23 13:42	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/10/23 13:42	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/10/23 13:42	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/10/23 13:42	1
2-Hexanone	ND		25	1.4	ug/L			01/10/23 13:42	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/10/23 13:42	1
Methylene bromide	ND		5.0	0.22	ug/L			01/10/23 13:42	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/10/23 13:42	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/10/23 13:42	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/10/23 13:42	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/10/23 13:42	1
Naphthalene	ND		5.0	3.0	ug/L			01/10/23 13:42	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/10/23 13:42	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/10/23 13:42	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/10/23 13:42	1
o-Xylene	ND		5.0	0.60	ug/L			01/10/23 13:42	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/10/23 13:42	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/10/23 13:42	1

Client Sample ID: P93A-ROX-010523
Date Collected: 01/05/23 09:30
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231397-10
Matrix: Water

Method: SW846 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			01/10/23 13:42	1
Styrene	ND		1.0	1.0	ug/L			01/10/23 13:42	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/10/23 13:42	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/10/23 13:42	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/10/23 13:42	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/10/23 13:42	1
Toluene	ND		1.0	0.41	ug/L			01/10/23 13:42	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/10/23 13:42	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/10/23 13:42	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/10/23 13:42	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/10/23 13:42	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/10/23 13:42	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/10/23 13:42	1
Trichloroethene	ND		1.0	0.15	ug/L			01/10/23 13:42	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/10/23 13:42	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/10/23 13:42	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/10/23 13:42	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/10/23 13:42	1
Vinyl acetate	ND		25	0.93	ug/L			01/10/23 13:42	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/10/23 13:42	1
Xylenes, Total	ND		10	1.6	ug/L			01/10/23 13:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*		*72 - 119*		*01/10/23 13:42*	*1*
Dibromofluoromethane	*102*		*75 - 126*		*01/10/23 13:42*	*1*
Toluene-d8 (Surr)	*96*		*64 - 132*		*01/10/23 13:42*	*1*

Method: SW846 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	0.031	ug/L		01/09/23 10:42	01/10/23 19:13	1
Acenaphthylene	ND		0.19	0.043	ug/L		01/09/23 10:42	01/10/23 19:13	1
Anthracene	ND		0.19	0.031	ug/L		01/09/23 10:42	01/10/23 19:13	1
Benzo[a]anthracene	ND		0.19	0.044	ug/L		01/09/23 10:42	01/10/23 19:13	1
Benzo[a]pyrene	ND		0.19	0.040	ug/L		01/09/23 10:42	01/10/23 19:13	1
Benzo[g,h,i]perylene	ND		0.19	0.12	ug/L		01/09/23 10:42	01/10/23 19:13	1
Benzo[k]fluoranthene	ND		0.19	0.096	ug/L		01/09/23 10:42	01/10/23 19:13	1
Chrysene	ND		0.19	0.071	ug/L		01/09/23 10:42	01/10/23 19:13	1
Dibenz(a,h)anthracene	ND		0.19	0.048	ug/L		01/09/23 10:42	01/10/23 19:13	1
Fluoranthene	ND		0 19	0 065	ug/L		01/09/23 10 42	01/10/23 19 13	1
Fluorene	ND		0.19	0.11	ug/L		01/09/23 10:42	01/10/23 19:13	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.041	ug/L		01/09/23 10:42	01/10/23 19:13	1
1-Methylnaphthalene	ND		0.19	0.071	ug/L		01/09/23 10:42	01/10/23 19:13	1
2-Methylnaphthalene	ND		0.19	0.058	ug/L		01/09/23 10:42	01/10/23 19:13	1
Phenanthrene	ND		0.19	0.035	ug/L		01/09/23 10:42	01/10/23 19:13	1
Pyrene	ND		0.19	0.038	ug/L		01/09/23 10:42	01/10/23 19:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*96*		*15 - 122*	*01/09/23 10:42*	*01/10/23 19:13*	*1*
Nitrobenzene-d5	*63*		*19 - 130*	*01/09/23 10:42*	*01/10/23 19:13*	*1*
Terphenyl-d14	*113*		*33 - 138*	*01/09/23 10:42*	*01/10/23 19:13*	*1*

Client Sample ID: P93A-ROX-010523
Date Collected: 01/05/23 09:30
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231397-10
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	**0.29**		0.19	0.033	ug/L		01/09/23 10:42	01/27/23 18:54	1

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND	H	0.19	0.033	ug/L		02/02/23 14:02	03/03/23 11:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*87*		*15 - 122*	*02/02/23 14:02*	*03/03/23 11:33*	*1*
Nitrobenzene-d5	*85*		*19 - 130*	*02/02/23 14:02*	*03/03/23 11:33*	*1*
Terphenyl-d14	*100*		*33 - 138*	*02/02/23 14:02*	*03/03/23 11:33*	*1*

Method: SW846 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		01/09/23 10:42	01/10/23 20:31	1
Benzenethiol	ND	*-	9.6	1.6	ug/L		01/09/23 10:42	01/10/23 20:31	1
Benzoic acid	ND		29	7.0	ug/L		01/09/23 10:42	01/10/23 20:31	1
Benzyl alcohol	ND		9.6	1.9	ug/L		01/09/23 10:42	01/10/23 20:31	1
Bis(2-chloroethoxy)methane	ND		9.6	0.15	ug/L		01/09/23 10:42	01/10/23 20:31	1
Bis(2-chloroethyl)ether	ND		9.6	2.6	ug/L		01/09/23 10:42	01/10/23 20:31	1
bis (2-chloroisopropyl) ether	ND		9.6	0.15	ug/L		01/09/23 10:42	01/10/23 20:31	1
Bis(2-ethylhexyl) phthalate	ND		9.6	4.8	ug/L		01/09/23 10:42	01/10/23 20:31	1
4-Bromophenyl phenyl ether	ND		9.6	0.19	ug/L		01/09/23 10:42	01/10/23 20:31	1
Butyl benzyl phthalate	ND		9.6	0.18	ug/L		01/09/23 10:42	01/10/23 20:31	1
4-Chloroaniline	ND		9.6	3.3	ug/L		01/09/23 10:42	01/10/23 20:31	1
4-Chloro-3-methylphenol	ND		9.6	3.7	ug/L		01/09/23 10:42	01/10/23 20:31	1
2-Chloronaphthalene	ND		9.6	0.13	ug/L		01/09/23 10:42	01/10/23 20:31	1
2-Chlorophenol	ND		9.6	2.1	ug/L		01/09/23 10:42	01/10/23 20:31	1
4-Chlorophenyl phenyl ether	ND		9.6	1.9	ug/L		01/09/23 10:42	01/10/23 20:31	1
Dibenz[a,h]acridine	ND		9.6	0.96	ug/L		01/09/23 10:42	01/10/23 20:31	1
Dibenzofuran	ND		9.6	0.16	ug/L		01/09/23 10:42	01/10/23 20:31	1
3,3'-Dichlorobenzidine	ND		9.6	2.5	ug/L		01/09/23 10:42	01/10/23 20:31	1
2,4-Dichlorophenol	ND		9.6	2.9	ug/L		01/09/23 10:42	01/10/23 20:31	1
Diethyl phthalate	ND		9.6	0.23	ug/L		01/09/23 10:42	01/10/23 20:31	1
2,4-Dimethylphenol	ND		9.6	3.4	ug/L		01/09/23 10:42	01/10/23 20:31	1
Dimethyl phthalate	ND		9.6	0.16	ug/L		01/09/23 10:42	01/10/23 20:31	1
Di-n-butyl phthalate	ND		9.6	2.6	ug/L		01/09/23 10:42	01/10/23 20:31	1
4,6-Dinitro-ortho-cresol	ND		9.6	1.5	ug/L		01/09/23 10:42	01/10/23 20:31	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		01/09/23 10:42	01/10/23 20:31	1
2,4-Dinitrotoluene	ND		9.6	1.8	ug/L		01/09/23 10:42	01/10/23 20:31	1
2,6-Dinitrotoluene	ND		9.6	1.8	ug/L		01/09/23 10:42	01/10/23 20:31	1
Di-n-octyl phthalate	ND		9.6	0.16	ug/L		01/09/23 10:42	01/10/23 20:31	1
1,4-Dioxane	ND		9.6	0.96	ug/L		01/09/23 10:42	01/10/23 20:31	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.6	0.96	ug/L		01/09/23 10:42	01/10/23 20:31	1
Hexachlorobenzene	ND		9.6	0.16	ug/L		01/09/23 10:42	01/10/23 20:31	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		01/09/23 10:42	01/10/23 20:31	1
Hexachloroethane	ND		9.6	4.0	ug/L		01/09/23 10:42	01/10/23 20:31	1
Indene	ND		9.6	0.96	ug/L		01/09/23 10:42	01/10/23 20:31	1
Isophorone	ND		9.6	0.13	ug/L		01/09/23 10:42	01/10/23 20:31	1
2-Methylphenol	ND		9.6	1.7	ug/L		01/09/23 10:42	01/10/23 20:31	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: P93A-ROX-010523

Date Collected: 01/05/23 09:30
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231397-10

Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	ND		19	0.37	ug/L		01/09/23 10:42	01/10/23 20:31	1
2-Nitroaniline	ND		9.6	2.1	ug/L		01/09/23 10:42	01/10/23 20:31	1
3-Nitroaniline	ND		9.6	1.7	ug/L		01/09/23 10:42	01/10/23 20:31	1
4-Nitroaniline	ND		9.6	1.4	ug/L		01/09/23 10:42	01/10/23 20:31	1
Nitrobenzene	ND		9.6	0.12	ug/L		01/09/23 10:42	01/10/23 20:31	1
2-Nitrophenol	ND		9.6	5.0	ug/L		01/09/23 10:42	01/10/23 20:31	1
4-Nitrophenol	ND		9.6	2.0	ug/L		01/09/23 10:42	01/10/23 20:31	1
N-Nitrosodimethylamine	ND		9.6	3.4	ug/L		01/09/23 10:42	01/10/23 20:31	1
N-Nitrosodi-n-propylamine	ND		9.6	3.2	ug/L		01/09/23 10:42	01/10/23 20:31	1
N-Nitrosodiphenylamine	ND		9.6	0.17	ug/L		01/09/23 10:42	01/10/23 20:31	1
Pentachlorophenol	ND		19	1.3	ug/L		01/09/23 10:42	01/10/23 20:31	1
Phenol	ND		9.6	2.5	ug/L		01/09/23 10:42	01/10/23 20:31	1
Pyridine	ND		9.6	3.1	ug/L		01/09/23 10:42	01/10/23 20:31	1
Quinoline	ND	*-	9.6	4.3	ug/L		01/09/23 10:42	01/10/23 20:31	1
2,4,5-Trichlorophenol	ND		9.6	3.6	ug/L		01/09/23 10:42	01/10/23 20:31	1
2,4,6-Trichlorophenol	ND		9.6	3.4	ug/L		01/09/23 10:42	01/10/23 20:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*90*		*46 - 124*	*01/09/23 10:42*	*01/10/23 20:31*	*1*
2-Fluorophenol	*24*		*13 - 113*	*01/09/23 10:42*	*01/10/23 20:31*	*1*
Nitrobenzene-d5	*61*		*36 - 126*	*01/09/23 10:42*	*01/10/23 20:31*	*1*
Phenol-d5	*48*		*17 - 127*	*01/09/23 10:42*	*01/10/23 20:31*	*1*
Terphenyl-d14	*115*		*44 - 149*	*01/09/23 10:42*	*01/10/23 20:31*	*1*
2,4,6-Tribromophenol	*57*		*26 - 150*	*01/09/23 10:42*	*01/10/23 20:31*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.030	0.017	ug/L		01/12/23 13:01	01/13/23 16:08	1
1,2-D bromoethane	ND	*+	0.020	0.015	ug/L		01/12/23 13:01	01/13/23 16:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*116*	*p*	*51 - 149*	*01/12/23 13:01*	*01/13/23 16:08*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: P93C-ROX-010523
Date Collected: 01/05/23 10:30
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231397-11
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/10/23 14:07	1
Acrolein	ND		20	3.3	ug/L			01/10/23 14:07	1
Acrylonitrile	ND		10	2.8	ug/L			01/10/23 14:07	1
Benzene	ND		1.0	0.13	ug/L			01/10/23 14:07	1
Bromobenzene	ND		1.0	0.54	ug/L			01/10/23 14:07	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/10/23 14:07	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/10/23 14:07	1
Bromoform	ND		5.0	0.25	ug/L			01/10/23 14:07	1
Bromomethane	ND		1.0	0.98	ug/L			01/10/23 14:07	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/10/23 14:07	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/10/23 14:07	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/10/23 14:07	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/10/23 14:07	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/10/23 14:07	1
Chloroethane	ND		1.0	0.76	ug/L			01/10/23 14:07	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/10/23 14:07	1
Chloroform	ND		1.0	1.0	ug/L			01/10/23 14:07	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/10/23 14:07	1
Chloromethane	ND		1.0	0.32	ug/L			01/10/23 14:07	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/10/23 14:07	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/10/23 14:07	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/10/23 14:07	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/10/23 14:07	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/10/23 14:07	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/10/23 14:07	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/10/23 14:07	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/10/23 14:07	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/10/23 14:07	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 14:07	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 14:07	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 14:07	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/10/23 14:07	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/10/23 14:07	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/10/23 14:07	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/10/23 14:07	1
2-Hexanone	ND		25	1.4	ug/L			01/10/23 14:07	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/10/23 14:07	1
Methylene bromide	ND		5.0	0.22	ug/L			01/10/23 14:07	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/10/23 14:07	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/10/23 14:07	1
Methyl tert-butyl ether	**1.9**		1.0	0.22	ug/L			01/10/23 14:07	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/10/23 14:07	1
Naphthalene	ND		5.0	3.0	ug/L			01/10/23 14:07	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/10/23 14:07	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/10/23 14:07	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/10/23 14:07	1
o-Xylene	ND		5.0	0.60	ug/L			01/10/23 14:07	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/10/23 14:07	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/10/23 14:07	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: P93C-ROX-010523
Date Collected: 01/05/23 10:30
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231397-11
Matrix: Water

Method: SW846 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			01/10/23 14:07	1
Styrene	ND		1.0	1.0	ug/L			01/10/23 14:07	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/10/23 14:07	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/10/23 14:07	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/10/23 14:07	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/10/23 14:07	1
Toluene	ND		1.0	0.41	ug/L			01/10/23 14:07	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/10/23 14:07	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/10/23 14:07	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/10/23 14:07	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/10/23 14:07	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/10/23 14:07	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/10/23 14:07	1
Trichloroethene	ND		1.0	0.15	ug/L			01/10/23 14:07	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/10/23 14:07	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/10/23 14:07	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/10/23 14:07	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/10/23 14:07	1
Vinyl acetate	ND		25	0.93	ug/L			01/10/23 14:07	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/10/23 14:07	1
Xylenes, Total	ND		10	1.6	ug/L			01/10/23 14:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*105*		*72 - 119*		*01/10/23 14:07*	*1*
Dibromofluoromethane	*101*		*75 - 126*		*01/10/23 14:07*	*1*
Toluene-d8 (Surr)	*95*		*64 - 132*		*01/10/23 14:07*	*1*

Method: SW846 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	0.031	ug/L		01/09/23 10:42	01/10/23 19:30	1
Acenaphthylene	ND		0.19	0.044	ug/L		01/09/23 10:42	01/10/23 19:30	1
Anthracene	ND		0.19	0.031	ug/L		01/09/23 10:42	01/10/23 19:30	1
Benzo[a]anthracene	ND		0.19	0.044	ug/L		01/09/23 10:42	01/10/23 19:30	1
Benzo[a]pyrene	ND		0.19	0.041	ug/L		01/09/23 10:42	01/10/23 19:30	1
Benzo[b]fluoranthene	ND		0.19	0.033	ug/L		01/09/23 10:42	01/10/23 19:30	1
Benzo[g,h,i]perylene	ND		0.19	0.13	ug/L		01/09/23 10:42	01/10/23 19:30	1
Benzo[k]fluoranthene	ND		0.19	0.097	ug/L		01/09/23 10:42	01/10/23 19:30	1
Chrysene	ND		0.19	0.072	ug/L		01/09/23 10:42	01/10/23 19:30	1
Dibenz(a,h)anthracene	ND		0 19	0 048	ug/L		01/09/23 10 42	01/10/23 19 30	1
Fluoranthene	**0.16**	**J**	0.19	0.066	ug/L		01/09/23 10:42	01/10/23 19:30	1
Fluorene	ND		0.19	0.11	ug/L		01/09/23 10:42	01/10/23 19:30	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.042	ug/L		01/09/23 10:42	01/10/23 19:30	1
1-Methylnaphthalene	ND		0.19	0.072	ug/L		01/09/23 10:42	01/10/23 19:30	1
2-Methylnaphthalene	ND		0.19	0.058	ug/L		01/09/23 10:42	01/10/23 19:30	1
Phenanthrene	ND		0.19	0.035	ug/L		01/09/23 10:42	01/10/23 19:30	1
Pyrene	**0.072**	**J**	0.19	0.039	ug/L		01/09/23 10:42	01/10/23 19:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*90*		*15 - 122*	*01/09/23 10:42*	*01/10/23 19:30*	*1*
Nitrobenzene-d5	*58*		*19 - 130*	*01/09/23 10:42*	*01/10/23 19:30*	*1*

Client Sample ID: P93C-ROX-010523
Date Collected: 01/05/23 10:30
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231397-11
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*59*		*33 - 138*	*01/09/23 10:42*	*01/10/23 19:30*	*1*

Method: SW846 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		01/09/23 10:42	01/10/23 20:56	1
Benzenethiol	ND	*-	9.7	1.6	ug/L		01/09/23 10:42	01/10/23 20:56	1
Benzoic acid	ND		29	7.1	ug/L		01/09/23 10:42	01/10/23 20:56	1
Benzyl alcohol	ND		9.7	1.9	ug/L		01/09/23 10:42	01/10/23 20:56	1
Bis(2-chloroethoxy)methane	ND		9.7	0.15	ug/L		01/09/23 10:42	01/10/23 20:56	1
Bis(2-chloroethyl)ether	ND		9.7	2.6	ug/L		01/09/23 10:42	01/10/23 20:56	1
bis (2-chloroisopropyl) ether	ND		9.7	0.15	ug/L		01/09/23 10:42	01/10/23 20:56	1
Bis(2-ethylhexyl) phthalate	ND		9.7	4.8	ug/L		01/09/23 10:42	01/10/23 20:56	1
4-Bromophenyl phenyl ether	ND		9.7	0.19	ug/L		01/09/23 10:42	01/10/23 20:56	1
Butyl benzyl phthalate	ND		9.7	0.18	ug/L		01/09/23 10:42	01/10/23 20:56	1
4-Chloroaniline	ND		9.7	3.3	ug/L		01/09/23 10:42	01/10/23 20:56	1
4-Chloro-3-methylphenol	ND		9.7	3.7	ug/L		01/09/23 10:42	01/10/23 20:56	1
2-Chloronaphthalene	ND		9.7	0.14	ug/L		01/09/23 10:42	01/10/23 20:56	1
2-Chlorophenol	ND		9.7	2.1	ug/L		01/09/23 10:42	01/10/23 20:56	1
4-Chlorophenyl phenyl ether	ND		9.7	1.9	ug/L		01/09/23 10:42	01/10/23 20:56	1
Dibenz[a,h]acridine	ND		9.7	0.97	ug/L		01/09/23 10:42	01/10/23 20:56	1
Dibenzofuran	ND		9.7	0.16	ug/L		01/09/23 10:42	01/10/23 20:56	1
3,3'-Dichlorobenzidine	ND		9.7	2.5	ug/L		01/09/23 10:42	01/10/23 20:56	1
2,4-Dichlorophenol	ND		9.7	2.9	ug/L		01/09/23 10:42	01/10/23 20:56	1
Diethyl phthalate	ND		9.7	0.23	ug/L		01/09/23 10:42	01/10/23 20:56	1
2,4-Dimethylphenol	ND		9.7	3.4	ug/L		01/09/23 10:42	01/10/23 20:56	1
Dimethyl phthalate	ND		9.7	0.16	ug/L		01/09/23 10:42	01/10/23 20:56	1
Di-n-butyl phthalate	ND		9.7	2.6	ug/L		01/09/23 10:42	01/10/23 20:56	1
4,6-Dinitro-ortho-cresol	ND		9.7	1.5	ug/L		01/09/23 10:42	01/10/23 20:56	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		01/09/23 10:42	01/10/23 20:56	1
2,4-Dinitrotoluene	ND		9.7	1.8	ug/L		01/09/23 10:42	01/10/23 20:56	1
2,6-Dinitrotoluene	ND		9.7	1.8	ug/L		01/09/23 10:42	01/10/23 20:56	1
Di-n-octyl phthalate	ND		9.7	0.16	ug/L		01/09/23 10:42	01/10/23 20:56	1
1,4-Dioxane	ND		9.7	0.97	ug/L		01/09/23 10:42	01/10/23 20:56	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.7	0.97	ug/L		01/09/23 10:42	01/10/23 20:56	1
Hexachlorobenzene	ND		9.7	0.16	ug/L		01/09/23 10:42	01/10/23 20:56	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		01/09/23 10:42	01/10/23 20:56	1
Hexachloroethane	ND		9.7	4.1	ug/L		01/09/23 10:42	01/10/23 20:56	1
Indene	ND		9.7	0.97	ug/L		01/09/23 10:42	01/10/23 20:56	1
Isophorone	ND		9.7	0.14	ug/L		01/09/23 10:42	01/10/23 20:56	1
2-Methylphenol	ND		9.7	1.7	ug/L		01/09/23 10:42	01/10/23 20:56	1
3 & 4 Methylphenol	ND		19	0.38	ug/L		01/09/23 10:42	01/10/23 20:56	1
2-Nitroaniline	ND		9.7	2.1	ug/L		01/09/23 10:42	01/10/23 20:56	1
3-Nitroaniline	ND		9.7	1.7	ug/L		01/09/23 10:42	01/10/23 20:56	1
4-Nitroaniline	ND		9.7	1.5	ug/L		01/09/23 10:42	01/10/23 20:56	1
Nitrobenzene	ND		9.7	0.13	ug/L		01/09/23 10:42	01/10/23 20:56	1
2-Nitrophenol	ND		9.7	5.0	ug/L		01/09/23 10:42	01/10/23 20:56	1
4-Nitrophenol	ND		9.7	2.0	ug/L		01/09/23 10:42	01/10/23 20:56	1
N-Nitrosodimethylamine	ND		9.7	3.4	ug/L		01/09/23 10:42	01/10/23 20:56	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: P93C-ROX-010523
Date Collected: 01/05/23 10:30
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231397-11
Matrix: Water

Method: SW846 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		01/09/23 10:42	01/10/23 20:56	1
N-Nitrosodiphenylamine	ND		9.7	0.17	ug/L		01/09/23 10:42	01/10/23 20:56	1
Pentachlorophenol	ND		19	1.4	ug/L		01/09/23 10:42	01/10/23 20:56	1
Phenol	ND		9.7	2.5	ug/L		01/09/23 10:42	01/10/23 20:56	1
Pyridine	ND		9.7	3.1	ug/L		01/09/23 10:42	01/10/23 20:56	1
Quinoline	ND	*-	9.7	4.4	ug/L		01/09/23 10:42	01/10/23 20:56	1
2,4,5-Trichlorophenol	ND		9.7	3.6	ug/L		01/09/23 10:42	01/10/23 20:56	1
2,4,6-Trichlorophenol	ND		9.7	3.4	ug/L		01/09/23 10:42	01/10/23 20:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*91*		*46 - 124*	*01/09/23 10:42*	*01/10/23 20:56*	*1*
2-Fluorophenol	*21*		*13 - 113*	*01/09/23 10:42*	*01/10/23 20:56*	*1*
Nitrobenzene-d5	*63*		*36 - 126*	*01/09/23 10:42*	*01/10/23 20:56*	*1*
Phenol-d5	*40*		*17 - 127*	*01/09/23 10:42*	*01/10/23 20:56*	*1*
Terphenyl-d14	*75*		*44 - 149*	*01/09/23 10:42*	*01/10/23 20:56*	*1*
2,4,6-Tribromophenol	*72*		*26 - 150*	*01/09/23 10:42*	*01/10/23 20:56*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.030	0.017	ug/L		01/12/23 13:01	01/13/23 16:28	1
1,2-D bromoethane	ND	*+	0.020	0.015	ug/L		01/12/23 13:01	01/13/23 16:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*109*	*p*	*51 - 149*	*01/12/23 13:01*	*01/13/23 16:28*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: P93D-ROX-010523
Date Collected: 01/05/23 12:05
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-12
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/10/23 14:31	1
Acrolein	ND		20	3.3	ug/L			01/10/23 14:31	1
Acrylonitrile	ND		10	2.8	ug/L			01/10/23 14:31	1
Benzene	ND		1.0	0.13	ug/L			01/10/23 14:31	1
Bromobenzene	ND		1.0	0.54	ug/L			01/10/23 14:31	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/10/23 14:31	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/10/23 14:31	1
Bromoform	ND		5.0	0.25	ug/L			01/10/23 14:31	1
Bromomethane	ND		1.0	0.98	ug/L			01/10/23 14:31	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/10/23 14:31	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/10/23 14:31	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/10/23 14:31	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/10/23 14:31	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/10/23 14:31	1
Chloroethane	ND		1.0	0.76	ug/L			01/10/23 14:31	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/10/23 14:31	1
Chloroform	ND		1.0	1.0	ug/L			01/10/23 14:31	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/10/23 14:31	1
Chloromethane	ND		1.0	0.32	ug/L			01/10/23 14:31	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/10/23 14:31	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/10/23 14:31	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/10/23 14:31	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/10/23 14:31	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/10/23 14:31	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/10/23 14:31	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/10/23 14:31	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/10/23 14:31	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/10/23 14:31	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 14:31	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 14:31	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 14:31	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/10/23 14:31	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/10/23 14:31	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/10/23 14:31	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/10/23 14:31	1
2-Hexanone	ND		25	1.4	ug/L			01/10/23 14:31	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/10/23 14:31	1
Methylene bromide	ND		5.0	0.22	ug/L			01/10/23 14:31	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/10/23 14:31	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/10/23 14:31	1
Methyl tert-butyl ether	**0.61**	**J**	1.0	0.22	ug/L			01/10/23 14:31	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/10/23 14:31	1
Naphthalene	ND		5.0	3.0	ug/L			01/10/23 14:31	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/10/23 14:31	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/10/23 14:31	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/10/23 14:31	1
o-Xylene	ND		5.0	0.60	ug/L			01/10/23 14:31	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/10/23 14:31	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/10/23 14:31	1

Client Sample ID: P93D-ROX-010523
Date Collected: 01/05/23 12:05
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-12
Matrix: Water

Method: SW846 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			01/10/23 14:31	1
Styrene	ND		1.0	1.0	ug/L			01/10/23 14:31	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/10/23 14:31	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/10/23 14:31	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/10/23 14:31	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/10/23 14:31	1
Toluene	ND		1.0	0.41	ug/L			01/10/23 14:31	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/10/23 14:31	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/10/23 14:31	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/10/23 14:31	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/10/23 14:31	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/10/23 14:31	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/10/23 14:31	1
Trichloroethene	ND		1.0	0.15	ug/L			01/10/23 14:31	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/10/23 14:31	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/10/23 14:31	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/10/23 14:31	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/10/23 14:31	1
Vinyl acetate	ND		25	0.93	ug/L			01/10/23 14:31	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/10/23 14:31	1
Xylenes, Total	ND		10	1.6	ug/L			01/10/23 14:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*104*		*72 - 119*		*01/10/23 14:31*	*1*
Dibromofluoromethane	*101*		*75 - 126*		*01/10/23 14:31*	*1*
Toluene-d8 (Surr)	*96*		*64 - 132*		*01/10/23 14:31*	*1*

Method: SW846 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	0.030	ug/L		01/09/23 10:42	01/10/23 19:47	1
Acenaphthylene	ND		0.19	0.042	ug/L		01/09/23 10:42	01/10/23 19:47	1
Anthracene	ND		0.19	0.030	ug/L		01/09/23 10:42	01/10/23 19:47	1
Benzo[a]anthracene	**0.22**		0.19	0.043	ug/L		01/09/23 10:42	01/10/23 19:47	1
Benzo[a]pyrene	ND		0.19	0.040	ug/L		01/09/23 10:42	01/10/23 19:47	1
Benzo[b]fluoranthene	**0.33**		0.19	0.032	ug/L		01/09/23 10:42	01/10/23 19:47	1
Benzo[g,h,i]perylene	ND		0.19	0.12	ug/L		01/09/23 10:42	01/10/23 19:47	1
Benzo[k]fluoranthene	**0.26**		0.19	0.094	ug/L		01/09/23 10:42	01/10/23 19:47	1
Chrysene	**0.21**		0.19	0.070	ug/L		01/09/23 10:42	01/10/23 19:47	1
Dibenz(a,h)anthracene	ND		0.19	0.047	ug/L		01/09/23 10:42	01/10/23 19:47	1
Fluoranthene	**0.18**	**J**	0.19	0.064	ug/L		01/09/23 10:42	01/10/23 19:47	1
Fluorene	ND		0.19	0.10	ug/L		01/09/23 10:42	01/10/23 19:47	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.041	ug/L		01/09/23 10:42	01/10/23 19:47	1
1-Methylnaphthalene	ND		0.19	0.070	ug/L		01/09/23 10:42	01/10/23 19:47	1
2-Methylnaphthalene	ND		0.19	0.057	ug/L		01/09/23 10:42	01/10/23 19:47	1
Phenanthrene	ND		0.19	0.034	ug/L		01/09/23 10:42	01/10/23 19:47	1
Pyrene	**0.15**	**J**	0.19	0.038	ug/L		01/09/23 10:42	01/10/23 19:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*99*		*15 - 122*	*01/09/23 10:42*	*01/10/23 19:47*	*1*
Nitrobenzene-d5	*65*		*19 - 130*	*01/09/23 10:42*	*01/10/23 19:47*	*1*

Client Sample ID: P93D-ROX-010523

Date Collected: 01/05/23 12:05
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-12

Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*100*		*33 - 138*	*01/09/23 10:42*	*01/10/23 19:47*	*1*

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND	H	0.19	0.044	ug/L		02/02/23 14:02	03/03/23 11:50	1
Benzo[b]fluoranthene	ND	H	0.19	0.033	ug/L		02/02/23 14:02	03/03/23 11:50	1
Benzo[k]fluoranthene	ND	H	0.19	0.096	ug/L		02/02/23 14:02	03/03/23 11:50	1
Chrysene	ND	H	0.19	0.071	ug/L		02/02/23 14:02	03/03/23 11:50	1
Dibenz(a,h)anthracene	ND	H	0.19	0.048	ug/L		02/02/23 14:02	03/03/23 11:50	1
Pyrene	ND	H	0.19	0.038	ug/L		02/02/23 14:02	03/03/23 11:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*85*		*15 - 122*	*02/02/23 14:02*	*03/03/23 11:50*	*1*
Nitrobenzene-d5	*86*		*19 - 130*	*02/02/23 14:02*	*03/03/23 11:50*	*1*
Terphenyl-d14	*109*		*33 - 138*	*02/02/23 14:02*	*03/03/23 11:50*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.4	3.6	ug/L		01/09/23 10:42	01/10/23 21:21	1
Benzenethiol	ND	*-	9.4	1.6	ug/L		01/09/23 10:42	01/10/23 21:21	1
Benzoic acid	ND		28	6.9	ug/L		01/09/23 10:42	01/10/23 21:21	1
Benzyl alcohol	ND		9.4	1.9	ug/L		01/09/23 10:42	01/10/23 21:21	1
Bis(2-chloroethoxy)methane	ND		9.4	0.15	ug/L		01/09/23 10:42	01/10/23 21:21	1
Bis(2-chloroethyl)ether	ND		9.4	2.5	ug/L		01/09/23 10:42	01/10/23 21:21	1
bis (2-chloroisopropyl) ether	ND		9.4	0.15	ug/L		01/09/23 10:42	01/10/23 21:21	1
Bis(2-ethylhexyl) phthalate	ND		9.4	4.7	ug/L		01/09/23 10:42	01/10/23 21:21	1
4-Bromophenyl phenyl ether	ND		9.4	0.19	ug/L		01/09/23 10:42	01/10/23 21:21	1
Butyl benzyl phthalate	ND		9.4	0.18	ug/L		01/09/23 10:42	01/10/23 21:21	1
4-Chloroaniline	ND		9.4	3.2	ug/L		01/09/23 10:42	01/10/23 21:21	1
4-Chloro-3-methylphenol	ND		9.4	3.6	ug/L		01/09/23 10:42	01/10/23 21:21	1
2-Chloronaphthalene	ND		9.4	0.13	ug/L		01/09/23 10:42	01/10/23 21:21	1
2-Chlorophenol	ND		9.4	2.1	ug/L		01/09/23 10:42	01/10/23 21:21	1
4-Chlorophenyl phenyl ether	ND		9.4	1.9	ug/L		01/09/23 10:42	01/10/23 21:21	1
Dibenz[a,h]acridine	ND		9.4	0.94	ug/L		01/09/23 10:42	01/10/23 21:21	1
Dibenzofuran	ND		9.4	0.16	ug/L		01/09/23 10:42	01/10/23 21:21	1
3,3'-Dichlorobenzidine	ND		9.4	2.5	ug/L		01/09/23 10:42	01/10/23 21:21	1
2,4-Dichlorophenol	ND		9.4	2.8	ug/L		01/09/23 10:42	01/10/23 21:21	1
Diethyl phthalate	ND		9.4	0.23	ug/L		01/09/23 10:42	01/10/23 21:21	1
2,4-Dimethylphenol	ND		9.4	3.3	ug/L		01/09/23 10:42	01/10/23 21:21	1
Dimethyl phthalate	ND		9.4	0.16	ug/L		01/09/23 10:42	01/10/23 21:21	1
Di-n-butyl phthalate	ND		9.4	2.5	ug/L		01/09/23 10:42	01/10/23 21:21	1
4,6-Dinitro-ortho-cresol	ND		9.4	1.5	ug/L		01/09/23 10:42	01/10/23 21:21	1
2,4-Dinitrophenol	ND		28	3.2	ug/L		01/09/23 10:42	01/10/23 21:21	1
2,4-Dinitrotoluene	ND		9.4	1.8	ug/L		01/09/23 10:42	01/10/23 21:21	1
2,6-Dinitrotoluene	ND		9.4	1.8	ug/L		01/09/23 10:42	01/10/23 21:21	1
Di-n-octyl phthalate	ND		9.4	0.16	ug/L		01/09/23 10:42	01/10/23 21:21	1
1,4-Dioxane	ND		9.4	0.94	ug/L		01/09/23 10:42	01/10/23 21:21	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.4	0.94	ug/L		01/09/23 10:42	01/10/23 21:21	1
Hexachlorobenzene	ND		9.4	0.16	ug/L		01/09/23 10:42	01/10/23 21:21	1

Client Sample ID: P93D-ROX-010523

Date Collected: 01/05/23 12:05
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-12

Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		01/09/23 10:42	01/10/23 21:21	1
Hexachloroethane	ND		9.4	4.0	ug/L		01/09/23 10:42	01/10/23 21:21	1
Indene	ND		9.4	0.94	ug/L		01/09/23 10:42	01/10/23 21:21	1
Isophorone	ND		9.4	0.13	ug/L		01/09/23 10:42	01/10/23 21:21	1
2-Methylphenol	ND		9.4	1.7	ug/L		01/09/23 10:42	01/10/23 21:21	1
3 & 4 Methylphenol	ND		19	0.37	ug/L		01/09/23 10:42	01/10/23 21:21	1
2-Nitroaniline	ND		9.4	2.1	ug/L		01/09/23 10:42	01/10/23 21:21	1
3-Nitroaniline	ND		9.4	1.7	ug/L		01/09/23 10:42	01/10/23 21:21	1
4-Nitroaniline	ND		9.4	1.4	ug/L		01/09/23 10:42	01/10/23 21:21	1
Nitrobenzene	ND		9.4	0.12	ug/L		01/09/23 10:42	01/10/23 21:21	1
2-Nitrophenol	ND		9.4	4.9	ug/L		01/09/23 10:42	01/10/23 21:21	1
4-Nitrophenol	ND		9.4	2.0	ug/L		01/09/23 10:42	01/10/23 21:21	1
N-Nitrosodimethylamine	ND		9.4	3.3	ug/L		01/09/23 10:42	01/10/23 21:21	1
N-Nitrosodi-n-propylamine	ND		9.4	3.1	ug/L		01/09/23 10:42	01/10/23 21:21	1
N-Nitrosodiphenylamine	ND		9.4	0.17	ug/L		01/09/23 10:42	01/10/23 21:21	1
Pentachlorophenol	ND		19	1.3	ug/L		01/09/23 10:42	01/10/23 21:21	1
Phenol	ND		9.4	2.5	ug/L		01/09/23 10:42	01/10/23 21:21	1
Pyridine	ND		9.4	3.0	ug/L		01/09/23 10:42	01/10/23 21:21	1
Quinoline	ND	*-	9.4	4.2	ug/L		01/09/23 10:42	01/10/23 21:21	1
2,4,5-Trichlorophenol	ND		9.4	3.5	ug/L		01/09/23 10:42	01/10/23 21:21	1
2,4,6-Trichlorophenol	ND		9.4	3.3	ug/L		01/09/23 10:42	01/10/23 21:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*96*		*46 - 124*	*01/09/23 10:42*	*01/10/23 21:21*	*1*
2-Fluorophenol	*11*	*S1-*	*13 - 113*	*01/09/23 10:42*	*01/10/23 21:21*	*1*
Nitrobenzene-d5	*65*		*36 - 126*	*01/09/23 10:42*	*01/10/23 21:21*	*1*
Phenol-d5	*33*		*17 - 127*	*01/09/23 10:42*	*01/10/23 21:21*	*1*
Terphenyl-d14	*111*		*44 - 149*	*01/09/23 10:42*	*01/10/23 21:21*	*1*
2,4,6-Tribromophenol	*74*		*26 - 150*	*01/09/23 10:42*	*01/10/23 21:21*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.032	0.018	ug/L		01/12/23 13:01	01/13/23 16:48	1
1,2-D bromoethane	ND	*+	0.021	0.016	ug/L		01/12/23 13:01	01/13/23 16:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*	*p*	*51 - 149*	*01/12/23 13:01*	*01/13/23 16:48*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: MW28-ROX-010523

Date Collected: 01/05/23 13:10
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-13

Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/10/23 10:11	1
Acrolein	ND		20	3.3	ug/L			01/10/23 10:11	1
Acrylonitrile	ND		10	2.8	ug/L			01/10/23 10:11	1
Benzene	**0.38**	**J**	1.0	0.13	ug/L			01/10/23 10:11	1
Bromobenzene	ND		1.0	0.54	ug/L			01/10/23 10:11	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/10/23 10:11	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/10/23 10:11	1
Bromoform	ND		5.0	0.25	ug/L			01/10/23 10:11	1
Bromomethane	ND		1.0	0.98	ug/L			01/10/23 10:11	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/10/23 10:11	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/10/23 10:11	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/10/23 10:11	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/10/23 10:11	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/10/23 10:11	1
Chloroethane	ND		1.0	0.76	ug/L			01/10/23 10:11	1
2-Chloroethyl vinyl ether	ND	F2 F1	5.0	2.0	ug/L			01/10/23 10:11	1
Chloroform	ND		1.0	1.0	ug/L			01/10/23 10:11	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/10/23 10:11	1
Chloromethane	ND		1.0	0.32	ug/L			01/10/23 10:11	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/10/23 10:11	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/10/23 10:11	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/10/23 10:11	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/10/23 10:11	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/10/23 10:11	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/10/23 10:11	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/10/23 10:11	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/10/23 10:11	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/10/23 10:11	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 10:11	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 10:11	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 10:11	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/10/23 10:11	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/10/23 10:11	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/10/23 10:11	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/10/23 10:11	1
2-Hexanone	ND		25	1.4	ug/L			01/10/23 10:11	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/10/23 10:11	1
Methylene bromide	ND		5.0	0.22	ug/L			01/10/23 10:11	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/10/23 10:11	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/10/23 10:11	1
Methyl tert-butyl ether	**2.6**		1.0	0.22	ug/L			01/10/23 10:11	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/10/23 10:11	1
Naphthalene	ND		5.0	3.0	ug/L			01/10/23 10:11	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/10/23 10:11	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/10/23 10:11	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/10/23 10:11	1
o-Xylene	ND		5.0	0.60	ug/L			01/10/23 10:11	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/10/23 10:11	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/10/23 10:11	1

Client Sample ID: MW28-ROX-010523
Date Collected: 01/05/23 13:10
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-13
Matrix: Water

Method: SW846 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			01/10/23 10:11	1
Styrene	ND		1.0	1.0	ug/L			01/10/23 10:11	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/10/23 10:11	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/10/23 10:11	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/10/23 10:11	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/10/23 10:11	1
Toluene	ND		1.0	0.41	ug/L			01/10/23 10:11	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/10/23 10:11	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/10/23 10:11	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/10/23 10:11	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/10/23 10:11	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/10/23 10:11	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/10/23 10:11	1
Trichloroethene	ND		1.0	0.15	ug/L			01/10/23 10:11	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/10/23 10:11	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/10/23 10:11	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/10/23 10:11	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/10/23 10:11	1
Vinyl acetate	ND		25	0.93	ug/L			01/10/23 10:11	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/10/23 10:11	1
Xylenes, Total	ND		10	1.6	ug/L			01/10/23 10:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*104*		*72 - 119*		*01/10/23 10:11*	*1*
Dibromofluoromethane	*101*		*75 - 126*		*01/10/23 10:11*	*1*
Toluene-d8 (Surr)	*95*		*64 - 132*		*01/10/23 10:11*	*1*

Method: SW846 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	0.031	ug/L		01/09/23 10:42	01/10/23 20:05	1
Acenaphthylene	ND		0.20	0.044	ug/L		01/09/23 10:42	01/10/23 20:05	1
Anthracene	ND		0.20	0.031	ug/L		01/09/23 10:42	01/10/23 20:05	1
Benzo[a]anthracene	ND		0.20	0.045	ug/L		01/09/23 10:42	01/10/23 20:05	1
Benzo[a]pyrene	ND		0.20	0.041	ug/L		01/09/23 10:42	01/10/23 20:05	1
Benzo[b]fluoranthene	ND		0.20	0.033	ug/L		01/09/23 10:42	01/10/23 20:05	1
Benzo[g,h,i]perylene	ND		0.20	0.13	ug/L		01/09/23 10:42	01/10/23 20:05	1
Benzo[k]fluoranthene	ND		0.20	0.098	ug/L		01/09/23 10:42	01/10/23 20:05	1
Chrysene	ND		0.20	0.072	ug/L		01/09/23 10:42	01/10/23 20:05	1
Dibenz(a,h)anthracene	ND		0 20	0 049	ug/L		01/09/23 10 42	01/10/23 20 05	1
Fluoranthene	ND		0.20	0.067	ug/L		01/09/23 10:42	01/10/23 20:05	1
Fluorene	ND		0.20	0.11	ug/L		01/09/23 10:42	01/10/23 20:05	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.042	ug/L		01/09/23 10:42	01/10/23 20:05	1
1-Methylnaphthalene	ND		0.20	0.072	ug/L		01/09/23 10:42	01/10/23 20:05	1
2-Methylnaphthalene	ND		0.20	0.059	ug/L		01/09/23 10:42	01/10/23 20:05	1
Phenanthrene	ND		0.20	0.035	ug/L		01/09/23 10:42	01/10/23 20:05	1
Pyrene	ND		0.20	0.039	ug/L		01/09/23 10:42	01/10/23 20:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*101*		*15 - 122*	*01/09/23 10:42*	*01/10/23 20:05*	*1*
Nitrobenzene-d5	*68*		*19 - 130*	*01/09/23 10:42*	*01/10/23 20:05*	*1*

Client Sample ID: MW28-ROX-010523
Date Collected: 01/05/23 13:10
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-13
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*117*		*33 - 138*	*01/09/23 10:42*	*01/10/23 20:05*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND	F1	9.8	3.7	ug/L		01/09/23 10:42	01/10/23 21:46	1
Benzenethiol	ND	*-	9.8	1.7	ug/L		01/09/23 10:42	01/10/23 21:46	1
Benzoic acid	ND		29	7.1	ug/L		01/09/23 10:42	01/10/23 21:46	1
Benzyl alcohol	ND		9.8	2.0	ug/L		01/09/23 10:42	01/10/23 21:46	1
Bis(2-chloroethoxy)methane	ND		9.8	0.16	ug/L		01/09/23 10:42	01/10/23 21:46	1
Bis(2-chloroethyl)ether	ND	F2 F1	9.8	2.6	ug/L		01/09/23 10:42	01/10/23 21:46	1
bis (2-chloroisopropyl) ether	ND		9.8	0.16	ug/L		01/09/23 10:42	01/10/23 21:46	1
Bis(2-ethylhexyl) phthalate	ND		9.8	4.9	ug/L		01/09/23 10:42	01/10/23 21:46	1
4-Bromophenyl phenyl ether	ND		9.8	0.20	ug/L		01/09/23 10:42	01/10/23 21:46	1
Butyl benzyl phthalate	ND		9.8	0.19	ug/L		01/09/23 10:42	01/10/23 21:46	1
4-Chloroaniline	ND		9.8	3.3	ug/L		01/09/23 10:42	01/10/23 21:46	1
4-Chloro-3-methylphenol	ND		9.8	3.7	ug/L		01/09/23 10:42	01/10/23 21:46	1
2-Chloronaphthalene	ND		9.8	0.14	ug/L		01/09/23 10:42	01/10/23 21:46	1
2-Chlorophenol	ND		9.8	2.2	ug/L		01/09/23 10:42	01/10/23 21:46	1
4-Chlorophenyl phenyl ether	ND		9.8	2.0	ug/L		01/09/23 10:42	01/10/23 21:46	1
Dibenz[a,h]acridine	ND	F1	9.8	0.98	ug/L		01/09/23 10:42	01/10/23 21:46	1
Dibenzofuran	ND		9.8	0.17	ug/L		01/09/23 10:42	01/10/23 21:46	1
3,3'-Dichlorobenzidine	ND		9.8	2.5	ug/L		01/09/23 10:42	01/10/23 21:46	1
2,4-Dichlorophenol	ND		9.8	2.9	ug/L		01/09/23 10:42	01/10/23 21:46	1
Diethyl phthalate	**1.0**	**J**	9.8	0.23	ug/L		01/09/23 10:42	01/10/23 21:46	1
2,4-Dimethylphenol	ND		9.8	3.4	ug/L		01/09/23 10:42	01/10/23 21:46	1
Dimethyl phthalate	ND		9.8	0.17	ug/L		01/09/23 10:42	01/10/23 21:46	1
Di-n-butyl phthalate	ND		9.8	2.6	ug/L		01/09/23 10:42	01/10/23 21:46	1
4,6-Dinitro-ortho-cresol	ND		9.8	1.6	ug/L		01/09/23 10:42	01/10/23 21:46	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		01/09/23 10:42	01/10/23 21:46	1
2,4-Dinitrotoluene	ND		9.8	1.9	ug/L		01/09/23 10:42	01/10/23 21:46	1
2,6-Dinitrotoluene	ND		9.8	1.9	ug/L		01/09/23 10:42	01/10/23 21:46	1
Di-n-octyl phthalate	ND		9.8	0.17	ug/L		01/09/23 10:42	01/10/23 21:46	1
1,4-Dioxane	ND	F1	9.8	0.98	ug/L		01/09/23 10:42	01/10/23 21:46	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.8	0.98	ug/L		01/09/23 10:42	01/10/23 21:46	1
Hexachlorobenzene	ND		9.8	0.17	ug/L		01/09/23 10:42	01/10/23 21:46	1
Hexachlorocyclopentadiene	ND		20	2.5	ug/L		01/09/23 10:42	01/10/23 21:46	1
Hexachloroethane	ND		9.8	4.1	ug/L		01/09/23 10:42	01/10/23 21:46	1
Indene	ND		9.8	0.98	ug/L		01/09/23 10:42	01/10/23 21:46	1
Isophorone	ND		9.8	0.14	ug/L		01/09/23 10:42	01/10/23 21:46	1
2-Methylphenol	ND		9.8	1.8	ug/L		01/09/23 10:42	01/10/23 21:46	1
3 & 4 Methylphenol	ND		20	0.38	ug/L		01/09/23 10:42	01/10/23 21:46	1
2-Nitroaniline	ND		9.8	2.2	ug/L		01/09/23 10:42	01/10/23 21:46	1
3-Nitroaniline	ND		9.8	1.8	ug/L		01/09/23 10:42	01/10/23 21:46	1
4-Nitroaniline	ND		9.8	1.5	ug/L		01/09/23 10:42	01/10/23 21:46	1
Nitrobenzene	ND		9.8	0.13	ug/L		01/09/23 10:42	01/10/23 21:46	1
2-Nitrophenol	ND		9.8	5.1	ug/L		01/09/23 10:42	01/10/23 21:46	1
4-Nitrophenol	ND		9.8	2.1	ug/L		01/09/23 10:42	01/10/23 21:46	1
N-Nitrosodimethylamine	ND		9.8	3.4	ug/L		01/09/23 10:42	01/10/23 21:46	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: MW28-ROX-010523
Date Collected: 01/05/23 13:10
Date Received: 01/06/23 08:58

Lab Sample ID: 400-231397-13
Matrix: Water

Method: SW846 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		01/09/23 10:42	01/10/23 21:46	1
N-Nitrosodiphenylamine	ND		9.8	0.18	ug/L		01/09/23 10:42	01/10/23 21:46	1
Pentachlorophenol	ND		20	1.4	ug/L		01/09/23 10:42	01/10/23 21:46	1
Phenol	ND		9.8	2.5	ug/L		01/09/23 10:42	01/10/23 21:46	1
Pyridine	ND		9.8	3.1	ug/L		01/09/23 10:42	01/10/23 21:46	1
Quinoline	ND	F1 *-	9.8	4.4	ug/L		01/09/23 10:42	01/10/23 21:46	1
2,4,5-Trichlorophenol	ND		9.8	3.6	ug/L		01/09/23 10:42	01/10/23 21:46	1
2,4,6-Trichlorophenol	ND		9.8	3.4	ug/L		01/09/23 10:42	01/10/23 21:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*99*		*46 - 124*	*01/09/23 10:42*	*01/10/23 21:46*	*1*
2-Fluorophenol	*13*		*13 - 113*	*01/09/23 10:42*	*01/10/23 21:46*	*1*
Nitrobenzene-d5	*68*		*36 - 126*	*01/09/23 10:42*	*01/10/23 21:46*	*1*
Phenol-d5	*43*		*17 - 127*	*01/09/23 10:42*	*01/10/23 21:46*	*1*
Terphenyl-d14	*125*		*44 - 149*	*01/09/23 10:42*	*01/10/23 21:46*	*1*
2,4,6-Tribromophenol	*58*		*26 - 150*	*01/09/23 10:42*	*01/10/23 21:46*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	F1 *+	0.030	0.017	ug/L		01/12/23 13:01	01/13/23 17:08	1
1,2-D bromoethane	ND	*+	0.020	0.015	ug/L		01/12/23 13:01	01/13/23 17:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*106*	*p*	*51 - 149*	*01/12/23 13:01*	*01/13/23 17:08*	*1*

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds 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/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds 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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TNTC	Too Numerous To Count

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

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	(72-119)	(75-126)	(64-132)
400-231397-1	TB-ROX-010523-8260-A	102	99	95
400-231397-3	MW16-ROX-010523-EB	103	101	96
400-231397-4	MW16-ROX-010523	102	100	95
400-231397-5	ROST3MW-ROX-010523	103	102	96
400-231397-6	MW9-ROX-010523	102	101	96
400-231397-7	TB-ROX-010523-8260-B	102	103	96
400-231397-9	P93A-ROX-010523-EB	103	103	96
400-231397-10	P93A-ROX-010523	102	102	96
400-231397-11	P93C-ROX-010523	105	101	95
400-231397-12	P93D-ROX-010523	104	101	96
400-231397-13	MW28-ROX-010523	104	101	95
400-231397-13 MS	MW28-ROX-010523	97	98	97
400-231397-13 MSD	MW28-ROX-010523	96	99	97
LCS 400-607812/1002	Lab Control Sample	100	99	97
MB 400-607812/4	Method Blank	104	102	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	(46 124)	(13 113)	(36 126)	(17 127)	(44 149)	(26 150)
400-231397-3	MW16-ROX-010523-EB	106	36	72	61	125	90
400-231397-4	MW16-ROX-010523	97	8 S1-	64	27	124	53
400-231397-5	ROST3MW-ROX-010523	82	36	58	49	91	66
400-231397-6	MW9-ROX-010523	91	8 S1-	64	27	125	51
400-231397-9	P93A-ROX-010523-EB	94	22	65	48	121	61
400-231397-10	P93A-ROX-010523	90	24	61	48	115	57
400-231397-11	P93C-ROX-010523	91	21	63	40	75	72
400-231397-12	P93D-ROX-010523	96	11 S1-	65	33	111	74
400-231397-13	MW28-ROX-010523	99	13	68	43	125	58
400-231397-13 MS	MW28-ROX-010523	105	28	69	60	128	107
400-231397-13 MSD	MW28-ROX-010523	103	36	73	63	127	106
LCS 400-607741/2-A	Lab Control Sample	95	39	67	61	116	102
LCS 400-607741/5-A	Lab Control Sample	112	38	76	63	137	57
LCSD 400-607741/6-A	Lab Control Sample Dup	109	41	74	64	129	61
MB 400-607741/1-A	Method Blank	107	63	74	49	139	96

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 GW

Job ID: 400-231397-1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	NBZ	TPHL
Lab Sample ID	Client Sample ID	(15-122)	(19-130)	(33-138)
400-231397-3	MW16-ROX-010523-EB	105	69	125
400-231397-4	MW16-ROX-010523	96	62	120
400-231397-5	ROST3MW-ROX-010523	77	51	80
400-231397-6	MW9-ROX-010523	91	62	109
400-231397-9	P93A-ROX-010523-EB	100	69	117
400-231397-10	P93A-ROX-010523	96	63	113
400-231397-10 - RE	P93A-ROX-010523	87	85	100
400-231397-11	P93C-ROX-010523	90	58	59
400-231397-12	P93D-ROX-010523	99	65	100
400-231397-12 - RE	P93D-ROX-010523	85	86	109
400-231397-13	MW28-ROX-010523	101	68	117
400-231397-13 MS	MW28-ROX-010523	94	65	104
400-231397-13 MSD	MW28-ROX-010523	92	63	95
LCS 400-607741/2-A	Lab Control Sample	93	64	102
LCS 400-610934/2-A - RE	Lab Control Sample	82	107	99
LCSD 400-610934/3-A - RE	Lab Control Sample Dup	82	100	97
MB 400-607741/1-A	Method Blank	102	70	115
MB 400-610934/1-A	Method Blank	79	79	96

Surrogate Legend

FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14

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)
400-231397-2	TB-ROX-010523-8011-A	97 p
400-231397-3	MW16-ROX-010523-EB	111 p
400-231397-4	MW16-ROX-010523	105 p
400-231397-5	ROST3MW-ROX-010523	116
400-231397-6	MW9-ROX-010523	112 p
400-231397-8	TB-ROX-010523-8011-B	102 p
400-231397-9	P93A-ROX-010523-EB	109 p
400-231397-10	P93A-ROX-010523	116 p
400-231397-11	P93C-ROX-010523	109 p
400-231397-12	P93D-ROX-010523	99 p
400-231397-13	MW28-ROX-010523	106 p
400-231397-13 MS	MW28-ROX-010523	111 p
400-231397-13 MSD	MW28-ROX-010523	117 p
LCS 400-608226/2-A	Lab Control Sample	118
LCSD 400-608226/3-A	Lab Control Sample Dup	111
MB 400-608226/1-A	Method Blank	102

Surrogate Legend

BFB = 4-Bromofluorobenzene

Method Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	EET PEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	EET PEN
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	EET PEN
8011	EDB and DBCP in Water by Microextraction	EPA	EET PEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	EET PEN
5030B	Purge and Trap	SW846	EET PEN
8011	Microextraction	SW846	EET 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:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: TB-ROX-010523-8260-A
Lab Sample ID: 400-231397-1
Date Collected: 01/05/23 12:00
Matrix: Water
Date Received: 01/07/23 09:10

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	607812	01/10/23 11:43	WPD	EET PEN

Client Sample ID: TB-ROX-010523-8011-A
Lab Sample ID: 400-231397-2
Date Collected: 01/05/23 12:00
Matrix: Water
Date Received: 01/07/23 09:10

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	608226	01/12/23 13:01	JAW	EET PEN
Total/NA	Analysis	8011		1			608261	01/13/23 10:49	JAW	EET PEN

Client Sample ID: MW16-ROX-010523-EB
Lab Sample ID: 400-231397-3
Date Collected: 01/05/23 08:30
Matrix: Water
Date Received: 01/06/23 08:58

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	607812	01/10/23 09:27	WPD	EET PEN
Total/NA	Prep	3520C			238 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	607924	01/10/23 18:24	S1B	EET PEN
Total/NA	Prep	3520C			238 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	607925	01/10/23 17:48	PP1	EET PEN
Total/NA	Prep	8011			34.8 mL	35 mL	608226	01/12/23 13:01	JAW	EET PEN
Total/NA	Analysis	8011		1			608261	01/13/23 11:10	JAW	EET PEN

Client Sample ID: MW16-ROX-010523
Lab Sample ID: 400-231397-4
Date Collected: 01/05/23 09:45
Matrix: Water
Date Received: 01/06/23 08:58

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	607812	01/10/23 12:29	WPD	EET PEN
Total/NA	Prep	3520C			235.8 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	607924	01/10/23 18:49	S1B	EET PEN
Total/NA	Prep	3520C			235.8 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	607925	01/10/23 18:05	PP1	EET PEN
Total/NA	Prep	8011			35.3 mL	35 mL	608226	01/12/23 13:01	JAW	EET PEN
Total/NA	Analysis	8011		1			608261	01/13/23 11:30	JAW	EET PEN

Client Sample ID: ROST3MW-ROX-010523
Lab Sample ID: 400-231397-5
Date Collected: 01/05/23 10:50
Matrix: Water
Date Received: 01/06/23 08:58

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	607812	01/10/23 12:53	WPD	EET PEN
Total/NA	Prep	3520C			241 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	607924	01/10/23 19:15	S1B	EET PEN

Client Sample ID: ROST3MW-ROX-010523

Lab Sample ID: 400-231397-5

Date Collected: 01/05/23 10:50

Matrix: Water

Date Received: 01/06/23 08:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			241 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	607925	01/10/23 18:22	PP1	EET PEN
Total/NA	Prep	8011			34.8 mL	35 mL	608226	01/12/23 13:01	JAW	EET PEN
Total/NA	Analysis	8011		1			608261	01/13/23 11:50	JAW	EET PEN

Client Sample ID: MW9-ROX-010523

Lab Sample ID: 400-231397-6

Date Collected: 01/05/23 11:55

Matrix: Water

Date Received: 01/06/23 08:58

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	607812	01/10/23 13:18	WPD	EET PEN
Total/NA	Prep	3520C			243.4 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	607924	01/10/23 19:40	S1B	EET PEN
Total/NA	Prep	3520C			243.4 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	607925	01/10/23 18:39	PP1	EET PEN
Total/NA	Prep	8011			34.5 mL	35 mL	608226	01/12/23 13:01	JAW	EET PEN
Total/NA	Analysis	8011		1			608261	01/13/23 12:10	JAW	EET PEN

Client Sample ID: TB-ROX-010523-8260-B

Lab Sample ID: 400-231397-7

Date Collected: 01/05/23 12:00

Matrix: Water

Date Received: 01/07/23 09:10

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	607812	01/10/23 12:04	WPD	EET PEN

Client Sample ID: TB-ROX-010523-8011-B

Lab Sample ID: 400-231397-8

Date Collected: 01/05/23 12:00

Matrix: Water

Date Received: 01/07/23 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			34.9 mL	35 mL	608226	01/12/23 13:01	JAW	EET PEN
Total/NA	Analysis	8011		1			608261	01/13/23 12:30	JAW	EET PEN

Client Sample ID: P93A-ROX-010523-EB

Lab Sample ID: 400-231397-9

Date Collected: 01/05/23 08:15

Matrix: Water

Date Received: 01/06/23 08:58

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	607812	01/10/23 09:49	WPD	EET PEN
Total/NA	Prep	3520C			260.8 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	607924	01/10/23 20:06	S1B	EET PEN
Total/NA	Prep	3520C			260.8 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	607925	01/10/23 18:56	PP1	EET PEN
Total/NA	Prep	8011			34.6 mL	35 mL	608226	01/12/23 13:01	JAW	EET PEN
Total/NA	Analysis	8011		1			608261	01/13/23 15:48	JAW	EET PEN

Client Sample ID: P93A-ROX-010523

Lab Sample ID: 400-231397-10

Date Collected: 01/05/23 09:30

Matrix: Water

Date Received: 01/07/23 09:10

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	607812	01/10/23 13:42	WPD	EET PEN
Total/NA	Prep	3520C			260.2 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	607924	01/10/23 20:31	S1B	EET PEN
Total/NA	Prep	3520C			260.2 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	607925	01/10/23 19:13	PP1	EET PEN
Total/NA	Prep	3520C	RA		260.2 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D LL	RA	1	0.4 mL	0.4 mL	610183	01/27/23 18:54	PP1	EET PEN
Total/NA	Prep	3520C	RE		259.4 mL	1 mL	610934	02/02/23 14:02	BKL	EET PEN
Total/NA	Analysis	8270D LL	RE	1	0.4 mL	0.4 mL	614729	03/03/23 11:33	DHW	EET PEN
Total/NA	Prep	8011			34.6 mL	35 mL	608226	01/12/23 13:01	JAW	EET PEN
Total/NA	Analysis	8011		1			608261	01/13/23 16:08	JAW	EET PEN

Client Sample ID: P93C-ROX-010523

Lab Sample ID: 400-231397-11

Date Collected: 01/05/23 10:30

Matrix: Water

Date Received: 01/07/23 09:10

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	607812	01/10/23 14:07	WPD	EET PEN
Total/NA	Prep	3520C			258.6 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	607924	01/10/23 20:56	S1B	EET PEN
Total/NA	Prep	3520C			258.6 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	607925	01/10/23 19:30	PP1	EET PEN
Total/NA	Prep	8011			34.9 mL	35 mL	608226	01/12/23 13:01	JAW	EET PEN
Total/NA	Analysis	8011		1			608261	01/13/23 16:28	JAW	EET PEN

Client Sample ID: P93D-ROX-010523

Lab Sample ID: 400-231397-12

Date Collected: 01/05/23 12:05

Matrix: Water

Date Received: 01/06/23 08:58

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	607812	01/10/23 14:31	WPD	EET PEN
Total/NA	Prep	3520C			265.2 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	607924	01/10/23 21:21	S1B	EET PEN
Total/NA	Prep	3520C			265.2 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	607925	01/10/23 19:47	PP1	EET PEN
Total/NA	Prep	3520C	RE		260.4 mL	1 mL	610934	02/02/23 14:02	BKL	EET PEN
Total/NA	Analysis	8270D LL	RE	1	0.4 mL	0.4 mL	614729	03/03/23 11:50	DHW	EET PEN
Total/NA	Prep	8011			33.1 mL	35 mL	608226	01/12/23 13:01	JAW	EET PEN
Total/NA	Analysis	8011		1			608261	01/13/23 16:48	JAW	EET PEN

Client Sample ID: MW28-ROX-010523

Lab Sample ID: 400-231397-13

Date Collected: 01/05/23 13:10

Matrix: Water

Date Received: 01/06/23 08:58

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	607812	01/10/23 10:11	WPD	EET PEN
Total/NA	Prep	3520C			255.6 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	607924	01/10/23 21:46	S1B	EET PEN
Total/NA	Prep	3520C			255.6 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	607925	01/10/23 20:05	PP1	EET PEN
Total/NA	Prep	8011			35.5 mL	35 mL	608226	01/12/23 13:01	JAW	EET PEN
Total/NA	Analysis	8011		1			608261	01/13/23 17:08	JAW	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-607741/1-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			250 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	607924	01/10/23 15:51	S1B	EET PEN
Total/NA	Prep	3520C			250 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	607925	01/10/23 16:39	PP1	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-607812/4

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	607812	01/10/23 07:55	WPD	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-608226/1-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	608226	01/12/23 13:01	JAW	EET PEN
Total/NA	Analysis	8011		1			608261	01/12/23 16:14	JAW	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-610934/1-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			250 mL	1 mL	610934	02/02/23 14:02	BKL	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	614729	03/03/23 11:15	DHW	EET PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-607741/2-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			250 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	607924	01/10/23 17:08	S1B	EET PEN
Total/NA	Prep	3520C			250 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D LL		5	0.4 mL	0.4 mL	607925	01/10/23 16:56	PP1	EET PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-607741/5-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			250 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	607924	01/10/23 16:17	S1B	EET PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-607812/1002
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	607812	01/10/23 07:10	WPD	EET PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-608226/2-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	608226	01/12/23 13:01	JAW	EET PEN
Total/NA	Analysis	8011		1			608261	01/12/23 16:58	JAW	EET PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-610934/2-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	RE		250 mL	1 mL	610934	02/02/23 14:02	BKL	EET PEN
Total/NA	Analysis	8270D LL	RE	5	0.4 mL	0.4 mL	611182	02/05/23 10:34	PP1	EET PEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-607741/6-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			250 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	607924	01/10/23 16:43	S1B	EET PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231397-1

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-608226/3-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	608226	01/12/23 13:01	JAW	EET PEN
Total/NA	Analysis	8011		1			608261	01/12/23 17:18	JAW	EET PEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-610934/3-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	RE		250 mL	1 mL	610934	02/02/23 14:02	BKL	EET PEN
Total/NA	Analysis	8270D LL	RE	5	0.4 mL	0.4 mL	611182	02/05/23 10:52	PP1	EET PEN

Client Sample ID: MW28-ROX-010523
Lab Sample ID: 400-231397-13 MS
Date Collected: 01/05/23 13:10
Matrix: Water
Date Received: 01/06/23 08:58

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	607812	01/10/23 10:35	WPD	EET PEN
Total/NA	Prep	3520C			258.4 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	607924	01/10/23 17:33	S1B	EET PEN
Total/NA	Prep	3520C			258.4 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D LL		5	0.4 mL	0.4 mL	607925	01/10/23 17:13	PP1	EET PEN
Total/NA	Prep	8011			34 mL	35 mL	608226	01/12/23 13:01	JAW	EET PEN
Total/NA	Analysis	8011		1			608261	01/13/23 17:29	JAW	EET PEN

Client Sample ID: MW28-ROX-010523
Lab Sample ID: 400-231397-13 MSD
Date Collected: 01/05/23 13:10
Matrix: Water
Date Received: 01/06/23 08:58

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	607812	01/10/23 10:59	WPD	EET PEN
Total/NA	Prep	3520C			260.6 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	607924	01/10/23 17:59	S1B	EET PEN
Total/NA	Prep	3520C			260.6 mL	1 mL	607741	01/09/23 10:42	KWS	EET PEN
Total/NA	Analysis	8270D LL		5	0.4 mL	0.4 mL	607925	01/10/23 17:30	PP1	EET PEN
Total/NA	Prep	8011			35.7 mL	35 mL	608226	01/12/23 13:01	JAW	EET PEN
Total/NA	Analysis	8011		1			608261	01/13/23 17:49	JAW	EET PEN

Laboratory References:
EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

GC/MS VOA

Analysis Batch: 607812

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231397-1	TB-ROX-010523-8260-A	Total/NA	Water	8260B	
400-231397-3	MW16-ROX-010523-EB	Total/NA	Water	8260B	
400-231397-4	MW16-ROX-010523	Total/NA	Water	8260B	
400-231397-5	ROST3MW-ROX-010523	Total/NA	Water	8260B	
400-231397-6	MW9-ROX-010523	Total/NA	Water	8260B	
400-231397-7	TB-ROX-010523-8260-B	Total/NA	Water	8260B	
400-231397-9	P93A-ROX-010523-EB	Total/NA	Water	8260B	
400-231397-10	P93A-ROX-010523	Total/NA	Water	8260B	
400-231397-11	P93C-ROX-010523	Total/NA	Water	8260B	
400-231397-12	P93D-ROX-010523	Total/NA	Water	8260B	
400-231397-13	MW28-ROX-010523	Total/NA	Water	8260B	
MB 400-607812/4	Method Blank	Total/NA	Water	8260B	
LCS 400-607812/1002	Lab Control Sample	Total/NA	Water	8260B	
400-231397-13 MS	MW28-ROX-010523	Total/NA	Water	8260B	
400-231397-13 MSD	MW28-ROX-010523	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 607741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231397-3	MW16-ROX-010523-EB	Total/NA	Water	3520C	
400-231397-4	MW16-ROX-010523	Total/NA	Water	3520C	
400-231397-5	ROST3MW-ROX-010523	Total/NA	Water	3520C	
400-231397-6	MW9-ROX-010523	Total/NA	Water	3520C	
400-231397-9	P93A-ROX-010523-EB	Total/NA	Water	3520C	
400-231397-10	P93A-ROX-010523	Total/NA	Water	3520C	
400-231397-10 - RA	P93A-ROX-010523	Total/NA	Water	3520C	
400-231397-11	P93C-ROX-010523	Total/NA	Water	3520C	
400-231397-12	P93D-ROX-010523	Total/NA	Water	3520C	
400-231397-13	MW28-ROX-010523	Total/NA	Water	3520C	
MB 400-607741/1-A	Method Blank	Total/NA	Water	3520C	
LCS 400-607741/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 400-607741/5-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-607741/6-A	Lab Control Sample Dup	Total/NA	Water	3520C	
400-231397-13 MS	MW28-ROX-010523	Total/NA	Water	3520C	
400-231397-13 MSD	MW28-ROX-010523	Total/NA	Water	3520C	

Analysis Batch: 607924

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231397-3	MW16-ROX-010523-EB	Total/NA	Water	8270D	607741
400-231397-4	MW16-ROX-010523	Total/NA	Water	8270D	607741
400-231397-5	ROST3MW-ROX-010523	Total/NA	Water	8270D	607741
400-231397-6	MW9-ROX-010523	Total/NA	Water	8270D	607741
400-231397-9	P93A-ROX-010523-EB	Total/NA	Water	8270D	607741
400-231397-10	P93A-ROX-010523	Total/NA	Water	8270D	607741
400-231397-11	P93C-ROX-010523	Total/NA	Water	8270D	607741
400-231397-12	P93D-ROX-010523	Total/NA	Water	8270D	607741
400-231397-13	MW28-ROX-010523	Total/NA	Water	8270D	607741
MB 400-607741/1-A	Method Blank	Total/NA	Water	8270D	607741
LCS 400-607741/2-A	Lab Control Sample	Total/NA	Water	8270D	607741
LCS 400-607741/5-A	Lab Control Sample	Total/NA	Water	8270D	607741

GC/MS Semi VOA (Continued)

Analysis Batch: 607924 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 400-607741/6-A	Lab Control Sample Dup	Total/NA	Water	8270D	607741
400-231397-13 MS	MW28-ROX-010523	Total/NA	Water	8270D	607741
400-231397-13 MSD	MW28-ROX-010523	Total/NA	Water	8270D	607741

Analysis Batch: 607925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231397-3	MW16-ROX-010523-EB	Total/NA	Water	8270D LL	607741
400-231397-4	MW16-ROX-010523	Total/NA	Water	8270D LL	607741
400-231397-5	ROST3MW-ROX-010523	Total/NA	Water	8270D LL	607741
400-231397-6	MW9-ROX-010523	Total/NA	Water	8270D LL	607741
400-231397-9	P93A-ROX-010523-EB	Total/NA	Water	8270D LL	607741
400-231397-10	P93A-ROX-010523	Total/NA	Water	8270D LL	607741
400-231397-11	P93C-ROX-010523	Total/NA	Water	8270D LL	607741
400-231397-12	P93D-ROX-010523	Total/NA	Water	8270D LL	607741
400-231397-13	MW28-ROX-010523	Total/NA	Water	8270D LL	607741
MB 400-607741/1-A	Method Blank	Total/NA	Water	8270D LL	607741
LCS 400-607741/2-A	Lab Control Sample	Total/NA	Water	8270D LL	607741
400-231397-13 MS	MW28-ROX-010523	Total/NA	Water	8270D LL	607741
400-231397-13 MSD	MW28-ROX-010523	Total/NA	Water	8270D LL	607741

Analysis Batch: 610183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231397-10 - RA	P93A-ROX-010523	Total/NA	Water	8270D LL	607741

Prep Batch: 610934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231397-10 - RE	P93A-ROX-010523	Total/NA	Water	3520C	
400-231397-12 - RE	P93D-ROX-010523	Total/NA	Water	3520C	
MB 400-610934/1-A	Method Blank	Total/NA	Water	3520C	
LCS 400-610934/2-A - RE	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-610934/3-A - RE	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 611182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-610934/2-A - RE	Lab Control Sample	Total/NA	Water	8270D LL	610934
LCSD 400-610934/3-A - RE	Lab Control Sample Dup	Total/NA	Water	8270D LL	610934

Analysis Batch: 614729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231397-10 - RE	P93A-ROX-010523	Total/NA	Water	8270D LL	610934
400-231397-12 - RE	P93D-ROX-010523	Total/NA	Water	8270D LL	610934
MB 400-610934/1-A	Method Blank	Total/NA	Water	8270D LL	610934

GC Semi VOA

Prep Batch: 608226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231397-2	TB-ROX-010523-8011-A	Total/NA	Water	8011	
400-231397-3	MW16-ROX-010523-EB	Total/NA	Water	8011	
400-231397-4	MW16-ROX-010523	Total/NA	Water	8011	
400-231397-5	ROST3MW-ROX-010523	Total/NA	Water	8011	

GC Semi VOA (Continued)

Prep Batch: 608226 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231397-6	MW9-ROX-010523	Total/NA	Water	8011	
400-231397-8	TB-ROX-010523-8011-B	Total/NA	Water	8011	
400-231397-9	P93A-ROX-010523-EB	Total/NA	Water	8011	
400-231397-10	P93A-ROX-010523	Total/NA	Water	8011	
400-231397-11	P93C-ROX-010523	Total/NA	Water	8011	
400-231397-12	P93D-ROX-010523	Total/NA	Water	8011	
400-231397-13	MW28-ROX-010523	Total/NA	Water	8011	
MB 400-608226/1-A	Method Blank	Total/NA	Water	8011	
LCS 400-608226/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 400-608226/3-A	Lab Control Sample Dup	Total/NA	Water	8011	
400-231397-13 MS	MW28-ROX-010523	Total/NA	Water	8011	
400-231397-13 MSD	MW28-ROX-010523	Total/NA	Water	8011	

Analysis Batch: 608261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231397-2	TB-ROX-010523-8011-A	Total/NA	Water	8011	608226
400-231397-3	MW16-ROX-010523-EB	Total/NA	Water	8011	608226
400-231397-4	MW16-ROX-010523	Total/NA	Water	8011	608226
400-231397-5	ROST3MW-ROX-010523	Total/NA	Water	8011	608226
400-231397-6	MW9-ROX-010523	Total/NA	Water	8011	608226
400-231397-8	TB-ROX-010523-8011-B	Total/NA	Water	8011	608226
400-231397-9	P93A-ROX-010523-EB	Total/NA	Water	8011	608226
400-231397-10	P93A-ROX-010523	Total/NA	Water	8011	608226
400-231397-11	P93C-ROX-010523	Total/NA	Water	8011	608226
400-231397-12	P93D-ROX-010523	Total/NA	Water	8011	608226
400-231397-13	MW28-ROX-010523	Total/NA	Water	8011	608226
MB 400-608226/1-A	Method Blank	Total/NA	Water	8011	608226
LCS 400-608226/2-A	Lab Control Sample	Total/NA	Water	8011	608226
LCSD 400-608226/3-A	Lab Control Sample Dup	Total/NA	Water	8011	608226
400-231397-13 MS	MW28-ROX-010523	Total/NA	Water	8011	608226
400-231397-13 MSD	MW28-ROX-010523	Total/NA	Water	8011	608226

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-607812/4
Matrix: Water
Analysis Batch: 607812

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			01/10/23 07:55	1
Acrolein	ND		20	3.3	ug/L			01/10/23 07:55	1
Acrylonitrile	ND		10	2.8	ug/L			01/10/23 07:55	1
Benzene	ND		1.0	0.13	ug/L			01/10/23 07:55	1
Bromobenzene	ND		1.0	0.54	ug/L			01/10/23 07:55	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/10/23 07:55	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/10/23 07:55	1
Bromoform	ND		5.0	0.25	ug/L			01/10/23 07:55	1
Bromomethane	ND		1.0	0.98	ug/L			01/10/23 07:55	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/10/23 07:55	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/10/23 07:55	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/10/23 07:55	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/10/23 07:55	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/10/23 07:55	1
Chloroethane	ND		1.0	0.76	ug/L			01/10/23 07:55	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/10/23 07:55	1
Chloroform	ND		1.0	1.0	ug/L			01/10/23 07:55	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/10/23 07:55	1
Chloromethane	ND		1.0	0.32	ug/L			01/10/23 07:55	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/10/23 07:55	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/10/23 07:55	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/10/23 07:55	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/10/23 07:55	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/10/23 07:55	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/10/23 07:55	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/10/23 07:55	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/10/23 07:55	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/10/23 07:55	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 07:55	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 07:55	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/10/23 07:55	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/10/23 07:55	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/10/23 07:55	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/10/23 07:55	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/10/23 07:55	1
2-Hexanone	ND		25	1.4	ug/L			01/10/23 07:55	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/10/23 07:55	1
Methylene bromide	ND		5.0	0.22	ug/L			01/10/23 07:55	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/10/23 07:55	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/10/23 07:55	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/10/23 07:55	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/10/23 07:55	1
Naphthalene	ND		5.0	3.0	ug/L			01/10/23 07:55	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/10/23 07:55	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/10/23 07:55	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/10/23 07:55	1
o-Xylene	ND		5.0	0.60	ug/L			01/10/23 07:55	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/10/23 07:55	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-607812/4
Matrix: Water
Analysis Batch: 607812

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			01/10/23 07:55	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			01/10/23 07:55	1
Styrene	ND		1.0	1.0	ug/L			01/10/23 07:55	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/10/23 07:55	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/10/23 07:55	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/10/23 07:55	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/10/23 07:55	1
Toluene	ND		1.0	0.41	ug/L			01/10/23 07:55	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/10/23 07:55	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/10/23 07:55	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/10/23 07:55	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/10/23 07:55	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/10/23 07:55	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/10/23 07:55	1
Trichloroethene	ND		1.0	0.15	ug/L			01/10/23 07:55	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/10/23 07:55	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/10/23 07:55	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/10/23 07:55	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/10/23 07:55	1
Vinyl acetate	ND		25	0.93	ug/L			01/10/23 07:55	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/10/23 07:55	1
Xylenes, Total	ND		10	1.6	ug/L			01/10/23 07:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*104*		*72 - 119*		*01/10/23 07:55*	*1*
Dibromofluoromethane	*102*		*75 - 126*		*01/10/23 07:55*	*1*
Toluene-d8 (Surr)	*96*		*64 - 132*		*01/10/23 07:55*	*1*

Lab Sample ID: LCS 400-607812/1002
Matrix: Water
Analysis Batch: 607812

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	200	193		ug/L		96	43 - 160
Acrolein	500	489		ug/L		98	38 - 160
Acrylonitrile	500	464		ug/L		93	64 - 142
Benzene	50.0	48.4		ug/L		97	70 - 130
Bromobenzene	50.0	49.0		ug/L		98	70 - 132
Bromochloromethane	50.0	51.1		ug/L		102	70 - 130
Bromodichloromethane	50.0	50.4		ug/L		101	67 - 133
Bromoform	50.0	51.2		ug/L		102	57 - 140
Bromomethane	50.0	38.5		ug/L		77	10 - 160
2-Butanone (MEK)	200	183		ug/L		91	61 - 145
Carbon disulfide	50.0	42.8		ug/L		86	61 - 137
Carbon tetrachloride	50.0	45.8		ug/L		92	61 - 137
Chlorobenzene	50.0	48.3		ug/L		97	70 - 130
Dibromochloromethane	50.0	49.4		ug/L		99	67 - 135
Chloroethane	50.0	43.9		ug/L		88	55 - 141

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-607812/1002
Matrix: Water
Analysis Batch: 607812

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	60.3		ug/L		121	10 - 160
Chloroform	50.0	46.8		ug/L		94	69 - 130
1-Chlorohexane	50.0	45.9		ug/L		92	69 - 130
Chloromethane	50.0	40.4		ug/L		81	58 - 137
cis-1,2-Dichloroethene	50.0	46.0		ug/L		92	68 - 130
cis-1,3-Dichloropropene	50.0	51.6		ug/L		103	69 - 132
1,2-Dichlorobenzene	50.0	50.5		ug/L		101	67 - 130
1,3-Dichlorobenzene	50.0	50.4		ug/L		101	70 - 130
1,4-Dichlorobenzene	50.0	49.7		ug/L		99	70 - 130
Dichlorodifluoromethane	50.0	32.7		ug/L		65	41 - 146
1,1-Dichloroethane	50.0	48.1		ug/L		96	70 - 130
1,2-Dichloroethane	50.0	48.8		ug/L		98	69 - 130
1,1-Dichloroethene	50.0	47.0		ug/L		94	63 - 134
1,2-Dichloropropane	50.0	48.4		ug/L		97	70 - 130
1,3-Dichloropropane	50.0	51.2		ug/L		102	70 - 130
2,2-Dichloropropane	50.0	50.5		ug/L		101	52 - 135
1,1-Dichloropropene	50.0	47.8		ug/L		96	70 - 130
Ethylbenzene	50.0	46.7		ug/L		93	70 - 130
Ethyl methacrylate	50.0	50.0		ug/L		100	68 - 130
Hexachlorobutadiene	50.0	53.8		ug/L		108	53 - 140
2-Hexanone	200	191		ug/L		96	65 - 137
Isopropy benzene	50.0	46.3		ug/L		93	70 - 130
Methylene bromide	50.0	51.2		ug/L		102	70 - 130
Methylene Chloride	50.0	49.6		ug/L		99	66 - 135
4-Methyl-2-pentanone (MIBK)	200	209		ug/L		104	69 - 138
Methyl tert-butyl ether	50.0	52.6		ug/L		105	66 - 130
m-Xylene & p-Xylene	50.0	46.6		ug/L		93	70 - 130
Naphthalene	50.0	54.3		ug/L		109	47 - 149
n-Butylbenzene	50.0	47.1		ug/L		94	67 - 130
N-Propylbenzene	50.0	48.0		ug/L		96	70 - 130
o-Chlorotoluene	50.0	47.1		ug/L		94	70 - 130
o-Xylene	50.0	46.9		ug/L		94	70 - 130
p-Chlorotoluene	50.0	47.1		ug/L		94	70 - 130
p-Isopropyltoluene	50.0	47.9		ug/L		96	65 - 130
sec-Butylbenzene	50.0	47.5		ug/L		95	66 - 130
Styrene	50.0	46.1		ug/L		92	70 - 130
tert-Butylbenzene	50.0	53.0		ug/L		106	64 - 139
1,1,1,2-Tetrachloroethane	50.0	48.4		ug/L		97	67 - 131
1,1,2,2-Tetrachloroethane	50.0	49.9		ug/L		100	70 - 131
Tetrachloroethene	50.0	50.0		ug/L		100	65 - 130
Toluene	50.0	46.5		ug/L		93	70 - 130
trans-1,2-Dichloroethene	50.0	45.8		ug/L		92	70 - 130
trans-1,3-Dichloropropene	50.0	50.0		ug/L		100	63 - 130
1,2,3-Trichlorobenzene	50.0	55.1		ug/L		110	60 - 138
1,2,4-Trichlorobenzene	50.0	54.7		ug/L		109	60 - 140
1,1,1-Trichloroethane	50.0	46.3		ug/L		93	68 - 130
1,1,2-Trichloroethane	50.0	49.9		ug/L		100	70 - 130
Trichloroethene	50.0	49.0		ug/L		98	70 - 130
Trichlorofluoromethane	50.0	48.4		ug/L		97	65 - 138

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-607812/1002
Matrix: Water
Analysis Batch: 607812

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	50.0	48.7		ug/L		97	70 - 130
1,2,4-Trimethy benzene	50.0	47.7		ug/L		95	70 - 130
1,3,5-Trimethy benzene	50.0	47.6		ug/L		95	69 - 130
Vinyl acetate	100	108		ug/L		108	26 - 160
Vinyl chloride	50.0	43.2		ug/L		86	59 - 136
Xylenes, Total	100	93.5		ug/L		94	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*100*		*72 - 119*
Dibromofluoromethane	*99*		*75 - 126*
Toluene-d8 (Surr)	*97*		*64 - 132*

Lab Sample ID: 400-231397-13 MS
Matrix: Water
Analysis Batch: 607812

Client Sample ID: MW28-ROX-010523
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	ND		200	176		ug/L		88	43 - 150
Acrolein	ND		500	437		ug/L		87	38 - 150
Acrylonitrile	ND		500	413		ug/L		83	62 - 149
Benzene	0.38	J	50.0	41.1		ug/L		81	56 - 142
Bromobenzene	ND		50.0	39.4		ug/L		79	59 - 136
Bromochloromethane	ND		50.0	43.8		ug/L		88	64 - 140
Bromodichloromethane	ND		50.0	42.1		ug/L		84	59 - 143
Bromoform	ND		50.0	40.0		ug/L		80	50 - 140
Bromomethane	ND		50.0	29.1		ug/L		58	10 - 150
2-Butanone (MEK)	ND		200	161		ug/L		80	55 - 150
Carbon disulfide	ND		50.0	37.0		ug/L		74	48 - 150
Carbon tetrachloride	ND		50.0	38.9		ug/L		78	55 - 145
Chlorobenzene	ND		50.0	40.8		ug/L		82	64 - 130
Dibromochloromethane	ND		50.0	40.5		ug/L		81	56 - 143
Chloroethane	ND		50.0	35.5		ug/L		71	50 - 150
2-Chloroethyl vinyl ether	ND	F2 F1	50.0	13.0		ug/L		26	10 - 150
Chloroform	ND		50.0	40.0		ug/L		80	60 - 141
1-Chlorohexane	ND		50.0	39.3		ug/L		79	56 - 136
Chloromethane	ND		50.0	33.5		ug/L		67	49 - 148
cis-1,2-Dichloroethene	ND		50.0	39.5		ug/L		79	59 - 143
cis-1,3-Dichloropropene	ND		50.0	43.2		ug/L		86	57 - 140
1,2-Dichlorobenzene	ND		50.0	41.8		ug/L		84	52 - 137
1,3-Dichlorobenzene	ND		50.0	40.6		ug/L		81	54 - 135
1,4-Dichlorobenzene	ND		50.0	40.0		ug/L		80	53 - 135
Dichlorodifluoromethane	ND		50.0	27.9		ug/L		56	16 - 150
1,1-Dichloroethane	ND		50.0	40.8		ug/L		82	61 - 144
1,2-Dichloroethane	ND		50.0	40.6		ug/L		81	60 - 141
1,1-Dichloroethene	ND		50.0	40.0		ug/L		80	54 - 147
1,2-Dichloropropane	ND		50.0	41.0		ug/L		82	66 - 137
1,3-Dichloropropane	ND		50.0	43.7		ug/L		87	66 - 133
2,2-Dichloropropane	ND		50.0	43.1		ug/L		86	42 - 144

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231397-13 MS
Matrix: Water
Analysis Batch: 607812

Client Sample ID: MW28-ROX-010523
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloropropene	ND		50.0	41.4		ug/L		83	65 - 136
Ethylbenzene	ND		50.0	39.5		ug/L		79	58 - 131
Ethyl methacrylate	ND		50.0	43.3		ug/L		87	64 - 130
Hexachlorobutadiene	ND		50.0	43.3		ug/L		87	31 - 149
2-Hexanone	ND		200	169		ug/L		85	65 - 140
Isopropy benzene	ND		50.0	39.5		ug/L		79	56 - 133
Methylene bromide	ND		50.0	42.8		ug/L		86	63 - 138
Methylene Chloride	ND		50.0	42.1		ug/L		84	60 - 146
4-Methyl-2-pentanone (MIBK)	ND		200	183		ug/L		92	63 - 146
Methyl tert-butyl ether	2.6		50.0	45.3		ug/L		85	59 - 137
m-Xylene & p-Xylene	ND		50.0	40.0		ug/L		80	57 - 130
Naphthalene	ND		50.0	46.7		ug/L		93	25 - 150
n-Butylbenzene	ND		50.0	39.2		ug/L		78	41 - 142
N-Propylbenzene	ND		50.0	38.6		ug/L		77	51 - 138
o-Chlorotoluene	ND		50.0	38.3		ug/L		77	53 - 134
o-Xylene	ND		50.0	40.3		ug/L		81	61 - 130
p-Chlorotoluene	ND		50.0	38.0		ug/L		76	54 - 133
p-Isopropyltoluene	ND		50.0	39.3		ug/L		79	48 - 139
sec-Butylbenzene	ND		50.0	38.5		ug/L		77	50 - 138
Styrene	ND		50.0	39.1		ug/L		78	58 - 131
tert-Butylbenzene	ND		50.0	42.8		ug/L		86	54 - 146
1,1,1,2-Tetrachloroethane	ND		50.0	41.2		ug/L		82	59 - 137
1,1,2,2-Tetrachloroethane	ND		50.0	41.5		ug/L		83	66 - 135
Tetrachloroethene	ND		50.0	40.9		ug/L		82	52 - 133
Toluene	ND		50.0	39.4		ug/L		79	65 - 130
trans-1,2-Dichloroethene	ND		50.0	38.1		ug/L		76	61 - 143
trans-1,3-Dichloropropene	ND		50.0	41.4		ug/L		83	53 - 133
1,2,3-Trichlorobenzene	ND		50.0	46.5		ug/L		93	43 - 145
1,2,4-Trichlorobenzene	ND		50.0	44.1		ug/L		88	39 - 148
1,1,1-Trichloroethane	ND		50.0	39.3		ug/L		79	57 - 142
1,1,2-Trichloroethane	ND		50.0	42.2		ug/L		84	66 - 131
Trichloroethene	ND		50.0	41.0		ug/L		82	64 - 136
Trichlorofluoromethane	ND		50.0	39.4		ug/L		79	54 - 150
1,2,3-Trichloropropane	ND		50.0	41.0		ug/L		82	65 - 133
1,2,4-Trimethy benzene	ND		50.0	39.0		ug/L		78	50 - 139
1,3,5-Trimethy benzene	ND		50.0	38.0		ug/L		76	52 - 135
Vinyl acetate	ND		100	87.6		ug/L		88	26 - 150
Vinyl chloride	ND		50.0	36.6		ug/L		73	46 - 150
Xylenes, Total	ND		100	80.3		ug/L		80	59 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*97*		*72 - 119*
Dibromofluoromethane	*98*		*75 - 126*
Toluene-d8 (Surr)	*97*		*64 - 132*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231397-13 MSD
Matrix: Water
Analysis Batch: 607812

Client Sample ID: MW28-ROX-010523
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	195		ug/L		98	43 - 150	10	30
Acrolein	ND		500	459		ug/L		92	38 - 150	5	31
Acrylonitrile	ND		500	461		ug/L		92	62 - 149	11	30
Benzene	0.38	J	50.0	44.0		ug/L		87	56 - 142	7	30
Bromobenzene	ND		50.0	43.0		ug/L		86	59 - 136	9	30
Bromochloromethane	ND		50.0	47.1		ug/L		94	64 - 140	7	30
Bromodichloromethane	ND		50.0	44.8		ug/L		90	59 - 143	6	30
Bromoform	ND		50.0	44.8		ug/L		90	50 - 140	11	30
Bromomethane	ND		50.0	37.5		ug/L		75	10 - 150	25	50
2-Butanone (MEK)	ND		200	184		ug/L		92	55 - 150	14	30
Carbon disulfide	ND		50.0	39.8		ug/L		80	48 - 150	7	30
Carbon tetrachloride	ND		50.0	40.9		ug/L		82	55 - 145	5	30
Chlorobenzene	ND		50.0	43.8		ug/L		88	64 - 130	7	30
Dibromochloromethane	ND		50.0	45.0		ug/L		90	56 - 143	11	30
Chloroethane	ND		50.0	38.6		ug/L		77	50 - 150	8	30
2-Chloroethyl vinyl ether	ND	F2 F1	50.0	3.65	J F2 F1	ug/L		7	10 - 150	112	50
Chloroform	ND		50.0	43.7		ug/L		87	60 - 141	9	30
1-Chlorohexane	ND		50.0	42.0		ug/L		84	56 - 136	7	30
Chloromethane	ND		50.0	34.3		ug/L		69	49 - 148	2	31
cis-1,2-Dichloroethene	ND		50.0	42.8		ug/L		86	59 - 143	8	30
cis-1,3-Dichloropropene	ND		50.0	47.1		ug/L		94	57 - 140	9	30
1,2-Dichlorobenzene	ND		50.0	44.8		ug/L		90	52 - 137	7	30
1,3-Dichlorobenzene	ND		50.0	43.7		ug/L		87	54 - 135	7	30
1,4-Dichlorobenzene	ND		50.0	43.6		ug/L		87	53 - 135	9	30
Dichlorodifluoromethane	ND		50.0	29.4		ug/L		59	16 - 150	5	31
1,1-Dichloroethane	ND		50.0	43.8		ug/L		88	61 - 144	7	30
1,2-Dichloroethane	ND		50.0	44.4		ug/L		89	60 - 141	9	30
1,1-Dichloroethene	ND		50.0	41.8		ug/L		84	54 - 147	5	30
1,2-Dichloropropane	ND		50.0	44.5		ug/L		89	66 - 137	8	30
1,3-Dichloropropane	ND		50.0	47.4		ug/L		95	66 - 133	8	30
2,2-Dichloropropane	ND		50.0	44.6		ug/L		89	42 - 144	3	31
1,1-Dichloropropene	ND		50.0	43.1		ug/L		86	65 - 136	4	30
Ethylbenzene	ND		50.0	43.3		ug/L		87	58 - 131	9	30
Ethyl methacrylate	ND		50.0	47.7		ug/L		95	64 - 130	10	30
Hexachlorobutadiene	ND		50.0	46.1		ug/L		92	31 - 149	6	36
2-Hexanone	ND		200	192		ug/L		96	65 - 140	13	30
Isopropy benzene	ND		50.0	42.5		ug/L		85	56 - 133	7	30
Methylene bromide	ND		50.0	47.0		ug/L		94	63 - 138	9	30
Methylene Chloride	ND		50.0	45.4		ug/L		91	60 - 146	7	32
4-Methyl-2-pentanone (MIBK)	ND		200	204		ug/L		102	63 - 146	11	30
Methyl tert-butyl ether	2.6		50.0	49.7		ug/L		94	59 - 137	9	30
m-Xylene & p-Xylene	ND		50.0	42.9		ug/L		86	57 - 130	7	30
Naphthalene	ND		50.0	54.2		ug/L		108	25 - 150	15	30
n-Butylbenzene	ND		50.0	42.1		ug/L		84	41 - 142	7	31
N-Propylbenzene	ND		50.0	41.9		ug/L		84	51 - 138	8	30
o-Chlorotoluene	ND		50.0	41.0		ug/L		82	53 - 134	7	30
o-Xylene	ND		50.0	43.4		ug/L		87	61 - 130	7	30
p-Chlorotoluene	ND		50.0	40.5		ug/L		81	54 - 133	6	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231397-13 MSD
Matrix: Water
Analysis Batch: 607812

Client Sample ID: MW28-ROX-010523
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	7	30
sec-Butylbenzene	ND		50.0	42.0		ug/L		84	50 - 138	9	30
Styrene	ND		50.0	43.1		ug/L		86	58 - 131	10	30
tert-Butylbenzene	ND		50.0	46.7		ug/L		93	54 - 146	9	30
1,1,1,2-Tetrachloroethane	ND		50.0	44.6		ug/L		89	59 - 137	8	30
1,1,2,2-Tetrachloroethane	ND		50.0	45.2		ug/L		90	66 - 135	9	30
Tetrachloroethene	ND		50.0	43.3		ug/L		87	52 - 133	6	30
Toluene	ND		50.0	42.5		ug/L		85	65 - 130	8	30
trans-1,2-Dichloroethene	ND		50.0	41.9		ug/L		84	61 - 143	10	30
trans-1,3-Dichloropropene	ND		50.0	45.1		ug/L		90	53 - 133	9	30
1,2,3-Trichlorobenzene	ND		50.0	50.7		ug/L		101	43 - 145	9	30
1,2,4-Trichlorobenzene	ND		50.0	46.7		ug/L		93	39 - 148	6	30
1,1,1-Trichloroethane	ND		50.0	41.9		ug/L		84	57 - 142	6	30
1,1,2-Trichloroethane	ND		50.0	47.0		ug/L		94	66 - 131	11	30
Trichloroethene	ND		50.0	44.7		ug/L		89	64 - 136	9	30
Trichlorofluoromethane	ND		50.0	41.2		ug/L		82	54 - 150	5	30
1,2,3-Trichloropropane	ND		50.0	45.1		ug/L		90	65 - 133	10	30
1,2,4-Trimethy benzene	ND		50.0	42.4		ug/L		85	50 - 139	8	30
1,3,5-Trimethy benzene	ND		50.0	41.8		ug/L		84	52 - 135	10	30
Vinyl acetate	ND		100	99.8		ug/L		100	26 - 150	13	33
Vinyl chloride	ND		50.0	38.5		ug/L		77	46 - 150	5	30
Xylenes, Total	ND		100	86.3		ug/L		86	59 - 130	7	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*96*		*72 - 119*
Dibromofluoromethane	*99*		*75 - 126*
Toluene-d8 (Surr)	*97*		*64 - 132*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-607741/1-A
Matrix: Water
Analysis Batch: 607924

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 607741

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.8	ug/L		01/09/23 10:42	01/10/23 15:51	1
Benzenethiol	ND		10	1.7	ug/L		01/09/23 10:42	01/10/23 15:51	1
Benzoic acid	ND		30	7.3	ug/L		01/09/23 10:42	01/10/23 15:51	1
Benzyl alcohol	ND		10	2.0	ug/L		01/09/23 10:42	01/10/23 15:51	1
Bis(2-chloroethoxy)methane	ND		10	0.16	ug/L		01/09/23 10:42	01/10/23 15:51	1
Bis(2-chloroethyl)ether	ND		10	2.7	ug/L		01/09/23 10:42	01/10/23 15:51	1
bis (2-chloroisopropyl) ether	ND		10	0.16	ug/L		01/09/23 10:42	01/10/23 15:51	1
Bis(2-ethylhexyl) phthalate	ND		10	5.0	ug/L		01/09/23 10:42	01/10/23 15:51	1
4-Bromophenyl phenyl ether	ND		10	0.20	ug/L		01/09/23 10:42	01/10/23 15:51	1
Butyl benzyl phthalate	ND		10	0.19	ug/L		01/09/23 10:42	01/10/23 15:51	1
4-Chloroaniline	ND		10	3.4	ug/L		01/09/23 10:42	01/10/23 15:51	1
4-Chloro-3-methylphenol	ND		10	3.8	ug/L		01/09/23 10:42	01/10/23 15:51	1
2-Chloronaphthalene	ND		10	0.14	ug/L		01/09/23 10:42	01/10/23 15:51	1
2-Chlorophenol	ND		10	2.2	ug/L		01/09/23 10:42	01/10/23 15:51	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-607741/1-A
Matrix: Water
Analysis Batch: 607924

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 607741

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		01/09/23 10:42	01/10/23 15:51	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/09/23 10:42	01/10/23 15:51	1
Dibenzofuran	ND		10	0.17	ug/L		01/09/23 10:42	01/10/23 15:51	1
3,3'-Dichlorobenzidine	ND		10	2.6	ug/L		01/09/23 10:42	01/10/23 15:51	1
2,4-Dichlorophenol	ND		10	3.0	ug/L		01/09/23 10:42	01/10/23 15:51	1
Diethyl phthalate	ND		10	0.24	ug/L		01/09/23 10:42	01/10/23 15:51	1
2,4-Dimethylphenol	ND		10	3.5	ug/L		01/09/23 10:42	01/10/23 15:51	1
Dimethyl phthalate	ND		10	0.17	ug/L		01/09/23 10:42	01/10/23 15:51	1
Di-n-butyl phthalate	ND		10	2.7	ug/L		01/09/23 10:42	01/10/23 15:51	1
4,6-Dinitro-ortho-cresol	ND		10	1.6	ug/L		01/09/23 10:42	01/10/23 15:51	1
2,4-Dinitrophenol	ND		30	3.4	ug/L		01/09/23 10:42	01/10/23 15:51	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		01/09/23 10:42	01/10/23 15:51	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		01/09/23 10:42	01/10/23 15:51	1
Di-n-octyl phthalate	ND		10	0.17	ug/L		01/09/23 10:42	01/10/23 15:51	1
1,4-Dioxane	ND		10	1.0	ug/L		01/09/23 10:42	01/10/23 15:51	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/09/23 10:42	01/10/23 15:51	1
Hexachlorobenzene	ND		10	0.17	ug/L		01/09/23 10:42	01/10/23 15:51	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		01/09/23 10:42	01/10/23 15:51	1
Hexachloroethane	ND		10	4.2	ug/L		01/09/23 10:42	01/10/23 15:51	1
Indene	ND		10	1.0	ug/L		01/09/23 10:42	01/10/23 15:51	1
Isophorone	ND		10	0.14	ug/L		01/09/23 10:42	01/10/23 15:51	1
2-Methylphenol	ND		10	1.8	ug/L		01/09/23 10:42	01/10/23 15:51	1
3 & 4 Methylphenol	ND		20	0.39	ug/L		01/09/23 10:42	01/10/23 15:51	1
2-Nitroaniline	ND		10	2.2	ug/L		01/09/23 10:42	01/10/23 15:51	1
3-Nitroaniline	ND		10	1.8	ug/L		01/09/23 10:42	01/10/23 15:51	1
4-Nitroaniline	ND		10	1.5	ug/L		01/09/23 10:42	01/10/23 15:51	1
Nitrobenzene	ND		10	0.13	ug/L		01/09/23 10:42	01/10/23 15:51	1
2-Nitrophenol	ND		10	5.2	ug/L		01/09/23 10:42	01/10/23 15:51	1
4-Nitrophenol	ND		10	2.1	ug/L		01/09/23 10:42	01/10/23 15:51	1
N-Nitrosodimethylamine	ND		10	3.5	ug/L		01/09/23 10:42	01/10/23 15:51	1
N-Nitrosodi-n-propylamine	ND		10	3.3	ug/L		01/09/23 10:42	01/10/23 15:51	1
N-Nitrosodiphenylamine	ND		10	0.18	ug/L		01/09/23 10:42	01/10/23 15:51	1
Pentachlorophenol	ND		20	1.4	ug/L		01/09/23 10:42	01/10/23 15:51	1
Phenol	ND		10	2.6	ug/L		01/09/23 10:42	01/10/23 15:51	1
Pyridine	ND		10	3.2	ug/L		01/09/23 10:42	01/10/23 15:51	1
Quinoline	ND		10	4.5	ug/L		01/09/23 10:42	01/10/23 15:51	1
2,4,5-Trichlorophenol	ND		10	3.7	ug/L		01/09/23 10:42	01/10/23 15:51	1
2,4,6-Trichlorophenol	ND		10	3.5	ug/L		01/09/23 10:42	01/10/23 15:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*107*		*46 - 124*	*01/09/23 10:42*	*01/10/23 15:51*	*1*
2-Fluorophenol	*63*		*13 - 113*	*01/09/23 10:42*	*01/10/23 15:51*	*1*
Nitrobenzene-d5	*74*		*36 - 126*	*01/09/23 10:42*	*01/10/23 15:51*	*1*
Phenol-d5	*49*		*17 - 127*	*01/09/23 10:42*	*01/10/23 15:51*	*1*
Terphenyl-d14	*139*		*44 - 149*	*01/09/23 10:42*	*01/10/23 15:51*	*1*
2,4,6-Tribromophenol	*96*		*26 - 150*	*01/09/23 10:42*	*01/10/23 15:51*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-607741/2-A
Matrix: Water
Analysis Batch: 607924

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 607741

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aniline	120	75.2		ug/L		63	21 - 120
Benzoic acid	554	145		ug/L		26	10 - 144
Benzyl alcohol	120	77.4		ug/L		64	28 - 120
Bis(2-chloroethoxy)methane	120	76.1		ug/L		63	47 - 120
Bis(2-chloroethyl)ether	120	78.3		ug/L		65	44 - 120
bis (2-chloroisopropyl) ether	120	54.6		ug/L		45	33 - 121
Bis(2-ethylhexyl) phthalate	120	121		ug/L		101	52 - 147
4-Bromophenyl phenyl ether	120	104		ug/L		87	54 - 122
Butyl benzyl phthalate	120	121		ug/L		101	54 - 133
4-Chloroaniline	120	96.7		ug/L		81	26 - 120
4-Chloro-3-methylphenol	120	93.1		ug/L		78	48 - 131
2-Chloronaphthalene	120	107		ug/L		89	52 - 121
2-Chlorophenol	120	74.0		ug/L		62	40 - 120
4-Chlorophenyl phenyl ether	120	115		ug/L		96	56 - 125
Dibenz[a,h]acridine	120	54.1		ug/L		45	31 - 150
Dibenzofuran	120	113		ug/L		94	56 - 122
3,3'-Dichlorobenzidine	160	189		ug/L		118	36 - 132
2,4-Dichlorophenol	120	97.3		ug/L		81	49 - 120
Diethyl phthalate	120	115		ug/L		96	50 - 137
2,4-Dimethylphenol	120	93.3		ug/L		78	48 - 120
Dimethyl phthalate	120	109		ug/L		91	57 - 124
Di-n-butyl phthalate	120	111		ug/L		92	58 - 126
4,6-Dinitro-ortho-cresol	240	168		ug/L		70	23 - 148
2,4-Dinitrophenol	240	137		ug/L		57	10 - 150
2,4-Dinitrotoluene	120	113		ug/L		94	54 - 142
2,6-Dinitrotoluene	120	109		ug/L		91	55 - 130
Di-n-octyl phthalate	120	115		ug/L		96	57 - 138
1,4-Dioxane	120	53.1		ug/L		44	31 - 120
1,2-Diphenylhydrazine (as Azobenzene)	120	85.1		ug/L		71	45 - 124
Hexachlorobenzene	120	105		ug/L		88	52 - 129
Hexachlorocyclopentadiene	120	66.1		ug/L		55	10 - 134
Hexachloroethane	120	75.6		ug/L		63	20 - 120
Indene	120	88.1		ug/L		73	49 - 120
Isophorone	120	76.8		ug/L		64	48 - 120
2-Methylphenol	120	89.2		ug/L		74	46 - 124
3 & 4 Methylphenol	120	90.6		ug/L		76	45 - 120
2-Nitroaniline	120	102		ug/L		85	51 - 145
3-Nitroaniline	120	92.8		ug/L		77	37 - 127
4-Nitroaniline	120	104		ug/L		87	36 - 137
Nitrobenzene	120	78.6		ug/L		65	45 - 120
2-Nitrophenol	120	96.2		ug/L		80	40 - 124
4-Nitrophenol	240	204		ug/L		85	23 - 146
N-Nitrosodimethylamine	120	92.4		ug/L		77	29 - 137
N-Nitrosodi-n-propylamine	120	81.0		ug/L		68	45 - 120
N-Nitrosodiphenylamine	119	102		ug/L		85	54 - 120
Pentachlorophenol	240	175		ug/L		73	31 - 130
Phenol	120	70.8		ug/L		59	11 - 120
Pyridine	240	114		ug/L		48	16 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-607741/2-A
Matrix: Water
Analysis Batch: 607924

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 607741

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Quinoline			120	49.9	*-	ug/L		42	49 - 130		
2,4,5-Trichlorophenol			120	115		ug/L		96	51 - 136		
2,4,6-Trichlorophenol			120	112		ug/L		93	50 - 127		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*95*		*46 - 124*
2-Fluorophenol	*39*		*13 - 113*
Nitrobenzene-d5	*67*		*36 - 126*
Phenol-d5	*61*		*17 - 127*
Terphenyl-d14	*116*		*44 - 149*
2,4,6-Tribromophenol	*102*		*26 - 150*

Lab Sample ID: LCS 400-607741/5-A
Matrix: Water
Analysis Batch: 607924

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 607741

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzenethiol			120	4.76	J *-	ug/L		4	10 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*112*		*46 - 124*
2-Fluorophenol	*38*		*13 - 113*
Nitrobenzene-d5	*76*		*36 - 126*
Phenol-d5	*63*		*17 - 127*
Terphenyl-d14	*137*		*44 - 149*
2,4,6-Tribromophenol	*57*		*26 - 150*

Lab Sample ID: LCSD 400-607741/6-A
Matrix: Water
Analysis Batch: 607924

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 607741

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzenethiol			120	3.99	J *-	ug/L		3	10 - 120	18	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*109*		*46 - 124*
2-Fluorophenol	*41*		*13 - 113*
Nitrobenzene-d5	*74*		*36 - 126*
Phenol-d5	*64*		*17 - 127*
Terphenyl-d14	*129*		*44 - 149*
2,4,6-Tribromophenol	*61*		*26 - 150*

Lab Sample ID: 400-231397-13 MS
Matrix: Water
Analysis Batch: 607924

Client Sample ID: MW28-ROX-010523
Prep Type: Total/NA
Prep Batch: 607741

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Aniline	ND	F1	116	ND	F1	ug/L		0	10 - 120		

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231397-13 MS
Matrix: Water
Analysis Batch: 607924

Client Sample ID: MW28-ROX-010523
Prep Type: Total/NA
Prep Batch: 607741

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzoic acid	ND		536	200		ug/L		37	10 - 149
Benzyl alcohol	ND		116	87.9		ug/L		76	33 - 120
Bis(2-chloroethoxy)methane	ND		116	81.6		ug/L		70	26 - 120
Bis(2-chloroethyl)ether	ND	F2 F1	116	170	F1	ug/L		146	42 - 120
bis (2-chloroisopropyl) ether	ND		116	59.8		ug/L		51	28 - 120
Bis(2-ethylhexyl) phthalate	ND		116	133		ug/L		114	39 - 120
4-Bromophenyl phenyl ether	ND		116	115		ug/L		99	40 - 120
Butyl benzyl phthalate	ND		116	132		ug/L		114	45 - 120
4-Chloroaniline	ND		116	99.2		ug/L		85	10 - 120
4-Chloro-3-methylphenol	ND		116	100		ug/L		86	34 - 120
2-Chloronaphthalene	ND		116	116		ug/L		100	39 - 120
2-Chlorophenol	ND		116	69.9		ug/L		60	25 - 120
4-Chlorophenyl phenyl ether	ND		116	124		ug/L		107	44 - 120
Dibenz[a,h]acridine	ND	F1	116	53.7	F1	ug/L		46	50 - 150
Dibenzofuran	ND		116	120		ug/L		103	25 - 130
3,3'-Dichlorobenzidine	ND		155	183		ug/L		119	10 - 120
2,4-Dichlorophenol	ND		116	103		ug/L		89	31 - 120
Diethyl phthalate	1.0	J	116	123		ug/L		105	46 - 120
2,4-Dimethylphenol	ND		116	102		ug/L		88	21 - 120
Dimethyl phthalate	ND		116	117		ug/L		101	38 - 120
Di-n-butyl phthalate	ND		116	120		ug/L		103	49 - 120
4,6-Dinitro-ortho-cresol	ND		232	179		ug/L		77	25 - 120
2,4-Dinitrophenol	ND		232	141		ug/L		61	15 - 140
2,4-Dinitrotoluene	ND		116	120		ug/L		103	53 - 120
2,6-Dinitrotoluene	ND		116	116		ug/L		100	43 - 120
Di-n-octyl phthalate	ND		116	125		ug/L		108	35 - 121
1,4-Dioxane	ND	F1	116	61.6		ug/L		53	50 - 150
1,2-Diphenylhydrazine (as Azobenzene)	ND		116	92.5		ug/L		80	50 - 150
Hexachlorobenzene	ND		116	114		ug/L		98	38 - 122
Hexachlorocyclopentadiene	ND		116	70.9		ug/L		61	10 - 120
Hexachloroethane	ND		116	80.0		ug/L		69	10 - 150
Indene	ND		116	94.9		ug/L		82	50 - 150
Isophorone	ND		116	83.2		ug/L		72	42 - 120
2-Methylphenol	ND		116	98.6		ug/L		85	28 - 120
3 & 4 Methylphenol	ND		116	95.6		ug/L		82	31 - 120
2-Nitroaniline	ND		116	105		ug/L		91	45 - 120
3-Nitroaniline	ND		116	98.4		ug/L		85	10 - 130
4-Nitroaniline	ND		116	106		ug/L		91	10 - 132
Nitrobenzene	ND		116	88.3		ug/L		76	39 - 120
2-Nitrophenol	ND		116	101		ug/L		87	33 - 120
4-Nitrophenol	ND		232	226		ug/L		97	10 - 120
N-Nitrosodimethylamine	ND		116	98.9		ug/L		85	10 - 139
N-Nitrosodi-n-propylamine	ND		116	89.2		ug/L		77	37 - 124
N-Nitrosodiphenylamine	ND		115	110		ug/L		96	10 - 150
Pentachlorophenol	ND		232	196		ug/L		84	29 - 130
Phenol	ND		116	70.8		ug/L		61	10 - 150
Pyridine	ND		232	123		ug/L		53	10 - 120
Quinoline	ND	F1 *-	116	53.0	F1	ug/L		46	51 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231397-13 MS
Matrix: Water
Analysis Batch: 607924

Client Sample ID: MW28-ROX-010523
Prep Type: Total/NA
Prep Batch: 607741

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2,4,5-Trichlorophenol	ND		116	126		ug/L		108	34 - 120
2,4,6-Trichlorophenol	ND		116	121		ug/L		104	33 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl	*105*		*46 - 124*
2-Fluorophenol	*28*		*13 - 113*
Nitrobenzene-d5	*69*		*36 - 126*
Phenol-d5	*60*		*17 - 127*
Terphenyl-d14	*128*		*44 - 149*
2,4,6-Tribromophenol	*107*		*26 - 150*

Lab Sample ID: 400-231397-13 MSD
Matrix: Water
Analysis Batch: 607924

Client Sample ID: MW28-ROX-010523
Prep Type: Total/NA
Prep Batch: 607741

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aniline	ND	F1	115	72.7		ug/L		63	10 - 120	NC	63
Benzoic acid	ND		531	193		ug/L		36	10 - 149	4	49
Benzyl alcohol	ND		115	86.0		ug/L		75	33 - 120	2	37
Bis(2-chloroethoxy)methane	ND		115	80.4		ug/L		70	26 - 120	1	70
Bis(2-chloroethyl)ether	ND	F2 F1	115	99.3	F2	ug/L		86	42 - 120	53	42
bis (2-chloroisopropyl) ether	ND		115	59.3		ug/L		51	28 - 120	1	41
Bis(2-ethylhexyl) phthalate	ND		115	131		ug/L		114	39 - 120	1	35
4-Bromophenyl phenyl ether	ND		115	111		ug/L		96	40 - 120	4	30
Butyl benzyl phthalate	ND		115	131		ug/L		114	45 - 120	1	32
4-Chloroaniline	ND		115	99.7		ug/L		87	10 - 120	0	94
4-Chloro-3-methylphenol	ND		115	98.9		ug/L		86	34 - 120	1	40
2-Chloronaphthalene	ND		115	112		ug/L		97	39 - 120	3	29
2-Chlorophenol	ND		115	74.8		ug/L		65	25 - 120	7	42
4-Chlorophenyl phenyl ether	ND		115	121		ug/L		105	44 - 120	2	27
Dibenz[a,h]acridine	ND	F1	115	53.2	F1	ug/L		46	50 - 150	1	40
Dibenzofuran	ND		115	117		ug/L		102	25 - 130	2	29
3,3'-Dichlorobenzidine	ND		153	178		ug/L		116	10 - 120	3	58
2,4-Dichlorophenol	ND		115	103		ug/L		90	31 - 120	0	43
Diethyl phthalate	1.0	J	115	122		ug/L		105	46 - 120	1	40
2,4-Dimethylphenol	ND		115	99.1		ug/L		86	21 - 120	3	47
Dimethyl phthalate	ND		115	114		ug/L		99	38 - 120	3	36
Di-n-butyl phthalate	ND		115	116		ug/L		101	49 - 120	3	32
4,6-Dinitro-ortho-cresol	ND		230	175		ug/L		76	25 - 120	3	42
2,4-Dinitrophenol	ND		230	140		ug/L		61	15 - 140	1	36
2,4-Dinitrotoluene	ND		115	118		ug/L		103	53 - 120	2	28
2,6-Dinitrotoluene	ND		115	111		ug/L		96	43 - 120	4	28
Di-n-octyl phthalate	ND		115	123		ug/L		107	35 - 121	2	35
1,4-Dioxane	ND	F1	115	55.6	F1	ug/L		48	50 - 150	10	40
1,2-Diphenylhydrazine (as Azobenzene)	ND		115	91.0		ug/L		79	50 - 150	2	40
Hexachlorobenzene	ND		115	109		ug/L		95	38 - 122	5	33
Hexachlorocyclopentadiene	ND		115	60.4		ug/L		52	10 - 120	16	50
Hexachloroethane	ND		115	78.0		ug/L		68	10 - 150	3	41

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231397-13 MSD
Matrix: Water
Analysis Batch: 607924

Client Sample ID: MW28-ROX-010523
Prep Type: Total/NA
Prep Batch: 607741

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Indene	ND		115	92.7		ug/L		81	50 - 150	2	40
Isophorone	ND		115	81.4		ug/L		71	42 - 120	2	33
2-Methylphenol	ND		115	94.4		ug/L		82	28 - 120	4	47
3 & 4 Methylphenol	ND		115	94.6		ug/L		82	31 - 120	1	47
2-Nitroaniline	ND		115	100		ug/L		87	45 - 120	5	33
3-Nitroaniline	ND		115	99.4		ug/L		86	10 - 130	1	39
4-Nitroaniline	ND		115	104		ug/L		90	10 - 132	2	50
Nitrobenzene	ND		115	84.0		ug/L		73	39 - 120	5	35
2-Nitrophenol	ND		115	101		ug/L		88	33 - 120	0	43
4-Nitrophenol	ND		230	226		ug/L		98	10 - 120	0	82
N-Nitrosodimethylamine	ND		115	94.8		ug/L		82	10 - 139	4	62
N-Nitrosodi-n-propylamine	ND		115	86.1		ug/L		75	37 - 124	4	36
N-Nitrosodiphenylamine	ND		114	108		ug/L		94	10 - 150	2	34
Pentachlorophenol	ND		230	194		ug/L		84	29 - 130	1	42
Phenol	ND		115	71.6		ug/L		62	10 - 150	1	52
Pyridine	ND		230	121		ug/L		53	10 - 120	1	55
Quinoline	ND	F1 *-	115	52.2	F1	ug/L		45	51 - 120	2	40
2,4,5-Trichlorophenol	ND		115	123		ug/L		107	34 - 120	3	42
2,4,6-Trichlorophenol	ND		115	120		ug/L		105	33 - 120	0	44

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl	*103*		*46 - 124*
2-Fluorophenol	*36*		*13 - 113*
Nitrobenzene-d5	*73*		*36 - 126*
Phenol-d5	*63*		*17 - 127*
Terphenyl-d14	*127*		*44 - 149*
2,4,6-Tribromophenol	*106*		*26 - 150*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 400-607741/1-A
Matrix: Water
Analysis Batch: 607925

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 607741

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.032	ug/L		01/09/23 10:42	01/10/23 16:39	1
Acenaphthylene	ND		0.20	0.045	ug/L		01/09/23 10:42	01/10/23 16:39	1
Anthracene	ND		0.20	0.032	ug/L		01/09/23 10:42	01/10/23 16:39	1
Benzo[a]anthracene	ND		0.20	0.046	ug/L		01/09/23 10:42	01/10/23 16:39	1
Benzo[a]pyrene	ND		0.20	0.042	ug/L		01/09/23 10:42	01/10/23 16:39	1
Benzo[b]fluoranthene	ND		0.20	0.034	ug/L		01/09/23 10:42	01/10/23 16:39	1
Benzo[g,h,i]perylene	ND		0.20	0.13	ug/L		01/09/23 10:42	01/10/23 16:39	1
Benzo[k]fluoranthene	ND		0.20	0.10	ug/L		01/09/23 10:42	01/10/23 16:39	1
Chrysene	ND		0.20	0.074	ug/L		01/09/23 10:42	01/10/23 16:39	1
Dibenz(a,h)anthracene	ND		0.20	0.050	ug/L		01/09/23 10:42	01/10/23 16:39	1
Fluoranthene	ND		0.20	0.068	ug/L		01/09/23 10:42	01/10/23 16:39	1
Fluorene	ND		0.20	0.11	ug/L		01/09/23 10:42	01/10/23 16:39	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.043	ug/L		01/09/23 10:42	01/10/23 16:39	1
1-Methylnaphthalene	ND		0.20	0.074	ug/L		01/09/23 10:42	01/10/23 16:39	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: MB 400-607741/1-A
Matrix: Water
Analysis Batch: 607925

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 607741

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		0.20	0.060	ug/L		01/09/23 10:42	01/10/23 16:39	1
Phenanthrene	ND		0.20	0.036	ug/L		01/09/23 10:42	01/10/23 16:39	1
Pyrene	ND		0.20	0.040	ug/L		01/09/23 10:42	01/10/23 16:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*102*		*15 - 122*	*01/09/23 10:42*	*01/10/23 16:39*	*1*
Nitrobenzene-d5	*70*		*19 - 130*	*01/09/23 10:42*	*01/10/23 16:39*	*1*
Terphenyl-d14	*115*		*33 - 138*	*01/09/23 10:42*	*01/10/23 16:39*	*1*

Lab Sample ID: LCS 400-607741/2-A
Matrix: Water
Analysis Batch: 607925

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 607741

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	120	113		ug/L		94	41 - 120
Acenaphthylene	120	118		ug/L		98	44 - 120
Anthracene	120	118		ug/L		98	49 - 120
Benzo[a]anthracene	120	115		ug/L		96	61 - 135
Benzo[a]pyrene	120	102		ug/L		85	52 - 120
Benzo[b]fluoranthene	120	97.5		ug/L		81	53 - 134
Benzo[g,h,i]perylene	120	89.9		ug/L		75	47 - 133
Benzo[k]fluoranthene	120	112		ug/L		93	57 - 134
Chrysene	120	111		ug/L		92	55 - 122
Dibenz(a,h)anthracene	120	96.4		ug/L		80	48 - 146
Fluoranthene	120	114		ug/L		95	54 - 128
Fluorene	120	120		ug/L		100	45 - 125
Indeno[1,2,3-cd]pyrene	120	98.6		ug/L		82	43 - 142
1-Methylnaphthalene	120	101		ug/L		84	41 - 120
2-Methylnaphthalene	120	94.8		ug/L		79	32 - 124
Phenanthrene	120	112		ug/L		93	48 - 120
Pyrene	120	119		ug/L		99	48 - 132

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*93*		*15 - 122*
Nitrobenzene-d5	*64*		*19 - 130*
Terphenyl-d14	*102*		*33 - 138*

Lab Sample ID: 400-231397-13 MS
Matrix: Water
Analysis Batch: 607925

Client Sample ID: MW28-ROX-010523
Prep Type: Total/NA
Prep Batch: 607741

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	ND		116	111		ug/L		96	35 - 113
Acenaphthylene	ND		116	116		ug/L		100	41 - 118
Anthracene	ND		116	119		ug/L		103	45 - 122
Benzo[a]anthracene	ND		116	114		ug/L		98	55 - 133
Benzo[a]pyrene	ND		116	103		ug/L		88	50 - 108
Benzo[b]fluoranthene	ND		116	98.8		ug/L		85	50 - 128

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: 400-231397-13 MS
Matrix: Water
Analysis Batch: 607925

Client Sample ID: MW28-ROX-010523
Prep Type: Total/NA
Prep Batch: 607741

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzo[g,h,i]perylene	ND		116	93.2		ug/L		80	46 - 133
Benzo[k]fluoranthene	ND		116	114		ug/L		98	52 - 128
Chrysene	ND		116	111		ug/L		96	52 - 116
Dibenz(a,h)anthracene	ND		116	96.3		ug/L		83	52 - 143
Fluoranthene	ND		116	108		ug/L		93	32 - 150
Fluorene	ND		116	116		ug/L		100	15 - 150
Indeno[1,2,3-cd]pyrene	ND		116	99.1		ug/L		85	41 - 141
1-Methylnaphthalene	ND		116	100		ug/L		86	10 - 150
2-Methylnaphthalene	ND		116	96.6		ug/L		83	10 - 150
Phenanthrene	ND		116	109		ug/L		94	36 - 125
Pyrene	ND		116	117		ug/L		101	41 - 127

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl	*94*		*15 - 122*
Nitrobenzene-d5	*65*		*19 - 130*
Terphenyl-d14	*104*		*33 - 138*

Lab Sample ID: 400-231397-13 MSD
Matrix: Water
Analysis Batch: 607925

Client Sample ID: MW28-ROX-010523
Prep Type: Total/NA
Prep Batch: 607741

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene	ND		115	108		ug/L		94	35 - 113	2	49
Acenaphthylene	ND		115	113		ug/L		98	41 - 118	3	48
Anthracene	ND		115	115		ug/L		100	45 - 122	4	56
Benzo[a]anthracene	ND		115	109		ug/L		94	55 - 133	5	57
Benzo[a]pyrene	ND		115	99.1		ug/L		86	50 - 108	4	59
Benzo[b]fluoranthene	ND		115	95.8		ug/L		83	50 - 128	3	62
Benzo[g,h,i]perylene	ND		115	91.9		ug/L		80	46 - 133	1	58
Benzo[k]fluoranthene	ND		115	108		ug/L		94	52 - 128	5	58
Chrysene	ND		115	105		ug/L		91	52 - 116	6	59
Dibenz(a,h)anthracene	ND		115	97.3		ug/L		85	52 - 143	1	60
Fluoranthene	ND		115	108		ug/L		93	32 - 150	0	59
Fluorene	ND		115	113		ug/L		98	15 - 150	2	49
Indeno[1,2,3-cd]pyrene	ND		115	101		ug/L		87	41 - 141	2	58
1-Methylnaphthalene	ND		115	95.1		ug/L		83	10 - 150	5	66
2-Methylnaphthalene	ND		115	91.2		ug/L		79	10 - 150	6	66
Phenanthrene	ND		115	107		ug/L		93	36 - 125	2	69
Pyrene	ND		115	108		ug/L		94	41 - 127	8	58

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl	*92*		*15 - 122*
Nitrobenzene-d5	*63*		*19 - 130*
Terphenyl-d14	*95*		*33 - 138*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: MB 400-610934/1-A
Matrix: Water
Analysis Batch: 614729

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 610934

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.20	0.046	ug/L		02/02/23 14:02	03/03/23 11:15	1
Benzo[b]fluoranthene	0.0960	J	0.20	0.034	ug/L		02/02/23 14:02	03/03/23 11:15	1
Benzo[k]fluoranthene	ND		0.20	0.10	ug/L		02/02/23 14:02	03/03/23 11:15	1
Chrysene	ND		0.20	0.074	ug/L		02/02/23 14:02	03/03/23 11:15	1
Dibenz(a,h)anthracene	0.0971	J	0.20	0.050	ug/L		02/02/23 14:02	03/03/23 11:15	1
Pyrene	ND		0.20	0.040	ug/L		02/02/23 14:02	03/03/23 11:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*79*		*15 - 122*	*02/02/23 14:02*	*03/03/23 11:15*	*1*
Nitrobenzene-d5	*79*		*19 - 130*	*02/02/23 14:02*	*03/03/23 11:15*	*1*
Terphenyl-d14	*96*		*33 - 138*	*02/02/23 14:02*	*03/03/23 11:15*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - RE

Lab Sample ID: LCS 400-610934/2-A
Matrix: Water
Analysis Batch: 611182

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 610934

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzo[a]anthracene - RE			120	125		ug/L		105	61 - 135		
Benzo[b]fluoranthene - RE			120	116		ug/L		96	53 - 134		
Benzo[k]fluoranthene - RE			120	103		ug/L		86	57 - 134		
Chrysene - RE			120	120		ug/L		100	55 - 122		
Dibenz(a,h)anthracene - RE			120	127		ug/L		106	48 - 146		
Pyrene - RE			120	122		ug/L		102	48 - 132		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl - RE	*82*		*15 - 122*
Nitrobenzene-d5 - RE	*107*		*19 - 130*
Terphenyl-d14 - RE	*99*		*33 - 138*

Lab Sample ID: LCSD 400-610934/3-A
Matrix: Water
Analysis Batch: 611182

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 610934

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzo[a]anthracene - RE			120	124		ug/L		103	61 - 135	1	49
Benzo[b]fluoranthene - RE			120	115		ug/L		95	53 - 134	1	54
Benzo[k]fluoranthene - RE			120	101		ug/L		84	57 - 134	2	52
Chrysene - RE			120	119		ug/L		99	55 - 122	1	50
Dibenz(a,h)anthracene - RE			120	130		ug/L		108	48 - 146	2	50
Pyrene - RE			120	118		ug/L		98	48 - 132	4	52

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl - RE	*82*		*15 - 122*
Nitrobenzene-d5 - RE	*100*		*19 - 130*
Terphenyl-d14 - RE	*97*		*33 - 138*

Method: 8011 - EDB and DBCP in Water by Microextraction

Lab Sample ID: MB 400-608226/1-A
Matrix: Water
Analysis Batch: 608261

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 608226

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND		0.030	0.017	ug/L		01/12/23 13:01	01/12/23 16:14	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/12/23 13:01	01/12/23 16:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*		*51 - 149*	*01/12/23 13:01*	*01/12/23 16:14*	*1*

Lab Sample ID: LCS 400-608226/2-A
Matrix: Water
Analysis Batch: 608261

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 608226

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,2-D bromo-3-Chloropropane			0.101	0.146	*+	ug/L		145	60 - 140		
1,2-D bromoethane			0.101	0.160	*+	ug/L		159	60 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*118*		*51 - 149*

Lab Sample ID: LCSD 400-608226/3-A
Matrix: Water
Analysis Batch: 608261

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 608226

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-D bromo-3-Chloropropane			0.101	0.148	*+	ug/L		147	60 - 140	1	30
1,2-D bromoethane			0.101	0.152	*+	ug/L		151	60 - 140	5	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*111*		*51 - 149*

Lab Sample ID: 400-231397-13 MS
Matrix: Water
Analysis Batch: 608261

Client Sample ID: MW28-ROX-010523
Prep Type: Total/NA
Prep Batch: 608226

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
1,2-D bromo-3-Chloropropane	ND	F1 *+	0.103	0.161	F1	ug/L		156	10 - 150		
1,2-D bromoethane	ND	*+	0.104	0.142		ug/L		137	39 - 150		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*111*	*p*	*51 - 149*

Lab Sample ID: 400-231397-13 MSD
Matrix: Water
Analysis Batch: 608261

Client Sample ID: MW28-ROX-010523
Prep Type: Total/NA
Prep Batch: 608226

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-D bromo-3-Chloropropane	ND	F1 *+	0.0985	0.151	F1	ug/L		154	10 - 150	6	20
1,2-D bromoethane	ND	*+	0.0988	0.135		ug/L		136	39 - 150	5	20

Method: 8011 - EDB and DBCP in Water by Microextraction (Continued)

Lab Sample ID: 400-231397-13 MSD
Matrix: Water
Analysis Batch: 608261

Client Sample ID: MW28-ROX-010523
Prep Type: Total/NA
Prep Batch: 608226

Surrogate	MSD %Recovery	MSD 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 (_____)

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
Melissa Remiger	25278	DATE: 1/5/2023
PO #	**GSAP Project ID**	PAGE: 1 of 2
60697537 – 3.1.2	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 60697537 – 3.1.2
ADDRESS: 100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA
EDF DELIVERABLE TO (Name, Company, Office Location): Melissa Remiger - please see special instructions
PHONE NO.: 314-802-1207
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AECOM Other ID:
PROJECT CONTACT (Hardcopy or PDF Report to): Melissa Remiger, Mary Massa, Brett Howell
SAMPLER NAME(S) (Print): Mary Massa, Joe Mayer
LAB USE ONLY
TELEPHONE: 314-429-0100
FAX: 314-429-0462
Bill To Contact E-MAIL: 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 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :

Email reports to: melissa.remiger@aecom.com; mary.massa@aecom.com; brett.howell@aecom.com

* Please include "J" values on Reports.
* Please provide sample receipt upon login.
* Please send EQuiS EDDs to EDDSubmissions@aecomshell.com; loredana.filimon@aecom.com

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS
60697537 – 3.1.2

400-231397 COC

FIELD NOTES:

2.6°C
1.7°C

TEMPERATURE ON RECEIPT C°: 1.9

Container PID Readings or Laboratory Notes:

Page 84 of 87	Field Sample identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VOC 8260	8011 EDB + DBCP	SVOC 8270	PAH 8270LL
	TB-ROX-010523-8260-A	1/5/2023	0000	Water	2					2	X			
	TB-ROX-010523-8011-A	1/5/2023	0000	Water	2					2		X		
	MW16-ROX-010523-EB	1/5/2023	0830	Water	6			2		8	X	X	X	X
	MW16-ROX-010523	1/5/2023	0945	Water	6			2		8	X	X	X	X
	ROST3MW-ROX-010523	1/5/2023	1050	Water	6			2		8	X	X	X	X
	MW9-ROX-010523	1/5/2023	1155	Water	6			2		8	X	X	X	X

Relinquished by: (Signature) MARY MASSA	Received by: (Signature) FEDEX: 5564 3935 7406, 5564 3935 7417	Date: 1/5/2023	Time: 1600
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date: 1-6-23	Time: 1855

3/3/2023 (Rev. 1)

Version: 13Oct22

CUSTODY SEALS: 2026361, 2026360, 2026358, 2026359

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 ( )

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
Melissa Remiger	25278	DATE: 1/5/2023
PO #	**GSAP Project ID**	PAGE: 2 of 2
60697537 – 3.1.2	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 60697537 – 3.1.2
ADDRESS: 100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA
EDF DELIVERABLE TO (Name, Company, Office Location): Melissa Remiger - please see special instructions
PHONE NO.: 314-802-1207
E-MAIL: melissa.remiger@aecom.com
AECOM Other ID:
PROJECT CONTACT (Hardcopy or PDF Report to): Melissa Remiger, Mary Massa, Brett Howell
SAMPLER NAME(S) (Print): T. Jones, S. Beadle
LAB USE ONLY
TELEPHONE: 314-429-0100
FAX: 314-429-0462
Bill To Contact E-MAIL: 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 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD
TEMPERATURE ON RECEIPT C°: Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
Email reports to: melissa.remiger@aecom.com; mary.massa@aecom.com; brett.howell@aecom.com
* Please include "J" values on Reports.
* Please provide sample receipt upon login.
* Please send EQuiS EDDs to EDDSubmissions@aecomshell.com; loredana.filimon@aecom.com

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS 60697537 – 3.1.2

FIELD NOTES: 0 C°C

TEMPERATURE ON RECEIPT C°: 1P%

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	8011 EDB + DBCP	SVOC 8270	PAH 8270LL	Container PID Readings or Laboratory Notes
	TB-ROX-010523-8260-B	1/5/2023	0000	Water	2					2	X				
	TB-ROX-010523-8011-B	1/5/2023	0000	Water	2					2		X			
	P93A-ROX-010523-EB	1/5/2023	0815	Water	6			2		8	X	X	X	X	
	P93A-ROX-010523	1/5/2023	0930	Water	6			2		8	X	X	X	X	
	P93C-ROX-010523	1/5/2023	1030	Water	6			2		8	X	X	X	X	
	P93D-ROX-010523	1/5/2023	1205	Water	6			2		8	X	X	X	X	
	MW28-ROX-010523	1/5/2023	1310	Water	6			2		8	X	X	X	X	
	MW28-ROX-010523-MS	1/5/2023	1310	Water	6			2		8	X	X	X	X	
	MW28-ROX-010523-MSD	1/5/2023	1310	Water	6			2		8	X	X	X	X	

Sam Beadle 1/5/23

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Sam Beadle	FEDEX: See page 1	1/5/2023	1600
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date: 1-6-23	Time: 858

Version: 13Oct22

CUSTODY SEALS:

Login Sample Receipt Checklist

Client: AECOM Technical Services Inc. Job Number: 400-231397-1

Login Number: 231397 **List Source: Eurofins Pensacola**
List Number: 1
Creator: Perez, Trina M

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	0.0°C IR-9, 1.7°C IR9
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.	N/A	
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. Job ID: 400-231397-1
Project/Site: ROXANA QUARTERLY GW

Laboratory: Eurofins Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	06-30-23
ANAB	ISO/IEC 17025	L2471	02-22-26
Arkansas DEQ	State	88-0689	09-01-23
California	State	2510	06-30-23
Florida	NELAP	E81010	06-30-23
Georgia	State	E81010(FL)	06-30-23
Illinois	NELAP	200041	10-09-23
Kansas	NELAP	E-10253	10-31-23
Kentucky (UST)	State	53	06-30-23
Louisiana (All)	NELAP	30976	06-30-23
Louisiana (DW)	State	LA017	12-31-23
Maryland	State	233	09-30-23
Michigan	State	9912	06-30-23
North Carolina (WW/SW)	State	314	12-31-23
Oklahoma	NELAP	9810	08-31-23
Pennsylvania	NELAP	68-00467	01-31-24
South Carolina	State	96026	06-30-23
Tennessee	State	TN02907	06-30-23
Texas	NELAP	T104704286	09-30-23
US Fish & Wildlife	US Federal Programs	A22340	06-30-23
USDA	US Federal Programs	FLGNV23001	01-08-26
USDA	US Federal Programs	P330-21-00056	05-17-24
Virginia	NELAP	460166	06-14-23
West Virginia DEP	State	136	03-31-23

Roxana Groundwater Quarterly – 1st Quarter 2023 Data Review

Laboratory SDG: 400-231426-1-Rev.4

Data Reviewer: Andreia Vladimirescu

Peer Reviewer: Cheyana Cokley

Date Reviewed: 03/10/2023

Guidance: USEPA National Functional Guidelines for Organic Superfund Methods Data Review 2020

Sample Identification	Sample Identification
TB-ROX-010623-8260-A	TB-ROX-010623-8011-A
P54-ROX-010623	MW26-ROX-010623
MW27-ROX-010623	TB-ROX-010623-8260-B
TB-ROX-010623-8011-B	MW12-ROX-010623
ROST4PZG-ROX-010623	P114R-ROX-010623

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 that several PAHs in sample P114R-ROX-010623 were re-extracted outside of the extraction time criteria. Benzo[b]fluoranthene was detected in the method blank. Several SVOC and VOC by 8011 LCS/LCSD recoveries, and/or SVOC LCS/LCSD RPDs, were outside evaluation criteria. Surrogate recoveries for PAH 2-fluorophenol in samples MW27-ROX-010623 and P114R-ROX-010623 were outside criteria. MS/MSD recoveries and RPDs for 2-chloroethyl vinyl ether were outside evaluation criteria in samples P54-ROX-010623 and P114R-ROX-010623. The continuing calibration verification (CCV) for di-n-octyl phthalate was outside evaluation criteria, biased high. The continuing calibration verification (CCV) for benzo[b]fluoranthene was outside evaluation criteria, biased low. These issues are addressed further in the appropriate sections of this data review. The laboratory report was revised on March 6, 2023, to report revised PAH detections.; both original and reanalysis results are reported. The laboratory report was revised on March 6, 2023, to include missing ICV data associated with PAH. The laboratory report was revised on March 13, 2023, to remove incorrect dilution comment for Method 8270LL PAHs. The laboratory report was revised on March 16, 2023, to include missing PAH method blank data. The laboratory report was revised on March 24, 2023, to include missing method blank data and correct case narrative comments.

Three of 70 (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?

No, several PAHs in sample P114R-ROX-010623 were re-extracted 27 days outside extraction time criteria (7 days) and then re-analyzed due to initial analysis results that were not consistent with historical data; the re-extracted and re-analyzed samples were out of hold time and the results were non-detect. Both sets of data are reported. With regard to initial P114R-ROX-010623 PAH data, the laboratory issued a Corrective Action Report (CAR) stating that through confirmation analyses, many previous detections were not confirmed and were therefore deemed laboratory contamination. Based on professional judgment, the results from the re-analyzed sample were used for the purposed of this report. Data requiring qualification is summarized in the following table.

Sample ID	Parameter	Analyte	Qualification
P114R-ROX-010623 – RE	PAHs	Benzo[b]fluoranthene	**UJ**
P114R-ROX-010623 – RE	PAHs	Fluoranthene	**UJ**
P114R-ROX-010623 – RE	PAHs	Pyrene	**UJ**

4.0 Blank Contamination

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

Yes

Blank ID	Parameter	Analyte	Concentration /Amount
MB 400-607999/1-A	PAHs	Benzo[b]fluoranthene	0.0629 µg/L
MB 400-611779/1-A	PAHs	Benzo[b]fluoranthene	0.0406 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 400-607999/4-A	SVOCs	Benzenethiol	**5/6**	7	10-120/30
LCS/LCSD 400-607999/2-A/3-A	SVOCs	4-Chloroaniline	**124/127**	2	26-120/30
LCS/LCSD 400-607999/2-A/3-A	SVOCs	3,3'-Dichlorobenzidine	**161/162**	1	36-132/30
LCS/LCSD 400-607999/2-A/3-A	SVOCs	3-Nitroaniline	**132/135**	2	37-127/30
LCS/LCSD 400-607999/2-A	SVOCs	1,4-Dioxane	36/68	**61**	31-120/30
LCS/LCSD 400-608768/2-A/3-A	VOCs by 8011	1,2-Dibromo-3-Chloropropane	**164/163**	1	60-140/30

Analytical data that required qualification based on LCS/LCSD data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Professional judgment was used to qualify, however not reject, data associated with benzenethiol below evaluation criteria; benzenethiol has been identified as a poor performing analyte under Method 8270. Analytical data associated with LCS/LCSD RPD alone outside evaluation criteria did not require qualification.

Sample ID	Parameter	Analyte	Qualification
P54-ROX-010623	SVOCs	Benzenethiol	**UJ**
MW26-ROX-010623	SVOCs	Benzenethiol	**UJ**
MW27-ROX-010623	SVOCs	Benzenethiol	**UJ**
MW12-ROX-010623	SVOCs	Benzenethiol	**UJ**
ROST4PZG-ROX-010623	SVOCs	Benzenethiol	**UJ**
P114R-ROX-010623	SVOCs	Benzenethiol	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
MW27-ROX-010623	SVOCs	2-Fluorophenol	**6**	13-113
P114R-ROX-010623	SVOCs	2-Fluorophenol	**2**	13-113

Qualifications due to surrogate recoveries were not required if only one of three base/neutral and/or acid surrogate recoveries were outside evaluation criteria.

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

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

Yes, although not requested, samples P54-ROX-010623 and P114R-ROX-010623 were spiked and analyzed for VOCs.

Were MS/MSD recoveries within evaluation criteria?

No.

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
P54-ROX-010623 MS/MSD	VOCs	2-Chloroethyl vinyl ether	**0/0**	**NC**	10-150/50
P114R-ROX-010623 MS/MSD	VOCs	2-Chloroethyl vinyl ether	12/**0**	**NC**	10-150/50

Analytical data that required qualification based on MS/MSD data are included in the table below. Professional judgement was used to qualify; however, not reject the compound 2-chloroethyl vinyl ether due to acceptable LCS recoveries for this compound and to the acid reactive nature of 2-chloroethyl vinyl ether.

Sample ID	Parameter	Analyte	Qualification
P54-ROX-010623	VOCs	2-Chloroethyl vinyl ether	**UJ**
P114R-ROX-010623	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 verification for di-n-octyl phthalate was outside evaluation criteria, biased high. The continuing calibration verification for benzo[b]fluoranthene was outside evaluation criteria, biased low. Analytes are qualified as summarized in the following table.

Sample ID	Parameter	Analyte	Qualification
ROST4PZG-ROX-010623	SVOCs	Di-n-octyl phthalate	**J**
MW26-ROX-010623	PAHs	Benzo[b]fluoranthene	**UJ**

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 3/24/2023 10:46:40 AM Revision 4

JOB DESCRIPTION

ROXANA QUARTERLY GW

JOB NUMBER

400-231426-1

Eurofins Pensacola
3355 McLemore Drive
Pensacola FL 32514

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet all NELAP requirements for accredited parameters, unless otherwise noted, and relate only to the referenced samples. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval from the laboratory. For questions please contact the Project Manager at the e-mail address listed on this page, or the telephone number at the bottom of the page. Eurofins Environment Testing Southeast LLC, Pensacola Certifications and Approvals: Alabama (40150), Arizona (AZ0710), Arkansas (88-0689), Florida (E81010), Illinois (200041), Iowa (367), Kansas (E-10253), Kentucky UST (53), Louisiana (30748), Maryland (233), Massachusetts (M-FL094), Michigan (9912), New Hampshire (250510), New Jersey (FL006), North Carolina (314), Oklahoma (9810), Pennsylvania (68-00467), Rhode Island (LAO00307), South Carolina (96026), Tennessee (TN02907), Texas (T104704286-10-2), Virginia (00008), Washington (C2043), West Virginia (136), USDA Foreign Soil Permit (P330-08-00006).

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization

Generated
3/24/2023 10:46:40 AM
Revision 4

Authorized for release by
Leah Klingensmith, Senior Project Manager
Leah.Klingensmith@et.eurofinsus.com
(615)301-5038

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Certification Summary 77

Job ID: 400-231426-1

Laboratory: Eurofins Pensacola

Narrative

Job Narrative
400-231426-1

Comment
Revised Report
Report revised to include missing method blank data for the 8270LL and correct comments in the narrative.
Supersedes report dated 3-16-2023.

Revised Report
Report revised to include missing method blank data for the 8270LL batch 400-607999.
Supersedes report dated 3-13-2023.

Revised Report
Report revised to remove unnecessary dilution comment for the 8270LL method.
Supersedes report dated 3/2023.

Revised Report
Report revised to include missing ICV data associated with PAHs.
Supersedes report dated 3-6-2023.

Revised Report
Report revised to correct 8270 data.
Supersedes report dated 1-23-2023.

The 8270 data for this job was reviewed when it was determined the original results did not match historical data. Confirmation analyses of the initial extract and in some instances analysis of re-extracted samples were performed. The results of these re-analyses confirm in some cases and are reported again in the revision. The difference in a result that does not confirm is most likely due to trace level contamination. The result with the highest confidence level is currently reported when all results are in hold. In instances where a confirmation analysis was performed outside of holding time both the initial and out of hold results are reported.

Receipt
The samples were received on 1/7/2023 9:10 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.0º C.

GC/MS VOA
Method 8260B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 400-607992 were outside control limits for 2-Chloroethyl vinyl ether due to the acidic nature of the parent sample.

Method 8260B: The RPD for the MS/MSD for 2-chloroethyl vinyl ether was not calculable for analytical batch 400-607992 becau the recoveries were below the reporting limit due to the acidic nature of the parent sample.

Method 8260B: The matrix spike duplicate (MSD) recovery for analytical batch 400-608295 was outside control limits for 2-Chloroethyl vinyl ether due to the acidic nature of the parent sample.

Method 8260B: The preservative used in the sample containers provided is not compatible with some of the Method 8260 analyt requested. The following samples were received preserved with hydrochloric acid: ROST4PZG-ROX-010623 (400-231426-9) ar P114R-ROX-010623 (400-231426-10). The requested target analyte list includes 2-chloroethyl vinyl ether, Acrolein and Acryloni which are acid-labile compounds that degrade in an acidic medium.

Method 8260B: The preservative used in the sample containers provided is not compatible with some of the Method 8260 analyt requested. The following samples were received preserved with hydrochloric acid: TB-ROX-010623-8260-A (400-231426-1), P54-ROX-010623 (400-231426-3), MW26-ROX-010623 (400-231426-4), MW27-ROX-010623 (400-231426-5), TB-ROX-010623-8260-B (400-231426-6) and MW12-ROX-010623 (400-231426-8). The requested target analyte list includes 2-chloroethyl vinyl ether, Acrolein and Acrylonitrile, which are acid-labile compounds that degrade in an acidic medium.

Job ID: 400-231426-1 (Continued)

Laboratory: Eurofins Pensacola (Continued)

Method 8260B: The RPD for the matrix spike / matrix spike duplicate (MS/MSD) for 2-Chloroethyl vinyl ether was not calculable analytical batch 400-608295 because the recovery for the MSD was below the reporting limit due to the acidic nature of the pare sample.

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

GC/MS Semi VOA

Method 8270D: The continuing calibration verification (CCV) associated with batch 400-608161 recovered above the upper cont limit for Quinoline. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8270D: The continuing calibration verification (CCV) associated with batch 400-608161 recovered above the upper cont limit for 4-Chloro-3-methylphenol, 2,4-Dinitrotoluene, Dibenzofuran, Aniline and Di-n-octyl phthalate. The samples associated w this CCV were less than the reporting limit for the affected analytes; therefore, the data have been reported.

Method 8270D: The continuing calibration verification (CCV) associated with batch 400-608161 recovered above the upper cont limit for Indene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have bee reported.

Method 8270D: The continuing calibration verification (CCV) associated with batch 400-608161 recovered above the upper cont limit for Benzenethiol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data hav been reported.

Method 8270D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 400-607999 and analytical batch 400-608161 recovered outside control limits for the following analytes: 3,3'-Dichlorobenzidine, 3-Nitroaniline and 4-Chloroaniline. These analytes were biased high in the LCS and were not detected in the associated sample therefore, the data have been reported.

Method 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 400-607999 and analytical batch 400-608161 recovered outside control limits for the following analytes: 1,4-Dioxane.

Method 8270D: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 400-607999 and analytical batch 400-608161 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 ha been reported and qualified.

Method 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: MW27-ROX-010623 (400-231426-5) and P114R-ROX-010623 (400-231426-10). These res have been reported and qualified.

Method 8270D LL: The method blank for preparation batch 400-607999 and analytical batch 400-614729 contained Benzo[k]fluoranthene 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 8270D LL: The continuing calibration verification (CCV) associated with batch 400-608245 recovered outside acceptanc criteria, low biased, for Benzo[b]fluoranthene. A reporting limit (RL) standard was analyzed, and the target analytes are detecte Since the associated samples were non-detect for the analyte(s), the data are reported.

Job ID: 400-231426-1 (Continued)

Laboratory: Eurofins Pensacola (Continued)

Method 8270D LL: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batc 400-611779 and analytical batch 400-611978 recovered outside control limits for the following analytes: Anthracene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8270D LL: The method blank for preparation batch 400-611779 and analytical batch 400-612404 contained Benzo[k]fluoranthene 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 8270D LL: The following sample was re-prepared outside of preparation holding time to confirm PAH detections: P114R-ROX-010623 (400-231426-10).

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

GC Semi VOA

Method 8011: The continuing calibration verification (CCV) associated with batch 400-608815 recovered above the upper contrc limit for 1,2-Dibromo-3-Chloropropane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8011: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 400-608768 and analytical batch 400-608815 recovered outside control limits for the following analytes: 1,2-Dibromo-3-Chloropropane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8011: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated w preparation batch 400-608768.

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 GW

Job ID: 400-231426-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-231426-1	TB-ROX-010623-8260-A	Water	01/06/23 12:00	01/07/23 09:10
400-231426-2	TB-ROX-010623-8011-A	Water	01/06/23 12:00	01/07/23 09:10
400-231426-3	P54-ROX-010623	Water	01/06/23 09:40	01/07/23 09:10
400-231426-4	MW26-ROX-010623	Water	01/06/23 10:45	01/07/23 09:10
400-231426-5	MW27-ROX-010623	Water	01/06/23 13:15	01/07/23 09:10
400-231426-6	TB-ROX-010623-8260-B	Water	01/06/23 12:00	01/07/23 09:10
400-231426-7	TB-ROX-010623-8011-B	Water	01/06/23 12:00	01/07/23 09:10
400-231426-8	MW12-ROX-010623	Water	01/06/23 09:45	01/07/23 09:10
400-231426-9	ROST4PZG-ROX-010623	Water	01/06/23 10:55	01/07/23 09:10
400-231426-10	P114R-ROX-010623	Water	01/06/23 13:15	01/07/23 09:10

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231426-1

Client Sample ID: TB-ROX-010623-8260-A — Lab Sample ID: 400-231426-1

No Detections.

Client Sample ID: TB-ROX-010623-8011-A — Lab Sample ID: 400-231426-2

No Detections.

Client Sample ID: P54-ROX-010623 — Lab Sample ID: 400-231426-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene - RA	0.056	J B	0.20	0.035	ug/L	1		8270D LL	Total/NA
Diethyl phthalate	0.64	J	10	0.24	ug/L	1		8270D	Total/NA

Client Sample ID: MW26-ROX-010623 — Lab Sample ID: 400-231426-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diethyl phthalate	0.67	J	10	0.24	ug/L	1		8270D	Total/NA

Client Sample ID: MW27-ROX-010623 — Lab Sample ID: 400-231426-5

No Detections.

Client Sample ID: TB-ROX-010623-8260-B — Lab Sample ID: 400-231426-6

No Detections.

Client Sample ID: TB-ROX-010623-8011-B — Lab Sample ID: 400-231426-7

No Detections.

Client Sample ID: MW12-ROX-010623 — Lab Sample ID: 400-231426-8

No Detections.

Client Sample ID: ROST4PZG-ROX-010623 — Lab Sample ID: 400-231426-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	550		25	10	ug/L	1		8260B	Total/NA
Benzene	0.32	J	1.0	0.13	ug/L	1		8260B	Total/NA
Phenanthrene	0.037	J	0.19	0.035	ug/L	1		8270D LL	Total/NA
Diethyl phthalate	0.30	J	9.7	0.23	ug/L	1		8270D	Total/NA
Di-n-octyl phthalate	2.9	J	9.7	0.16	ug/L	1		8270D	Total/NA

Client Sample ID: P114R-ROX-010623 — Lab Sample ID: 400-231426-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	1.4		1.0	0.22	ug/L	1		8260B	Total/NA
Benzo[b]fluoranthene - RA	0.13	J B	0.19	0.033	ug/L	1		8270D LL	Total/NA
Fluoranthene - RA	0.16	J	0.19	0.066	ug/L	1		8270D LL	Total/NA
Pyrene - RA	0.18	J	0.19	0.039	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 GW

Job ID: 400-231426-1

Client Sample ID: TB-ROX-010623-8260-A
Date Collected: 01/06/23 12:00
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-1
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/11/23 15:22	1
Acrolein	ND		20	3.3	ug/L			01/11/23 15:22	1
Acrylonitrile	ND		10	2.8	ug/L			01/11/23 15:22	1
Benzene	ND		1.0	0.13	ug/L			01/11/23 15:22	1
Bromobenzene	ND		1.0	0.54	ug/L			01/11/23 15:22	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/11/23 15:22	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/11/23 15:22	1
Bromoform	ND		5.0	0.25	ug/L			01/11/23 15:22	1
Bromomethane	ND		1.0	0.98	ug/L			01/11/23 15:22	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/11/23 15:22	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/11/23 15:22	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/11/23 15:22	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/11/23 15:22	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/11/23 15:22	1
Chloroethane	ND		1.0	0.76	ug/L			01/11/23 15:22	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/11/23 15:22	1
Chloroform	ND		1.0	1.0	ug/L			01/11/23 15:22	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/11/23 15:22	1
Chloromethane	ND		1.0	0.32	ug/L			01/11/23 15:22	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/11/23 15:22	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/11/23 15:22	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/11/23 15:22	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/11/23 15:22	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/11/23 15:22	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/11/23 15:22	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/11/23 15:22	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/11/23 15:22	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/11/23 15:22	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/11/23 15:22	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/11/23 15:22	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/11/23 15:22	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/11/23 15:22	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/11/23 15:22	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/11/23 15:22	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/11/23 15:22	1
2-Hexanone	ND		25	1.4	ug/L			01/11/23 15:22	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/11/23 15:22	1
Methylene bromide	ND		5.0	0.22	ug/L			01/11/23 15:22	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/11/23 15:22	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/11/23 15:22	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/11/23 15:22	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/11/23 15:22	1
Naphthalene	ND		5.0	3.0	ug/L			01/11/23 15:22	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/11/23 15:22	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/11/23 15:22	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/11/23 15:22	1
o-Xylene	ND		5.0	0.60	ug/L			01/11/23 15:22	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/11/23 15:22	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/11/23 15:22	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231426-1

Client Sample ID: TB-ROX-010623-8260-A
Date Collected: 01/06/23 12:00
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-1
Matrix: Water

Method: SW846 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			01/11/23 15:22	1
Styrene	ND		1.0	1.0	ug/L			01/11/23 15:22	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/11/23 15:22	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/11/23 15:22	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/11/23 15:22	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/11/23 15:22	1
Toluene	ND		1.0	0.41	ug/L			01/11/23 15:22	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/11/23 15:22	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/11/23 15:22	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/11/23 15:22	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/11/23 15:22	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/11/23 15:22	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/11/23 15:22	1
Trichloroethene	ND		1.0	0.15	ug/L			01/11/23 15:22	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/11/23 15:22	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/11/23 15:22	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/11/23 15:22	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/11/23 15:22	1
Vinyl acetate	ND		25	0.93	ug/L			01/11/23 15:22	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/11/23 15:22	1
Xylenes, Total	ND		10	1.6	ug/L			01/11/23 15:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*72 - 119*		*01/11/23 15:22*	*1*
Dibromofluoromethane	*100*		*75 - 126*		*01/11/23 15:22*	*1*
Toluene-d8 (Surr)	*96*		*64 - 132*		*01/11/23 15:22*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231426-1

Client Sample ID: TB-ROX-010623-8011-A
Date Collected: 01/06/23 12:00
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-2
Matrix: Water

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.030	0.017	ug/L		01/17/23 10:00	01/17/23 16:40	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/17/23 10:00	01/17/23 16:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*124*	*p*	*51 - 149*	*01/17/23 10:00*	*01/17/23 16:40*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231426-1

Client Sample ID: P54-ROX-010623
Date Collected: 01/06/23 09:40
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-3
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/11/23 12:05	1
Acrolein	ND		20	3.3	ug/L			01/11/23 12:05	1
Acrylonitrile	ND		10	2.8	ug/L			01/11/23 12:05	1
Benzene	ND		1.0	0.13	ug/L			01/11/23 12:05	1
Bromobenzene	ND		1.0	0.54	ug/L			01/11/23 12:05	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/11/23 12:05	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/11/23 12:05	1
Bromoform	ND		5.0	0.25	ug/L			01/11/23 12:05	1
Bromomethane	ND		1.0	0.98	ug/L			01/11/23 12:05	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/11/23 12:05	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/11/23 12:05	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/11/23 12:05	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/11/23 12:05	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/11/23 12:05	1
Chloroethane	ND		1.0	0.76	ug/L			01/11/23 12:05	1
2-Chloroethyl vinyl ether	ND	F1	5.0	2.0	ug/L			01/11/23 12:05	1
Chloroform	ND		1.0	1.0	ug/L			01/11/23 12:05	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/11/23 12:05	1
Chloromethane	ND		1.0	0.32	ug/L			01/11/23 12:05	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/11/23 12:05	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/11/23 12:05	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/11/23 12:05	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/11/23 12:05	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/11/23 12:05	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/11/23 12:05	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/11/23 12:05	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/11/23 12:05	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/11/23 12:05	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/11/23 12:05	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/11/23 12:05	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/11/23 12:05	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/11/23 12:05	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/11/23 12:05	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/11/23 12:05	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/11/23 12:05	1
2-Hexanone	ND		25	1.4	ug/L			01/11/23 12:05	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/11/23 12:05	1
Methylene bromide	ND		5.0	0.22	ug/L			01/11/23 12:05	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/11/23 12:05	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/11/23 12:05	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/11/23 12:05	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/11/23 12:05	1
Naphthalene	ND		5.0	3.0	ug/L			01/11/23 12:05	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/11/23 12:05	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/11/23 12:05	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/11/23 12:05	1
o-Xylene	ND		5.0	0.60	ug/L			01/11/23 12:05	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/11/23 12:05	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/11/23 12:05	1

Client Sample ID: P54-ROX-010623
Date Collected: 01/06/23 09:40
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-3
Matrix: Water

Method: SW846 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			01/11/23 12:05	1
Styrene	ND		1.0	1.0	ug/L			01/11/23 12:05	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/11/23 12:05	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/11/23 12:05	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/11/23 12:05	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/11/23 12:05	1
Toluene	ND		1.0	0.41	ug/L			01/11/23 12:05	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/11/23 12:05	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/11/23 12:05	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/11/23 12:05	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/11/23 12:05	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/11/23 12:05	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/11/23 12:05	1
Trichloroethene	ND		1.0	0.15	ug/L			01/11/23 12:05	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/11/23 12:05	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/11/23 12:05	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/11/23 12:05	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/11/23 12:05	1
Vinyl acetate	ND		25	0.93	ug/L			01/11/23 12:05	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/11/23 12:05	1
Xylenes, Total	ND		10	1.6	ug/L			01/11/23 12:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*72 - 119*		*01/11/23 12:05*	*1*
Dibromofluoromethane	*101*		*75 - 126*		*01/11/23 12:05*	*1*
Toluene-d8 (Surr)	*95*		*64 - 132*		*01/11/23 12:05*	*1*

Method: SW846 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	0.033	ug/L		01/11/23 08:49	01/13/23 13:44	1
Acenaphthylene	ND		0.20	0.046	ug/L		01/11/23 08:49	01/13/23 13:44	1
Anthracene	ND		0.20	0.033	ug/L		01/11/23 08:49	01/13/23 13:44	1
Benzo[a]anthracene	ND		0.20	0.047	ug/L		01/11/23 08:49	01/13/23 13:44	1
Benzo[g,h,i]perylene	ND		0.20	0.13	ug/L		01/11/23 08:49	01/13/23 13:44	1
Dibenz(a,h)anthracene	ND		0.20	0.051	ug/L		01/11/23 08:49	01/13/23 13:44	1
Fluorene	ND		0.20	0.11	ug/L		01/11/23 08:49	01/13/23 13:44	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.044	ug/L		01/11/23 08:49	01/13/23 13:44	1
1-Methylnaphthalene	ND		0.20	0.075	ug/L		01/11/23 08:49	01/13/23 13:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*105*		*15 - 122*	*01/11/23 08:49*	*01/13/23 13:44*	*1*
Nitrobenzene-d5	*71*		*19 - 130*	*01/11/23 08:49*	*01/13/23 13:44*	*1*
Terphenyl-d14	*117*		*33 - 138*	*01/11/23 08:49*	*01/13/23 13:44*	*1*

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		0.20	0.043	ug/L		01/11/23 08:49	01/27/23 22:02	1
Benzo[b]fluoranthene	**0.056**	**J B**	0.20	0.035	ug/L		01/11/23 08:49	01/27/23 22:02	1
Benzo[k]fluoranthene	ND		0.20	0.10	ug/L		01/11/23 08:49	01/27/23 22:02	1
Chrysene	ND		0.20	0.075	ug/L		01/11/23 08:49	01/27/23 22:02	1

Client Sample ID: P54-ROX-010623
Date Collected: 01/06/23 09:40
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-3
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - RA (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		0.20	0.069	ug/L		01/11/23 08:49	01/27/23 22:02	1
2-Methylnaphthalene	ND		0.20	0.061	ug/L		01/11/23 08:49	01/27/23 22:02	1
Phenanthrene	ND		0.20	0.037	ug/L		01/11/23 08:49	01/27/23 22:02	1
Pyrene	ND		0.20	0.041	ug/L		01/11/23 08:49	01/27/23 22:02	1

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.9	ug/L		01/11/23 08:49	01/12/23 17:54	1
Benzenethiol	ND	*-	10	1.7	ug/L		01/11/23 08:49	01/12/23 17:54	1
Benzoic acid	ND		31	7.4	ug/L		01/11/23 08:49	01/12/23 17:54	1
Benzyl alcohol	ND		10	2.0	ug/L		01/11/23 08:49	01/12/23 17:54	1
Bis(2-chloroethoxy)methane	ND		10	0.16	ug/L		01/11/23 08:49	01/12/23 17:54	1
Bis(2-chloroethyl)ether	ND		10	2.7	ug/L		01/11/23 08:49	01/12/23 17:54	1
bis (2-chloroisopropyl) ether	ND		10	0.16	ug/L		01/11/23 08:49	01/12/23 17:54	1
Bis(2-ethylhexyl) phthalate	ND		10	5.1	ug/L		01/11/23 08:49	01/12/23 17:54	1
4-Bromophenyl phenyl ether	ND		10	0.20	ug/L		01/11/23 08:49	01/12/23 17:54	1
Butyl benzyl phthalate	ND		10	0.19	ug/L		01/11/23 08:49	01/12/23 17:54	1
4-Chloroaniline	ND	*+	10	3.5	ug/L		01/11/23 08:49	01/12/23 17:54	1
4-Chloro-3-methylphenol	ND		10	3.9	ug/L		01/11/23 08:49	01/12/23 17:54	1
2-Chloronaphthalene	ND		10	0.14	ug/L		01/11/23 08:49	01/12/23 17:54	1
2-Chlorophenol	ND		10	2.2	ug/L		01/11/23 08:49	01/12/23 17:54	1
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		01/11/23 08:49	01/12/23 17:54	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/11/23 08:49	01/12/23 17:54	1
Dibenzofuran	ND		10	0.17	ug/L		01/11/23 08:49	01/12/23 17:54	1
3,3'-Dichlorobenzidine	ND	*+	10	2.6	ug/L		01/11/23 08:49	01/12/23 17:54	1
2,4-Dichlorophenol	ND		10	3.1	ug/L		01/11/23 08:49	01/12/23 17:54	1
Diethyl phthalate	**0.64**	**J**	10	0.24	ug/L		01/11/23 08:49	01/12/23 17:54	1
2,4-Dimethylphenol	ND		10	3.6	ug/L		01/11/23 08:49	01/12/23 17:54	1
Dimethyl phthalate	ND		10	0.17	ug/L		01/11/23 08:49	01/12/23 17:54	1
Di-n-butyl phthalate	ND		10	2.7	ug/L		01/11/23 08:49	01/12/23 17:54	1
4,6-Dinitro-ortho-cresol	ND		10	1.6	ug/L		01/11/23 08:49	01/12/23 17:54	1
2,4-Dinitrophenol	ND		31	3.5	ug/L		01/11/23 08:49	01/12/23 17:54	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		01/11/23 08:49	01/12/23 17:54	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		01/11/23 08:49	01/12/23 17:54	1
Di-n-octyl phthalate	ND		10	0.17	ug/L		01/11/23 08:49	01/12/23 17:54	1
1,4-Dioxane	ND	*1	10	1.0	ug/L		01/11/23 08:49	01/12/23 17:54	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/11/23 08:49	01/12/23 17:54	1
Hexachlorobenzene	ND		10	0.17	ug/L		01/11/23 08:49	01/12/23 17:54	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		01/11/23 08:49	01/12/23 17:54	1
Hexachloroethane	ND		10	4.3	ug/L		01/11/23 08:49	01/12/23 17:54	1
Indene	ND		10	1.0	ug/L		01/11/23 08:49	01/12/23 17:54	1
Isophorone	ND		10	0.14	ug/L		01/11/23 08:49	01/12/23 17:54	1
2-Methylphenol	ND		10	1.8	ug/L		01/11/23 08:49	01/12/23 17:54	1
3 & 4 Methylphenol	ND		20	0.40	ug/L		01/11/23 08:49	01/12/23 17:54	1
2-Nitroaniline	ND		10	2.2	ug/L		01/11/23 08:49	01/12/23 17:54	1
3-Nitroaniline	ND	*+	10	1.8	ug/L		01/11/23 08:49	01/12/23 17:54	1
4-Nitroaniline	ND		10	1.5	ug/L		01/11/23 08:49	01/12/23 17:54	1
Nitrobenzene	ND		10	0.13	ug/L		01/11/23 08:49	01/12/23 17:54	1
2-Nitrophenol	ND		10	5.3	ug/L		01/11/23 08:49	01/12/23 17:54	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231426-1

Client Sample ID: P54-ROX-010623
Date Collected: 01/06/23 09:40
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-3
Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	ND		10	2.1	ug/L		01/11/23 08:49	01/12/23 17:54	1
N-Nitrosodimethylamine	ND		10	3.6	ug/L		01/11/23 08:49	01/12/23 17:54	1
N-Nitrosodi-n-propylamine	ND		10	3.4	ug/L		01/11/23 08:49	01/12/23 17:54	1
N-Nitrosodiphenylamine	ND		10	0.18	ug/L		01/11/23 08:49	01/12/23 17:54	1
Pentachlorophenol	ND		20	1.4	ug/L		01/11/23 08:49	01/12/23 17:54	1
Phenol	ND		10	2.6	ug/L		01/11/23 08:49	01/12/23 17:54	1
Pyridine	ND		10	3.3	ug/L		01/11/23 08:49	01/12/23 17:54	1
Quinoline	ND		10	4.6	ug/L		01/11/23 08:49	01/12/23 17:54	1
2,4,5-Trichlorophenol	ND		10	3.8	ug/L		01/11/23 08:49	01/12/23 17:54	1
2,4,6-Trichlorophenol	ND		10	3.6	ug/L		01/11/23 08:49	01/12/23 17:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*103*		*46 - 124*	*01/11/23 08:49*	*01/12/23 17:54*	*1*
2-Fluorophenol	*15*		*13 - 113*	*01/11/23 08:49*	*01/12/23 17:54*	*1*
Nitrobenzene-d5	*93*		*36 - 126*	*01/11/23 08:49*	*01/12/23 17:54*	*1*
Phenol-d5	*49*		*17 - 127*	*01/11/23 08:49*	*01/12/23 17:54*	*1*
Terphenyl-d14	*120*		*44 - 149*	*01/11/23 08:49*	*01/12/23 17:54*	*1*
2,4,6-Tribromophenol	*76*		*26 - 150*	*01/11/23 08:49*	*01/12/23 17:54*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.029	0.017	ug/L		01/17/23 10:00	01/17/23 17:01	1
1,2-D bromoethane	ND		0.019	0.015	ug/L		01/17/23 10:00	01/17/23 17:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*124*	*p*	*51 - 149*	*01/17/23 10:00*	*01/17/23 17:01*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231426-1

Client Sample ID: MW26-ROX-010623
Date Collected: 01/06/23 10:45
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-4
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/11/23 19:27	1
Acrolein	ND		20	3.3	ug/L			01/11/23 19:27	1
Acrylonitrile	ND		10	2.8	ug/L			01/11/23 19:27	1
Benzene	ND		1.0	0.13	ug/L			01/11/23 19:27	1
Bromobenzene	ND		1.0	0.54	ug/L			01/11/23 19:27	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/11/23 19:27	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/11/23 19:27	1
Bromoform	ND		5.0	0.25	ug/L			01/11/23 19:27	1
Bromomethane	ND		1.0	0.98	ug/L			01/11/23 19:27	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/11/23 19:27	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/11/23 19:27	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/11/23 19:27	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/11/23 19:27	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/11/23 19:27	1
Chloroethane	ND		1.0	0.76	ug/L			01/11/23 19:27	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/11/23 19:27	1
Chloroform	ND		1.0	1.0	ug/L			01/11/23 19:27	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/11/23 19:27	1
Chloromethane	ND		1.0	0.32	ug/L			01/11/23 19:27	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/11/23 19:27	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/11/23 19:27	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/11/23 19:27	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/11/23 19:27	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/11/23 19:27	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/11/23 19:27	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/11/23 19:27	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/11/23 19:27	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/11/23 19:27	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/11/23 19:27	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/11/23 19:27	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/11/23 19:27	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/11/23 19:27	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/11/23 19:27	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/11/23 19:27	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/11/23 19:27	1
2-Hexanone	ND		25	1.4	ug/L			01/11/23 19:27	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/11/23 19:27	1
Methylene bromide	ND		5.0	0.22	ug/L			01/11/23 19:27	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/11/23 19:27	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/11/23 19:27	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/11/23 19:27	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/11/23 19:27	1
Naphthalene	ND		5.0	3.0	ug/L			01/11/23 19:27	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/11/23 19:27	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/11/23 19:27	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/11/23 19:27	1
o-Xylene	ND		5.0	0.60	ug/L			01/11/23 19:27	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/11/23 19:27	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/11/23 19:27	1

Client Sample ID: MW26-ROX-010623
Date Collected: 01/06/23 10:45
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-4
Matrix: Water

Method: SW846 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			01/11/23 19:27	1
Styrene	ND		1.0	1.0	ug/L			01/11/23 19:27	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/11/23 19:27	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/11/23 19:27	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/11/23 19:27	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/11/23 19:27	1
Toluene	ND		1.0	0.41	ug/L			01/11/23 19:27	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/11/23 19:27	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/11/23 19:27	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/11/23 19:27	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/11/23 19:27	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/11/23 19:27	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/11/23 19:27	1
Trichloroethene	ND		1.0	0.15	ug/L			01/11/23 19:27	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/11/23 19:27	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/11/23 19:27	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/11/23 19:27	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/11/23 19:27	1
Vinyl acetate	ND		25	0.93	ug/L			01/11/23 19:27	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/11/23 19:27	1
Xylenes, Total	ND		10	1.6	ug/L			01/11/23 19:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*72 - 119*		*01/11/23 19:27*	*1*
Dibromofluoromethane	*103*		*75 - 126*		*01/11/23 19:27*	*1*
Toluene-d8 (Surr)	*95*		*64 - 132*		*01/11/23 19:27*	*1*

Method: SW846 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	0.033	ug/L		01/11/23 08:49	01/12/23 18:44	1
Acenaphthylene	ND		0.20	0.046	ug/L		01/11/23 08:49	01/12/23 18:44	1
Anthracene	ND		0.20	0.033	ug/L		01/11/23 08:49	01/12/23 18:44	1
Benzo[a]anthracene	ND		0.20	0.047	ug/L		01/11/23 08:49	01/12/23 18:44	1
Benzo[a]pyrene	ND		0.20	0.043	ug/L		01/11/23 08:49	01/12/23 18:44	1
Benzo[b]fluoranthene	ND		0.20	0.035	ug/L		01/11/23 08:49	01/12/23 18:44	1
Benzo[g,h,i]perylene	ND		0.20	0.13	ug/L		01/11/23 08:49	01/12/23 18:44	1
Benzo[k]fluoranthene	ND		0.20	0.10	ug/L		01/11/23 08:49	01/12/23 18:44	1
Chrysene	ND		0.20	0.075	ug/L		01/11/23 08:49	01/12/23 18:44	1
Dibenz(a,h)anthracene	ND		0 20	0 051	ug/L		01/11/23 08 49	01/12/23 18 44	1
Fluoranthene	ND		0.20	0.069	ug/L		01/11/23 08:49	01/12/23 18:44	1
Fluorene	ND		0.20	0.11	ug/L		01/11/23 08:49	01/12/23 18:44	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.044	ug/L		01/11/23 08:49	01/12/23 18:44	1
1-Methylnaphthalene	ND		0.20	0.075	ug/L		01/11/23 08:49	01/12/23 18:44	1
2-Methylnaphthalene	ND		0.20	0.061	ug/L		01/11/23 08:49	01/12/23 18:44	1
Phenanthrene	ND		0.20	0.037	ug/L		01/11/23 08:49	01/12/23 18:44	1
Pyrene	ND		0.20	0.041	ug/L		01/11/23 08:49	01/12/23 18:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*116*		*15 - 122*	*01/11/23 08:49*	*01/12/23 18:44*	*1*
Nitrobenzene-d5	*79*		*19 - 130*	*01/11/23 08:49*	*01/12/23 18:44*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231426-1

Client Sample ID: MW26-ROX-010623

Date Collected: 01/06/23 10:45
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-4

Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*125*		*33 - 138*	*01/11/23 08:49*	*01/12/23 18:44*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.9	ug/L		01/11/23 08:49	01/12/23 18:16	1
Benzenethiol	ND	*-	10	1.7	ug/L		01/11/23 08:49	01/12/23 18:16	1
Benzoic acid	ND		31	7.4	ug/L		01/11/23 08:49	01/12/23 18:16	1
Benzyl alcohol	ND		10	2.0	ug/L		01/11/23 08:49	01/12/23 18:16	1
Bis(2-chloroethoxy)methane	ND		10	0.16	ug/L		01/11/23 08:49	01/12/23 18:16	1
Bis(2-chloroethyl)ether	ND		10	2.8	ug/L		01/11/23 08:49	01/12/23 18:16	1
bis (2-chloroisopropyl) ether	ND		10	0.16	ug/L		01/11/23 08:49	01/12/23 18:16	1
Bis(2-ethylhexyl) phthalate	ND		10	5.1	ug/L		01/11/23 08:49	01/12/23 18:16	1
4-Bromophenyl phenyl ether	ND		10	0.20	ug/L		01/11/23 08:49	01/12/23 18:16	1
Butyl benzyl phthalate	ND		10	0.19	ug/L		01/11/23 08:49	01/12/23 18:16	1
4-Chloroaniline	ND	*+	10	3.5	ug/L		01/11/23 08:49	01/12/23 18:16	1
4-Chloro-3-methylphenol	ND		10	3.9	ug/L		01/11/23 08:49	01/12/23 18:16	1
2-Chloronaphthalene	ND		10	0.14	ug/L		01/11/23 08:49	01/12/23 18:16	1
2-Chlorophenol	ND		10	2.2	ug/L		01/11/23 08:49	01/12/23 18:16	1
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		01/11/23 08:49	01/12/23 18:16	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/11/23 08:49	01/12/23 18:16	1
Dibenzofuran	ND		10	0.17	ug/L		01/11/23 08:49	01/12/23 18:16	1
3,3'-Dichlorobenzidine	ND	*+	10	2.7	ug/L		01/11/23 08:49	01/12/23 18:16	1
2,4-Dichlorophenol	ND		10	3.1	ug/L		01/11/23 08:49	01/12/23 18:16	1
Diethyl phthalate	**0.67**	**J**	10	0.24	ug/L		01/11/23 08:49	01/12/23 18:16	1
2,4-Dimethylphenol	ND		10	3.6	ug/L		01/11/23 08:49	01/12/23 18:16	1
Dimethyl phthalate	ND		10	0.17	ug/L		01/11/23 08:49	01/12/23 18:16	1
Di-n-butyl phthalate	ND		10	2.8	ug/L		01/11/23 08:49	01/12/23 18:16	1
4,6-Dinitro-ortho-cresol	ND		10	1.6	ug/L		01/11/23 08:49	01/12/23 18:16	1
2,4-Dinitrophenol	ND		31	3.5	ug/L		01/11/23 08:49	01/12/23 18:16	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		01/11/23 08:49	01/12/23 18:16	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		01/11/23 08:49	01/12/23 18:16	1
Di-n-octyl phthalate	ND		10	0.17	ug/L		01/11/23 08:49	01/12/23 18:16	1
1,4-Dioxane	ND	*1	10	1.0	ug/L		01/11/23 08:49	01/12/23 18:16	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/11/23 08:49	01/12/23 18:16	1
Hexachlorobenzene	ND		10	0.17	ug/L		01/11/23 08:49	01/12/23 18:16	1
Hexachlorocyclopentadiene	ND		20	2.7	ug/L		01/11/23 08:49	01/12/23 18:16	1
Hexachloroethane	ND		10	4.3	ug/L		01/11/23 08:49	01/12/23 18:16	1
Indene	ND		10	1.0	ug/L		01/11/23 08:49	01/12/23 18:16	1
Isophorone	ND		10	0.14	ug/L		01/11/23 08:49	01/12/23 18:16	1
2-Methylphenol	ND		10	1.8	ug/L		01/11/23 08:49	01/12/23 18:16	1
3 & 4 Methylphenol	ND		20	0.40	ug/L		01/11/23 08:49	01/12/23 18:16	1
2-Nitroaniline	ND		10	2.2	ug/L		01/11/23 08:49	01/12/23 18:16	1
3-Nitroaniline	ND	*+	10	1.8	ug/L		01/11/23 08:49	01/12/23 18:16	1
4-Nitroaniline	ND		10	1.5	ug/L		01/11/23 08:49	01/12/23 18:16	1
Nitrobenzene	ND		10	0.13	ug/L		01/11/23 08:49	01/12/23 18:16	1
2-Nitrophenol	ND		10	5.3	ug/L		01/11/23 08:49	01/12/23 18:16	1
4-Nitrophenol	ND		10	2.1	ug/L		01/11/23 08:49	01/12/23 18:16	1
N-Nitrosodimethylamine	ND		10	3.6	ug/L		01/11/23 08:49	01/12/23 18:16	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231426-1

Client Sample ID: MW26-ROX-010623
Date Collected: 01/06/23 10:45
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-4
Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		10	3.4	ug/L		01/11/23 08:49	01/12/23 18:16	1
N-Nitrosodiphenylamine	ND		10	0.18	ug/L		01/11/23 08:49	01/12/23 18:16	1
Pentachlorophenol	ND		20	1.4	ug/L		01/11/23 08:49	01/12/23 18:16	1
Phenol	ND		10	2.7	ug/L		01/11/23 08:49	01/12/23 18:16	1
Pyridine	ND		10	3.3	ug/L		01/11/23 08:49	01/12/23 18:16	1
Quinoline	ND		10	4.6	ug/L		01/11/23 08:49	01/12/23 18:16	1
2,4,5-Trichlorophenol	ND		10	3.8	ug/L		01/11/23 08:49	01/12/23 18:16	1
2,4,6-Trichlorophenol	ND		10	3.6	ug/L		01/11/23 08:49	01/12/23 18:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*113*		*46 - 124*	*01/11/23 08:49*	*01/12/23 18:16*	*1*
2-Fluorophenol	*31*		*13 - 113*	*01/11/23 08:49*	*01/12/23 18:16*	*1*
Nitrobenzene-d5	*103*		*36 - 126*	*01/11/23 08:49*	*01/12/23 18:16*	*1*
Phenol-d5	*72*		*17 - 127*	*01/11/23 08:49*	*01/12/23 18:16*	*1*
Terphenyl-d14	*120*		*44 - 149*	*01/11/23 08:49*	*01/12/23 18:16*	*1*
2,4,6-Tribromophenol	*84*		*26 - 150*	*01/11/23 08:49*	*01/12/23 18:16*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.029	0.016	ug/L		01/17/23 10:00	01/17/23 17:21	1
1,2-D bromoethane	ND		0.019	0.014	ug/L		01/17/23 10:00	01/17/23 17:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*123*	*p*	*51 - 149*	*01/17/23 10:00*	*01/17/23 17:21*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231426-1

Client Sample ID: MW27-ROX-010623
Date Collected: 01/06/23 13:15
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-5
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/11/23 19:51	1
Acrolein	ND		20	3.3	ug/L			01/11/23 19:51	1
Acrylonitrile	ND		10	2.8	ug/L			01/11/23 19:51	1
Benzene	ND		1.0	0.13	ug/L			01/11/23 19:51	1
Bromobenzene	ND		1.0	0.54	ug/L			01/11/23 19:51	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/11/23 19:51	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/11/23 19:51	1
Bromoform	ND		5.0	0.25	ug/L			01/11/23 19:51	1
Bromomethane	ND		1.0	0.98	ug/L			01/11/23 19:51	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/11/23 19:51	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/11/23 19:51	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/11/23 19:51	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/11/23 19:51	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/11/23 19:51	1
Chloroethane	ND		1.0	0.76	ug/L			01/11/23 19:51	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/11/23 19:51	1
Chloroform	ND		1.0	1.0	ug/L			01/11/23 19:51	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/11/23 19:51	1
Chloromethane	ND		1.0	0.32	ug/L			01/11/23 19:51	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/11/23 19:51	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/11/23 19:51	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/11/23 19:51	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/11/23 19:51	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/11/23 19:51	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/11/23 19:51	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/11/23 19:51	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/11/23 19:51	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/11/23 19:51	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/11/23 19:51	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/11/23 19:51	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/11/23 19:51	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/11/23 19:51	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/11/23 19:51	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/11/23 19:51	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/11/23 19:51	1
2-Hexanone	ND		25	1.4	ug/L			01/11/23 19:51	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/11/23 19:51	1
Methylene bromide	ND		5.0	0.22	ug/L			01/11/23 19:51	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/11/23 19:51	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/11/23 19:51	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/11/23 19:51	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/11/23 19:51	1
Naphthalene	ND		5.0	3.0	ug/L			01/11/23 19:51	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/11/23 19:51	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/11/23 19:51	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/11/23 19:51	1
o-Xylene	ND		5.0	0.60	ug/L			01/11/23 19:51	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/11/23 19:51	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/11/23 19:51	1

Client Sample ID: MW27-ROX-010623
Date Collected: 01/06/23 13:15
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-5
Matrix: Water

Method: SW846 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			01/11/23 19:51	1
Styrene	ND		1.0	1.0	ug/L			01/11/23 19:51	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/11/23 19:51	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/11/23 19:51	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/11/23 19:51	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/11/23 19:51	1
Toluene	ND		1.0	0.41	ug/L			01/11/23 19:51	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/11/23 19:51	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/11/23 19:51	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/11/23 19:51	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/11/23 19:51	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/11/23 19:51	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/11/23 19:51	1
Trichloroethene	ND		1.0	0.15	ug/L			01/11/23 19:51	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/11/23 19:51	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/11/23 19:51	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/11/23 19:51	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/11/23 19:51	1
Vinyl acetate	ND		25	0.93	ug/L			01/11/23 19:51	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/11/23 19:51	1
Xylenes, Total	ND		10	1.6	ug/L			01/11/23 19:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*104*		*72 - 119*		*01/11/23 19:51*	*1*
Dibromofluoromethane	*98*		*75 - 126*		*01/11/23 19:51*	*1*
Toluene-d8 (Surr)	*95*		*64 - 132*		*01/11/23 19:51*	*1*

Method: SW846 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	0.032	ug/L		01/11/23 08:49	01/13/23 14:01	1
Acenaphthylene	ND		0.20	0.044	ug/L		01/11/23 08:49	01/13/23 14:01	1
Anthracene	ND		0.20	0.032	ug/L		01/11/23 08:49	01/27/23 22:19	1
Benzo[a]anthracene	ND		0.20	0.045	ug/L		01/11/23 08:49	01/13/23 14:01	1
Benzo[a]pyrene	ND		0.20	0.042	ug/L		01/11/23 08:49	01/27/23 22:19	1
Benzo[b]fluoranthene	ND		0.20	0.034	ug/L		01/11/23 08:49	01/27/23 22:19	1
Benzo[g,h,i]perylene	ND		0.20	0.13	ug/L		01/11/23 08:49	01/13/23 14:01	1
Benzo[k]fluoranthene	ND		0.20	0.099	ug/L		01/11/23 08:49	01/27/23 22:19	1
Chrysene	ND		0.20	0.073	ug/L		01/11/23 08:49	01/27/23 22:19	1
Dibenz(a,h)anthracene	ND		0 20	0 049	ug/L		01/11/23 08 49	01/13/23 14 01	1
Fluoranthene	ND		0.20	0.067	ug/L		01/11/23 08:49	01/27/23 22:19	1
Fluorene	ND		0.20	0.11	ug/L		01/11/23 08:49	01/13/23 14:01	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.042	ug/L		01/11/23 08:49	01/13/23 14:01	1
1-Methylnaphthalene	ND		0.20	0.073	ug/L		01/11/23 08:49	01/13/23 14:01	1
2-Methylnaphthalene	ND		0.20	0.059	ug/L		01/11/23 08:49	01/13/23 14:01	1
Phenanthrene	ND		0.20	0.036	ug/L		01/11/23 08:49	01/13/23 14:01	1
Pyrene	ND		0.20	0.040	ug/L		01/11/23 08:49	01/27/23 22:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*102*		*15 - 122*	*01/11/23 08:49*	*01/13/23 14:01*	*1*
Nitrobenzene-d5	*70*		*19 - 130*	*01/11/23 08:49*	*01/13/23 14:01*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231426-1

Client Sample ID: MW27-ROX-010623
Date Collected: 01/06/23 13:15
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-5
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*108*		*33 - 138*	*01/11/23 08:49*	*01/13/23 14:01*	*1*

Method: SW846 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		01/11/23 08:49	01/12/23 18:38	1
Benzenethiol	ND	*-	9.9	1.7	ug/L		01/11/23 08:49	01/12/23 18:38	1
Benzoic acid	ND		30	7.2	ug/L		01/11/23 08:49	01/12/23 18:38	1
Benzyl alcohol	ND		9.9	2.0	ug/L		01/11/23 08:49	01/12/23 18:38	1
Bis(2-chloroethoxy)methane	ND		9.9	0.16	ug/L		01/11/23 08:49	01/12/23 18:38	1
Bis(2-chloroethyl)ether	ND		9.9	2.7	ug/L		01/11/23 08:49	01/12/23 18:38	1
bis (2-chloroisopropyl) ether	ND		9.9	0.16	ug/L		01/11/23 08:49	01/12/23 18:38	1
Bis(2-ethylhexyl) phthalate	ND		9.9	4.9	ug/L		01/11/23 08:49	01/12/23 18:38	1
4-Bromophenyl phenyl ether	ND		9.9	0.20	ug/L		01/11/23 08:49	01/12/23 18:38	1
Butyl benzyl phthalate	ND		9.9	0.19	ug/L		01/11/23 08:49	01/12/23 18:38	1
4-Chloroaniline	ND	*+	9.9	3.4	ug/L		01/11/23 08:49	01/12/23 18:38	1
4-Chloro-3-methylphenol	ND		9.9	3.8	ug/L		01/11/23 08:49	01/12/23 18:38	1
2-Chloronaphthalene	ND		9.9	0.14	ug/L		01/11/23 08:49	01/12/23 18:38	1
2-Chlorophenol	ND		9.9	2.2	ug/L		01/11/23 08:49	01/12/23 18:38	1
4-Chlorophenyl phenyl ether	ND		9.9	2.0	ug/L		01/11/23 08:49	01/12/23 18:38	1
Dibenz[a,h]acridine	ND		9.9	0.99	ug/L		01/11/23 08:49	01/12/23 18:38	1
Dibenzofuran	ND		9.9	0.17	ug/L		01/11/23 08:49	01/12/23 18:38	1
3,3'-Dichlorobenzidine	ND	*+	9.9	2.6	ug/L		01/11/23 08:49	01/12/23 18:38	1
2,4-Dichlorophenol	ND		9.9	3.0	ug/L		01/11/23 08:49	01/12/23 18:38	1
Diethyl phthalate	ND		9.9	0.24	ug/L		01/11/23 08:49	01/12/23 18:38	1
2,4-Dimethylphenol	ND		9.9	3.5	ug/L		01/11/23 08:49	01/12/23 18:38	1
Dimethyl phthalate	ND		9.9	0.17	ug/L		01/11/23 08:49	01/12/23 18:38	1
Di-n-butyl phthalate	ND		9.9	2.7	ug/L		01/11/23 08:49	01/12/23 18:38	1
4,6-Dinitro-ortho-cresol	ND		9.9	1.6	ug/L		01/11/23 08:49	01/12/23 18:38	1
2,4-Dinitrophenol	ND		30	3.4	ug/L		01/11/23 08:49	01/12/23 18:38	1
2,4-Dinitrotoluene	ND		9.9	1.9	ug/L		01/11/23 08:49	01/12/23 18:38	1
2,6-Dinitrotoluene	ND		9.9	1.9	ug/L		01/11/23 08:49	01/12/23 18:38	1
Di-n-octyl phthalate	ND		9.9	0.17	ug/L		01/11/23 08:49	01/12/23 18:38	1
1,4-Dioxane	ND	*1	9.9	0.99	ug/L		01/11/23 08:49	01/12/23 18:38	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.9	0.99	ug/L		01/11/23 08:49	01/12/23 18:38	1
Hexachlorobenzene	ND		9.9	0.17	ug/L		01/11/23 08:49	01/12/23 18:38	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		01/11/23 08:49	01/12/23 18:38	1
Hexachloroethane	ND		9.9	4.2	ug/L		01/11/23 08:49	01/12/23 18:38	1
Indene	ND		9.9	0.99	ug/L		01/11/23 08:49	01/12/23 18:38	1
Isophorone	ND		9.9	0.14	ug/L		01/11/23 08:49	01/12/23 18:38	1
2-Methylphenol	ND		9.9	1.8	ug/L		01/11/23 08:49	01/12/23 18:38	1
3 & 4 Methylphenol	ND		20	0.39	ug/L		01/11/23 08:49	01/12/23 18:38	1
2-Nitroaniline	ND		9.9	2.2	ug/L		01/11/23 08:49	01/12/23 18:38	1
3-Nitroaniline	ND	*+	9.9	1.8	ug/L		01/11/23 08:49	01/12/23 18:38	1
4-Nitroaniline	ND		9.9	1.5	ug/L		01/11/23 08:49	01/12/23 18:38	1
Nitrobenzene	ND		9.9	0.13	ug/L		01/11/23 08:49	01/12/23 18:38	1
2-Nitrophenol	ND		9.9	5.1	ug/L		01/11/23 08:49	01/12/23 18:38	1
4-Nitrophenol	ND		9.9	2.1	ug/L		01/11/23 08:49	01/12/23 18:38	1
N-Nitrosodimethylamine	ND		9.9	3.5	ug/L		01/11/23 08:49	01/12/23 18:38	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231426-1

Client Sample ID: MW27-ROX-010623
Date Collected: 01/06/23 13:15
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-5
Matrix: Water

Method: SW846 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		01/11/23 08:49	01/12/23 18:38	1
N-Nitrosodiphenylamine	ND		9.9	0.18	ug/L		01/11/23 08:49	01/12/23 18:38	1
Pentachlorophenol	ND		20	1.4	ug/L		01/11/23 08:49	01/12/23 18:38	1
Phenol	ND		9.9	2.6	ug/L		01/11/23 08:49	01/12/23 18:38	1
Pyridine	ND		9.9	3.2	ug/L		01/11/23 08:49	01/12/23 18:38	1
Quinoline	ND		9.9	4.4	ug/L		01/11/23 08:49	01/12/23 18:38	1
2,4,5-Trichlorophenol	ND		9.9	3.7	ug/L		01/11/23 08:49	01/12/23 18:38	1
2,4,6-Trichlorophenol	ND		9.9	3.5	ug/L		01/11/23 08:49	01/12/23 18:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*105*		*46 - 124*	*01/11/23 08:49*	*01/12/23 18:38*	*1*
2-Fluorophenol	*6*	*S1-*	*13 - 113*	*01/11/23 08:49*	*01/12/23 18:38*	*1*
Nitrobenzene-d5	*96*		*36 - 126*	*01/11/23 08:49*	*01/12/23 18:38*	*1*
Phenol-d5	*35*		*17 - 127*	*01/11/23 08:49*	*01/12/23 18:38*	*1*
Terphenyl-d14	*112*		*44 - 149*	*01/11/23 08:49*	*01/12/23 18:38*	*1*
2,4,6-Tribromophenol	*73*		*26 - 150*	*01/11/23 08:49*	*01/12/23 18:38*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.030	0.017	ug/L		01/17/23 10:00	01/17/23 17:42	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/17/23 10:00	01/17/23 17:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*	*p*	*51 - 149*	*01/17/23 10:00*	*01/17/23 17:42*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231426-1

Client Sample ID: TB-ROX-010623-8260-B
Date Collected: 01/06/23 12:00
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-6
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/11/23 15:46	1
Acrolein	ND		20	3.3	ug/L			01/11/23 15:46	1
Acrylonitrile	ND		10	2.8	ug/L			01/11/23 15:46	1
Benzene	ND		1.0	0.13	ug/L			01/11/23 15:46	1
Bromobenzene	ND		1.0	0.54	ug/L			01/11/23 15:46	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/11/23 15:46	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/11/23 15:46	1
Bromoform	ND		5.0	0.25	ug/L			01/11/23 15:46	1
Bromomethane	ND		1.0	0.98	ug/L			01/11/23 15:46	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/11/23 15:46	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/11/23 15:46	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/11/23 15:46	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/11/23 15:46	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/11/23 15:46	1
Chloroethane	ND		1.0	0.76	ug/L			01/11/23 15:46	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/11/23 15:46	1
Chloroform	ND		1.0	1.0	ug/L			01/11/23 15:46	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/11/23 15:46	1
Chloromethane	ND		1.0	0.32	ug/L			01/11/23 15:46	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/11/23 15:46	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/11/23 15:46	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/11/23 15:46	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/11/23 15:46	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/11/23 15:46	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/11/23 15:46	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/11/23 15:46	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/11/23 15:46	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/11/23 15:46	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/11/23 15:46	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/11/23 15:46	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/11/23 15:46	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/11/23 15:46	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/11/23 15:46	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/11/23 15:46	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/11/23 15:46	1
2-Hexanone	ND		25	1.4	ug/L			01/11/23 15:46	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/11/23 15:46	1
Methylene bromide	ND		5.0	0.22	ug/L			01/11/23 15:46	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/11/23 15:46	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/11/23 15:46	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/11/23 15:46	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/11/23 15:46	1
Naphthalene	ND		5.0	3.0	ug/L			01/11/23 15:46	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/11/23 15:46	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/11/23 15:46	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/11/23 15:46	1
o-Xylene	ND		5.0	0.60	ug/L			01/11/23 15:46	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/11/23 15:46	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/11/23 15:46	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231426-1

Client Sample ID: TB-ROX-010623-8260-B
Date Collected: 01/06/23 12:00
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-6
Matrix: Water

Method: SW846 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			01/11/23 15:46	1
Styrene	ND		1.0	1.0	ug/L			01/11/23 15:46	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/11/23 15:46	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/11/23 15:46	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/11/23 15:46	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/11/23 15:46	1
Toluene	ND		1.0	0.41	ug/L			01/11/23 15:46	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/11/23 15:46	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/11/23 15:46	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/11/23 15:46	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/11/23 15:46	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/11/23 15:46	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/11/23 15:46	1
Trichloroethene	ND		1.0	0.15	ug/L			01/11/23 15:46	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/11/23 15:46	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/11/23 15:46	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/11/23 15:46	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/11/23 15:46	1
Vinyl acetate	ND		25	0.93	ug/L			01/11/23 15:46	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/11/23 15:46	1
Xylenes, Total	ND		10	1.6	ug/L			01/11/23 15:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*72 - 119*		*01/11/23 15:46*	*1*
Dibromofluoromethane	*100*		*75 - 126*		*01/11/23 15:46*	*1*
Toluene-d8 (Surr)	*96*		*64 - 132*		*01/11/23 15:46*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231426-1

Client Sample ID: TB-ROX-010623-8011-B
Date Collected: 01/06/23 12:00
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-7
Matrix: Water

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.029	0.017	ug/L		01/17/23 10:00	01/17/23 18:02	1
1,2-D bromoethane	ND		0.019	0.015	ug/L		01/17/23 10:00	01/17/23 18:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*124*	*p*	*51 - 149*	*01/17/23 10:00*	*01/17/23 18:02*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231426-1

Client Sample ID: MW12-ROX-010623
Date Collected: 01/06/23 09:45
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-8
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/11/23 20:16	1
Acrolein	ND		20	3.3	ug/L			01/11/23 20:16	1
Acrylonitrile	ND		10	2.8	ug/L			01/11/23 20:16	1
Benzene	ND		1.0	0.13	ug/L			01/11/23 20:16	1
Bromobenzene	ND		1.0	0.54	ug/L			01/11/23 20:16	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/11/23 20:16	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/11/23 20:16	1
Bromoform	ND		5.0	0.25	ug/L			01/11/23 20:16	1
Bromomethane	ND		1.0	0.98	ug/L			01/11/23 20:16	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/11/23 20:16	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/11/23 20:16	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/11/23 20:16	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/11/23 20:16	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/11/23 20:16	1
Chloroethane	ND		1.0	0.76	ug/L			01/11/23 20:16	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/11/23 20:16	1
Chloroform	ND		1.0	1.0	ug/L			01/11/23 20:16	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/11/23 20:16	1
Chloromethane	ND		1.0	0.32	ug/L			01/11/23 20:16	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/11/23 20:16	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/11/23 20:16	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/11/23 20:16	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/11/23 20:16	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/11/23 20:16	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/11/23 20:16	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/11/23 20:16	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/11/23 20:16	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/11/23 20:16	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/11/23 20:16	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/11/23 20:16	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/11/23 20:16	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/11/23 20:16	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/11/23 20:16	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/11/23 20:16	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/11/23 20:16	1
2-Hexanone	ND		25	1.4	ug/L			01/11/23 20:16	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/11/23 20:16	1
Methylene bromide	ND		5.0	0.22	ug/L			01/11/23 20:16	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/11/23 20:16	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/11/23 20:16	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/11/23 20:16	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/11/23 20:16	1
Naphthalene	ND		5.0	3.0	ug/L			01/11/23 20:16	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/11/23 20:16	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/11/23 20:16	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/11/23 20:16	1
o-Xylene	ND		5.0	0.60	ug/L			01/11/23 20:16	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/11/23 20:16	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/11/23 20:16	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231426-1

Client Sample ID: MW12-ROX-010623
Date Collected: 01/06/23 09:45
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-8
Matrix: Water

Method: SW846 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			01/11/23 20:16	1
Styrene	ND		1.0	1.0	ug/L			01/11/23 20:16	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/11/23 20:16	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/11/23 20:16	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/11/23 20:16	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/11/23 20:16	1
Toluene	ND		1.0	0.41	ug/L			01/11/23 20:16	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/11/23 20:16	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/11/23 20:16	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/11/23 20:16	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/11/23 20:16	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/11/23 20:16	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/11/23 20:16	1
Trichloroethene	ND		1.0	0.15	ug/L			01/11/23 20:16	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/11/23 20:16	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/11/23 20:16	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/11/23 20:16	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/11/23 20:16	1
Vinyl acetate	ND		25	0.93	ug/L			01/11/23 20:16	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/11/23 20:16	1
Xylenes, Total	ND		10	1.6	ug/L			01/11/23 20:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*103*		*72 - 119*		*01/11/23 20:16*	*1*
Dibromofluoromethane	*101*		*75 - 126*		*01/11/23 20:16*	*1*
Toluene-d8 (Surr)	*96*		*64 - 132*		*01/11/23 20:16*	*1*

Method: SW846 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	0.031	ug/L		01/11/23 08:49	01/13/23 14:18	1
Acenaphthylene	ND		0.19	0.043	ug/L		01/11/23 08:49	01/13/23 14:18	1
Anthracene	ND		0.19	0.031	ug/L		01/11/23 08:49	01/13/23 14:18	1
Benzo[a]anthracene	ND		0.19	0.044	ug/L		01/11/23 08:49	01/13/23 14:18	1
Benzo[a]pyrene	ND		0.19	0.040	ug/L		01/11/23 08:49	01/27/23 22:36	1
Benzo[b]fluoranthene	ND		0.19	0.032	ug/L		01/11/23 08:49	01/13/23 14:18	1
Benzo[g,h,i]perylene	ND		0.19	0.12	ug/L		01/11/23 08:49	01/13/23 14:18	1
Benzo[k]fluoranthene	ND		0.19	0.095	ug/L		01/11/23 08:49	01/13/23 14:18	1
Chrysene	ND		0.19	0.071	ug/L		01/11/23 08:49	01/13/23 14:18	1
Dibenz(a,h)anthracene	ND		0 19	0 048	ug/L		01/11/23 08 49	01/13/23 14 18	1
Fluoranthene	ND		0.19	0.065	ug/L		01/11/23 08:49	01/27/23 22:36	1
Fluorene	ND		0.19	0.11	ug/L		01/11/23 08:49	01/13/23 14:18	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.041	ug/L		01/11/23 08:49	01/13/23 14:18	1
1-Methylnaphthalene	ND		0.19	0.071	ug/L		01/11/23 08:49	01/13/23 14:18	1
2-Methylnaphthalene	ND		0.19	0.057	ug/L		01/11/23 08:49	01/13/23 14:18	1
Phenanthrene	ND		0.19	0.034	ug/L		01/11/23 08:49	01/13/23 14:18	1
Pyrene	ND		0.19	0.038	ug/L		01/11/23 08:49	01/13/23 14:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*104*		*15 - 122*	*01/11/23 08:49*	*01/13/23 14:18*	*1*
Nitrobenzene-d5	*72*		*19 - 130*	*01/11/23 08:49*	*01/13/23 14:18*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231426-1

Client Sample ID: MW12-ROX-010623
Date Collected: 01/06/23 09:45
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-8
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*87*		*33 - 138*	*01/11/23 08:49*	*01/13/23 14:18*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.5	3.6	ug/L		01/11/23 08:49	01/12/23 19:00	1
Benzenethiol	ND	*-	9.5	1.6	ug/L		01/11/23 08:49	01/12/23 19:00	1
Benzoic acid	ND		29	7.0	ug/L		01/11/23 08:49	01/12/23 19:00	1
Benzyl alcohol	ND		9.5	1.9	ug/L		01/11/23 08:49	01/12/23 19:00	1
Bis(2-chloroethoxy)methane	ND		9.5	0.15	ug/L		01/11/23 08:49	01/12/23 19:00	1
Bis(2-chloroethyl)ether	ND		9.5	2.6	ug/L		01/11/23 08:49	01/12/23 19:00	1
bis (2-chloroisopropyl) ether	ND		9.5	0.15	ug/L		01/11/23 08:49	01/12/23 19:00	1
Bis(2-ethylhexyl) phthalate	ND		9.5	4.8	ug/L		01/11/23 08:49	01/12/23 19:00	1
4-Bromophenyl phenyl ether	ND		9.5	0.19	ug/L		01/11/23 08:49	01/12/23 19:00	1
Butyl benzyl phthalate	ND		9.5	0.18	ug/L		01/11/23 08:49	01/12/23 19:00	1
4-Chloroaniline	ND	*+	9.5	3.2	ug/L		01/11/23 08:49	01/12/23 19:00	1
4-Chloro-3-methylphenol	ND		9.5	3.6	ug/L		01/11/23 08:49	01/12/23 19:00	1
2-Chloronaphthalene	ND		9.5	0.13	ug/L		01/11/23 08:49	01/12/23 19:00	1
2-Chlorophenol	ND		9.5	2.1	ug/L		01/11/23 08:49	01/12/23 19:00	1
4-Chlorophenyl phenyl ether	ND		9.5	1.9	ug/L		01/11/23 08:49	01/12/23 19:00	1
Dibenz[a,h]acridine	ND		9.5	0.95	ug/L		01/11/23 08:49	01/12/23 19:00	1
Dibenzofuran	ND		9.5	0.16	ug/L		01/11/23 08:49	01/12/23 19:00	1
3,3'-Dichlorobenzidine	ND	*+	9.5	2.5	ug/L		01/11/23 08:49	01/12/23 19:00	1
2,4-Dichlorophenol	ND		9.5	2.9	ug/L		01/11/23 08:49	01/12/23 19:00	1
Diethyl phthalate	ND		9.5	0.23	ug/L		01/11/23 08:49	01/12/23 19:00	1
2,4-Dimethylphenol	ND		9.5	3.3	ug/L		01/11/23 08:49	01/12/23 19:00	1
Dimethyl phthalate	ND		9.5	0.16	ug/L		01/11/23 08:49	01/12/23 19:00	1
Di-n-butyl phthalate	ND		9.5	2.6	ug/L		01/11/23 08:49	01/12/23 19:00	1
4,6-Dinitro-ortho-cresol	ND		9.5	1.5	ug/L		01/11/23 08:49	01/12/23 19:00	1
2,4-Dinitrophenol	ND		29	3.2	ug/L		01/11/23 08:49	01/12/23 19:00	1
2,4-Dinitrotoluene	ND		9.5	1.8	ug/L		01/11/23 08:49	01/12/23 19:00	1
2,6-Dinitrotoluene	ND		9.5	1.8	ug/L		01/11/23 08:49	01/12/23 19:00	1
Di-n-octyl phthalate	ND		9.5	0.16	ug/L		01/11/23 08:49	01/12/23 19:00	1
1,4-Dioxane	ND	*1	9.5	0.95	ug/L		01/11/23 08:49	01/12/23 19:00	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.5	0.95	ug/L		01/11/23 08:49	01/12/23 19:00	1
Hexachlorobenzene	ND		9.5	0.16	ug/L		01/11/23 08:49	01/12/23 19:00	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		01/11/23 08:49	01/12/23 19:00	1
Hexachloroethane	ND		9.5	4.0	ug/L		01/11/23 08:49	01/12/23 19:00	1
Indene	ND		9.5	0.95	ug/L		01/11/23 08:49	01/12/23 19:00	1
Isophorone	ND		9.5	0.13	ug/L		01/11/23 08:49	01/12/23 19:00	1
2-Methylphenol	ND		9.5	1.7	ug/L		01/11/23 08:49	01/12/23 19:00	1
3 & 4 Methylphenol	ND		19	0.37	ug/L		01/11/23 08:49	01/12/23 19:00	1
2-Nitroaniline	ND		9.5	2.1	ug/L		01/11/23 08:49	01/12/23 19:00	1
3-Nitroaniline	ND	*+	9.5	1.7	ug/L		01/11/23 08:49	01/12/23 19:00	1
4-Nitroaniline	ND		9.5	1.4	ug/L		01/11/23 08:49	01/12/23 19:00	1
Nitrobenzene	ND		9.5	0.12	ug/L		01/11/23 08:49	01/12/23 19:00	1
2-Nitrophenol	ND		9.5	5.0	ug/L		01/11/23 08:49	01/12/23 19:00	1
4-Nitrophenol	ND		9.5	2.0	ug/L		01/11/23 08:49	01/12/23 19:00	1
N-Nitrosodimethylamine	ND		9.5	3.3	ug/L		01/11/23 08:49	01/12/23 19:00	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231426-1

Client Sample ID: MW12-ROX-010623
Date Collected: 01/06/23 09:45
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-8
Matrix: Water

Method: SW846 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	3.2	ug/L		01/11/23 08:49	01/12/23 19:00	1
N-Nitrosodiphenylamine	ND		9.5	0.17	ug/L		01/11/23 08:49	01/12/23 19:00	1
Pentachlorophenol	ND		19	1.3	ug/L		01/11/23 08:49	01/12/23 19:00	1
Phenol	ND		9.5	2.5	ug/L		01/11/23 08:49	01/12/23 19:00	1
Pyridine	ND		9.5	3.1	ug/L		01/11/23 08:49	01/12/23 19:00	1
Quinoline	ND		9.5	4.3	ug/L		01/11/23 08:49	01/12/23 19:00	1
2,4,5-Trichlorophenol	ND		9.5	3.5	ug/L		01/11/23 08:49	01/12/23 19:00	1
2,4,6-Trichlorophenol	ND		9.5	3.3	ug/L		01/11/23 08:49	01/12/23 19:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*101*		*46 - 124*	*01/11/23 08:49*	*01/12/23 19:00*	*1*
2-Fluorophenol	*34*		*13 - 113*	*01/11/23 08:49*	*01/12/23 19:00*	*1*
Nitrobenzene-d5	*95*		*36 - 126*	*01/11/23 08:49*	*01/12/23 19:00*	*1*
Phenol-d5	*57*		*17 - 127*	*01/11/23 08:49*	*01/12/23 19:00*	*1*
Terphenyl-d14	*88*		*44 - 149*	*01/11/23 08:49*	*01/12/23 19:00*	*1*
2,4,6-Tribromophenol	*49*		*26 - 150*	*01/11/23 08:49*	*01/12/23 19:00*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.029	0.016	ug/L		01/17/23 10:00	01/17/23 18:23	1
1,2-D bromoethane	ND		0.019	0.015	ug/L		01/17/23 10:00	01/17/23 18:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*122*	*p*	*51 - 149*	*01/17/23 10:00*	*01/17/23 18:23*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231426-1

Client Sample ID: ROST4PZG-ROX-010623
Date Collected: 01/06/23 10:55
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-9
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**550**		25	10	ug/L			01/13/23 14:38	1
Acrolein	ND		20	3.3	ug/L			01/13/23 14:38	1
Acrylonitrile	ND		10	2.8	ug/L			01/13/23 14:38	1
Benzene	**0.32**	**J**	1.0	0.13	ug/L			01/13/23 14:38	1
Bromobenzene	ND		1.0	0.54	ug/L			01/13/23 14:38	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/13/23 14:38	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/13/23 14:38	1
Bromoform	ND		5.0	0.25	ug/L			01/13/23 14:38	1
Bromomethane	ND		1.0	0.98	ug/L			01/13/23 14:38	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/13/23 14:38	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/13/23 14:38	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/13/23 14:38	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/13/23 14:38	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/13/23 14:38	1
Chloroethane	ND		1.0	0.76	ug/L			01/13/23 14:38	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/13/23 14:38	1
Chloroform	ND		1.0	1.0	ug/L			01/13/23 14:38	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/13/23 14:38	1
Chloromethane	ND		1.0	0.32	ug/L			01/13/23 14:38	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/13/23 14:38	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/13/23 14:38	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/13/23 14:38	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/13/23 14:38	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/13/23 14:38	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/13/23 14:38	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/13/23 14:38	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/13/23 14:38	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 14:38	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 14:38	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 14:38	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 14:38	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/13/23 14:38	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/13/23 14:38	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/13/23 14:38	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/13/23 14:38	1
2-Hexanone	ND		25	1.4	ug/L			01/13/23 14:38	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/13/23 14:38	1
Methylene bromide	ND		5.0	0.22	ug/L			01/13/23 14:38	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/13/23 14:38	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/13/23 14:38	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/13/23 14:38	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/13/23 14:38	1
Naphthalene	ND		5.0	3.0	ug/L			01/13/23 14:38	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/13/23 14:38	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/13/23 14:38	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/13/23 14:38	1
o-Xylene	ND		5.0	0.60	ug/L			01/13/23 14:38	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/13/23 14:38	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/13/23 14:38	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231426-1

Client Sample ID: ROST4PZG-ROX-010623
Date Collected: 01/06/23 10:55
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-9
Matrix: Water

Method: SW846 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			01/13/23 14:38	1
Styrene	ND		1.0	1.0	ug/L			01/13/23 14:38	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/13/23 14:38	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/13/23 14:38	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/13/23 14:38	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/13/23 14:38	1
Toluene	ND		1.0	0.41	ug/L			01/13/23 14:38	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 14:38	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/13/23 14:38	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/13/23 14:38	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/13/23 14:38	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/13/23 14:38	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/13/23 14:38	1
Trichloroethene	ND		1.0	0.15	ug/L			01/13/23 14:38	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/13/23 14:38	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/13/23 14:38	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/13/23 14:38	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/13/23 14:38	1
Vinyl acetate	ND		25	0.93	ug/L			01/13/23 14:38	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/13/23 14:38	1
Xylenes, Total	ND		10	1.6	ug/L			01/13/23 14:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*72 - 119*		*01/13/23 14:38*	*1*
Dibromofluoromethane	*104*		*75 - 126*		*01/13/23 14:38*	*1*
Toluene-d8 (Surr)	*96*		*64 - 132*		*01/13/23 14:38*	*1*

Method: SW846 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	0.031	ug/L		01/11/23 08:49	01/13/23 14:35	1
Acenaphthylene	ND		0.19	0.043	ug/L		01/11/23 08:49	01/13/23 14:35	1
Anthracene	ND		0.19	0.031	ug/L		01/11/23 08:49	01/13/23 14:35	1
Benzo[a]anthracene	ND		0.19	0.044	ug/L		01/11/23 08:49	01/13/23 14:35	1
Benzo[a]pyrene	ND		0.19	0.041	ug/L		01/11/23 08:49	01/27/23 22:53	1
Benzo[b]fluoranthene	ND		0.19	0.033	ug/L		01/11/23 08:49	01/27/23 22:53	1
Benzo[g,h,i]perylene	ND		0.19	0.13	ug/L		01/11/23 08:49	01/13/23 14:35	1
Benzo[k]fluoranthene	ND		0.19	0.097	ug/L		01/11/23 08:49	01/27/23 22:53	1
Chrysene	ND		0.19	0.071	ug/L		01/11/23 08:49	01/27/23 22:53	1
Dibenz(a,h)anthracene	ND		0 19	0 048	ug/L		01/11/23 08 49	01/13/23 14 35	1
Fluoranthene	ND		0.19	0.066	ug/L		01/11/23 08:49	01/27/23 22:53	1
Fluorene	ND		0.19	0.11	ug/L		01/11/23 08:49	01/13/23 14:35	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.042	ug/L		01/11/23 08:49	01/13/23 14:35	1
1-Methylnaphthalene	ND		0.19	0.071	ug/L		01/11/23 08:49	01/13/23 14:35	1
2-Methylnaphthalene	ND		0.19	0.058	ug/L		01/11/23 08:49	01/13/23 14:35	1
Phenanthrene	**0.037**	**J**	0.19	0.035	ug/L		01/11/23 08:49	01/27/23 22:53	1
Pyrene	ND		0.19	0.039	ug/L		01/11/23 08:49	01/27/23 22:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*101*		*15 - 122*	*01/11/23 08:49*	*01/13/23 14:35*	*1*
Nitrobenzene-d5	*74*		*19 - 130*	*01/11/23 08:49*	*01/13/23 14:35*	*1*

Client Sample ID: ROST4PZG-ROX-010623
Date Collected: 01/06/23 10:55
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-9
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	107		33 - 138	01/11/23 08:49	01/13/23 14:35	1

Method: SW846 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		01/11/23 08:49	01/12/23 19:22	1
Benzenethiol	ND	*-	9.7	1.6	ug/L		01/11/23 08:49	01/12/23 19:22	1
Benzoic acid	ND		29	7.1	ug/L		01/11/23 08:49	01/12/23 19:22	1
Benzyl alcohol	ND		9.7	1.9	ug/L		01/11/23 08:49	01/12/23 19:22	1
Bis(2-chloroethoxy)methane	ND		9.7	0.15	ug/L		01/11/23 08:49	01/12/23 19:22	1
Bis(2-chloroethyl)ether	ND		9.7	2.6	ug/L		01/11/23 08:49	01/12/23 19:22	1
bis (2-chloroisopropyl) ether	ND		9.7	0.15	ug/L		01/11/23 08:49	01/12/23 19:22	1
Bis(2-ethylhexyl) phthalate	ND		9.7	4.8	ug/L		01/11/23 08:49	01/12/23 19:22	1
4-Bromophenyl phenyl ether	ND		9.7	0.19	ug/L		01/11/23 08:49	01/12/23 19:22	1
Butyl benzyl phthalate	ND		9.7	0.18	ug/L		01/11/23 08:49	01/12/23 19:22	1
4-Chloroaniline	ND	*+	9.7	3.3	ug/L		01/11/23 08:49	01/12/23 19:22	1
4-Chloro-3-methylphenol	ND		9.7	3.7	ug/L		01/11/23 08:49	01/12/23 19:22	1
2-Chloronaphthalene	ND		9.7	0.14	ug/L		01/11/23 08:49	01/12/23 19:22	1
2-Chlorophenol	ND		9.7	2.1	ug/L		01/11/23 08:49	01/12/23 19:22	1
4-Chlorophenyl phenyl ether	ND		9.7	1.9	ug/L		01/11/23 08:49	01/12/23 19:22	1
Dibenz[a,h]acridine	ND		9.7	0.97	ug/L		01/11/23 08:49	01/12/23 19:22	1
Dibenzofuran	ND		9.7	0.16	ug/L		01/11/23 08:49	01/12/23 19:22	1
3,3'-Dichlorobenzidine	ND	*+	9.7	2.5	ug/L		01/11/23 08:49	01/12/23 19:22	1
2,4-Dichlorophenol	ND		9.7	2.9	ug/L		01/11/23 08:49	01/12/23 19:22	1
Diethyl phthalate	**0.30**	**J**	9.7	0.23	ug/L		01/11/23 08:49	01/12/23 19:22	1
2,4-Dimethylphenol	ND		9.7	3.4	ug/L		01/11/23 08:49	01/12/23 19:22	1
Dimethyl phthalate	ND		9.7	0.16	ug/L		01/11/23 08:49	01/12/23 19:22	1
Di-n-butyl phthalate	ND		9.7	2.6	ug/L		01/11/23 08:49	01/12/23 19:22	1
4,6-Dinitro-ortho-cresol	ND		9.7	1.5	ug/L		01/11/23 08:49	01/12/23 19:22	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		01/11/23 08:49	01/12/23 19:22	1
2,4-Dinitrotoluene	ND		9.7	1.8	ug/L		01/11/23 08:49	01/12/23 19:22	1
2,6-Dinitrotoluene	ND		9.7	1.8	ug/L		01/11/23 08:49	01/12/23 19:22	1
Di-n-octyl phthalate	**2.9**	**J**	9.7	0.16	ug/L		01/11/23 08:49	01/12/23 19:22	1
1,4-Dioxane	ND	*1	9.7	0.97	ug/L		01/11/23 08:49	01/12/23 19:22	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.7	0.97	ug/L		01/11/23 08:49	01/12/23 19:22	1
Hexachlorobenzene	ND		9.7	0.16	ug/L		01/11/23 08:49	01/12/23 19:22	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		01/11/23 08:49	01/12/23 19:22	1
Hexachloroethane	ND		9.7	4.1	ug/L		01/11/23 08:49	01/12/23 19:22	1
Indene	ND		9.7	0.97	ug/L		01/11/23 08:49	01/12/23 19:22	1
Isophorone	ND		9.7	0.14	ug/L		01/11/23 08:49	01/12/23 19:22	1
2-Methylphenol	ND		9.7	1.7	ug/L		01/11/23 08:49	01/12/23 19:22	1
3 & 4 Methylphenol	ND		19	0.38	ug/L		01/11/23 08:49	01/12/23 19:22	1
2-Nitroaniline	ND		9.7	2.1	ug/L		01/11/23 08:49	01/12/23 19:22	1
3-Nitroaniline	ND	*+	9.7	1.7	ug/L		01/11/23 08:49	01/12/23 19:22	1
4-Nitroaniline	ND		9.7	1.4	ug/L		01/11/23 08:49	01/12/23 19:22	1
Nitrobenzene	ND		9.7	0.13	ug/L		01/11/23 08:49	01/12/23 19:22	1
2-Nitrophenol	ND		9.7	5.0	ug/L		01/11/23 08:49	01/12/23 19:22	1
4-Nitrophenol	ND		9.7	2.0	ug/L		01/11/23 08:49	01/12/23 19:22	1
N-Nitrosodimethylamine	ND		9.7	3.4	ug/L		01/11/23 08:49	01/12/23 19:22	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231426-1

Client Sample ID: ROST4PZG-ROX-010623
Date Collected: 01/06/23 10:55
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-9
Matrix: Water

Method: SW846 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		01/11/23 08:49	01/12/23 19:22	1
N-Nitrosodiphenylamine	ND		9.7	0.17	ug/L		01/11/23 08:49	01/12/23 19:22	1
Pentachlorophenol	ND		19	1.4	ug/L		01/11/23 08:49	01/12/23 19:22	1
Phenol	ND		9.7	2.5	ug/L		01/11/23 08:49	01/12/23 19:22	1
Pyridine	ND		9.7	3.1	ug/L		01/11/23 08:49	01/12/23 19:22	1
Quinoline	ND		9.7	4.3	ug/L		01/11/23 08:49	01/12/23 19:22	1
2,4,5-Trichlorophenol	ND		9.7	3.6	ug/L		01/11/23 08:49	01/12/23 19:22	1
2,4,6-Trichlorophenol	ND		9.7	3.4	ug/L		01/11/23 08:49	01/12/23 19:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*109*		*46 - 124*	*01/11/23 08:49*	*01/12/23 19:22*	*1*
2-Fluorophenol	*18*		*13 - 113*	*01/11/23 08:49*	*01/12/23 19:22*	*1*
Nitrobenzene-d5	*100*		*36 - 126*	*01/11/23 08:49*	*01/12/23 19:22*	*1*
Phenol-d5	*61*		*17 - 127*	*01/11/23 08:49*	*01/12/23 19:22*	*1*
Terphenyl-d14	*115*		*44 - 149*	*01/11/23 08:49*	*01/12/23 19:22*	*1*
2,4,6-Tribromophenol	*93*		*26 - 150*	*01/11/23 08:49*	*01/12/23 19:22*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.030	0.017	ug/L		01/17/23 10:00	01/17/23 18:43	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/17/23 10:00	01/17/23 18:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*122*	*p*	*51 - 149*	*01/17/23 10:00*	*01/17/23 18:43*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231426-1

Client Sample ID: P114R-ROX-010623
Date Collected: 01/06/23 13:15
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-10
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/13/23 10:14	1
Acrolein	ND		20	3.3	ug/L			01/13/23 10:14	1
Acrylonitrile	ND		10	2.8	ug/L			01/13/23 10:14	1
Benzene	ND		1.0	0.13	ug/L			01/13/23 10:14	1
Bromobenzene	ND		1.0	0.54	ug/L			01/13/23 10:14	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/13/23 10:14	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/13/23 10:14	1
Bromoform	ND		5.0	0.25	ug/L			01/13/23 10:14	1
Bromomethane	ND		1.0	0.98	ug/L			01/13/23 10:14	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/13/23 10:14	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/13/23 10:14	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/13/23 10:14	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/13/23 10:14	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/13/23 10:14	1
Chloroethane	ND		1.0	0.76	ug/L			01/13/23 10:14	1
2-Chloroethyl vinyl ether	ND	F1	5.0	2.0	ug/L			01/13/23 10:14	1
Chloroform	ND		1.0	1.0	ug/L			01/13/23 10:14	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/13/23 10:14	1
Chloromethane	ND		1.0	0.32	ug/L			01/13/23 10:14	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/13/23 10:14	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/13/23 10:14	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/13/23 10:14	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/13/23 10:14	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/13/23 10:14	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/13/23 10:14	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/13/23 10:14	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/13/23 10:14	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 10:14	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 10:14	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 10:14	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 10:14	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/13/23 10:14	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/13/23 10:14	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/13/23 10:14	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/13/23 10:14	1
2-Hexanone	ND		25	1.4	ug/L			01/13/23 10:14	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/13/23 10:14	1
Methylene bromide	ND		5.0	0.22	ug/L			01/13/23 10:14	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/13/23 10:14	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/13/23 10:14	1
Methyl tert-butyl ether	**1.4**		1.0	0.22	ug/L			01/13/23 10:14	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/13/23 10:14	1
Naphthalene	ND		5.0	3.0	ug/L			01/13/23 10:14	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/13/23 10:14	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/13/23 10:14	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/13/23 10:14	1
o-Xylene	ND		5.0	0.60	ug/L			01/13/23 10:14	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/13/23 10:14	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/13/23 10:14	1

Client Sample ID: P114R-ROX-010623
Date Collected: 01/06/23 13:15
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-10
Matrix: Water

Method: SW846 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			01/13/23 10:14	1
Styrene	ND		1.0	1.0	ug/L			01/13/23 10:14	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/13/23 10:14	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/13/23 10:14	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/13/23 10:14	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/13/23 10:14	1
Toluene	ND		1.0	0.41	ug/L			01/13/23 10:14	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 10:14	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/13/23 10:14	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/13/23 10:14	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/13/23 10:14	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/13/23 10:14	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/13/23 10:14	1
Trichloroethene	ND		1.0	0.15	ug/L			01/13/23 10:14	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/13/23 10:14	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/13/23 10:14	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/13/23 10:14	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/13/23 10:14	1
Vinyl acetate	ND		25	0.93	ug/L			01/13/23 10:14	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/13/23 10:14	1
Xylenes, Total	ND		10	1.6	ug/L			01/13/23 10:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*72 - 119*		*01/13/23 10:14*	*1*
Dibromofluoromethane	*105*		*75 - 126*		*01/13/23 10:14*	*1*
Toluene-d8 (Surr)	*94*		*64 - 132*		*01/13/23 10:14*	*1*

Method: SW846 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	0.031	ug/L		01/11/23 08:49	01/13/23 14:53	1
Acenaphthylene	ND		0.19	0.044	ug/L		01/11/23 08:49	01/13/23 14:53	1
Anthracene	ND		0.19	0.031	ug/L		01/11/23 08:49	01/13/23 14:53	1
Benzo[a]anthracene	ND		0.19	0.045	ug/L		01/11/23 08:49	01/13/23 14:53	1
Benzo[g,h,i]perylene	ND		0.19	0.13	ug/L		01/11/23 08:49	01/13/23 14:53	1
Chrysene	ND		0.19	0.072	ug/L		01/11/23 08:49	01/13/23 14:53	1
Dibenz(a,h)anthracene	ND		0.19	0.048	ug/L		01/11/23 08:49	01/13/23 14:53	1
Fluorene	ND		0.19	0.11	ug/L		01/11/23 08:49	01/13/23 14:53	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.042	ug/L		01/11/23 08:49	01/13/23 14:53	1
1-Methylnaphthalene	ND		0 19	0 072	ug/L		01/11/23 08 49	01/13/23 14 53	1
2-Methylnaphthalene	ND		0.19	0.058	ug/L		01/11/23 08:49	01/13/23 14:53	1
Phenanthrene	ND		0.19	0.035	ug/L		01/11/23 08:49	01/13/23 14:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*91*		*15 - 122*	*01/11/23 08:49*	*01/13/23 14:53*	*1*
Nitrobenzene-d5	*62*		*19 - 130*	*01/11/23 08:49*	*01/13/23 14:53*	*1*
Terphenyl-d14	*79*		*33 - 138*	*01/11/23 08:49*	*01/13/23 14:53*	*1*

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		0.19	0.041	ug/L		01/11/23 08:49	01/27/23 23:10	1

Client Sample ID: P114R-ROX-010623

Date Collected: 01/06/23 13:15
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-10

Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - RA (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	**0.13**	**J B**	0.19	0.033	ug/L		01/11/23 08:49	01/27/23 23:10	1
Benzo[k]fluoranthene	ND		0.19	0.097	ug/L		01/11/23 08:49	01/27/23 23:10	1
Fluoranthene	**0.16**	**J**	0.19	0.066	ug/L		01/11/23 08:49	01/27/23 23:10	1
Pyrene	**0.18**	**J**	0.19	0.039	ug/L		01/11/23 08:49	01/27/23 23:10	1

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND	H	0.19	0.032	ug/L		02/09/23 13:26	03/03/23 17:23	1
Fluoranthene	ND	H	0.19	0.065	ug/L		02/09/23 13:26	03/03/23 17:23	1
Pyrene	ND	H	0.19	0.038	ug/L		02/09/23 13:26	03/03/23 17:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*76*		*15 - 122*	*02/09/23 13:26*	*03/03/23 17:23*	*1*
Nitrobenzene-d5	*71*		*19 - 130*	*02/09/23 13:26*	*03/03/23 17:23*	*1*
Terphenyl-d14	*92*		*33 - 138*	*02/09/23 13:26*	*03/03/23 17:23*	*1*

Method: SW846 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		01/11/23 08:49	01/12/23 19:44	1
Benzenethiol	ND	*-	9.7	1.6	ug/L		01/11/23 08:49	01/12/23 19:44	1
Benzoic acid	ND		29	7.1	ug/L		01/11/23 08:49	01/12/23 19:44	1
Benzyl alcohol	ND		9.7	1.9	ug/L		01/11/23 08:49	01/12/23 19:44	1
Bis(2-chloroethoxy)methane	ND		9.7	0.16	ug/L		01/11/23 08:49	01/12/23 19:44	1
Bis(2-chloroethyl)ether	ND		9.7	2.6	ug/L		01/11/23 08:49	01/12/23 19:44	1
bis (2-chloroisopropyl) ether	ND		9.7	0.16	ug/L		01/11/23 08:49	01/12/23 19:44	1
Bis(2-ethylhexyl) phthalate	ND		9.7	4.8	ug/L		01/11/23 08:49	01/12/23 19:44	1
4-Bromophenyl phenyl ether	ND		9.7	0.19	ug/L		01/11/23 08:49	01/12/23 19:44	1
Butyl benzyl phthalate	ND		9.7	0.18	ug/L		01/11/23 08:49	01/12/23 19:44	1
4-Chloroaniline	ND	*+	9.7	3.3	ug/L		01/11/23 08:49	01/12/23 19:44	1
4-Chloro-3-methylphenol	ND		9.7	3.7	ug/L		01/11/23 08:49	01/12/23 19:44	1
2-Chloronaphthalene	ND		9.7	0.14	ug/L		01/11/23 08:49	01/12/23 19:44	1
2-Chlorophenol	ND		9.7	2.1	ug/L		01/11/23 08:49	01/12/23 19:44	1
4-Chlorophenyl phenyl ether	ND		9.7	1.9	ug/L		01/11/23 08:49	01/12/23 19:44	1
Dibenz[a,h]acridine	ND		9.7	0.97	ug/L		01/11/23 08:49	01/12/23 19:44	1
Dibenzofuran	ND		9.7	0.16	ug/L		01/11/23 08:49	01/12/23 19:44	1
3,3'-Dichlorobenzidine	ND	*+	9.7	2.5	ug/L		01/11/23 08:49	01/12/23 19:44	1
2,4-Dichlorophenol	ND		9.7	2.9	ug/L		01/11/23 08:49	01/12/23 19:44	1
Diethyl phthalate	ND		9.7	0.23	ug/L		01/11/23 08:49	01/12/23 19:44	1
2,4-Dimethylphenol	ND		9.7	3.4	ug/L		01/11/23 08:49	01/12/23 19:44	1
Dimethyl phthalate	ND		9.7	0.16	ug/L		01/11/23 08:49	01/12/23 19:44	1
Di-n-butyl phthalate	ND		9.7	2.6	ug/L		01/11/23 08:49	01/12/23 19:44	1
4,6-Dinitro-ortho-cresol	ND		9.7	1.6	ug/L		01/11/23 08:49	01/12/23 19:44	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		01/11/23 08:49	01/12/23 19:44	1
2,4-Dinitrotoluene	ND		9.7	1.8	ug/L		01/11/23 08:49	01/12/23 19:44	1
2,6-Dinitrotoluene	ND		9.7	1.8	ug/L		01/11/23 08:49	01/12/23 19:44	1
Di-n-octyl phthalate	ND		9.7	0.16	ug/L		01/11/23 08:49	01/12/23 19:44	1
1,4-Dioxane	ND	*1	9.7	0.97	ug/L		01/11/23 08:49	01/12/23 19:44	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.7	0.97	ug/L		01/11/23 08:49	01/12/23 19:44	1
Hexachlorobenzene	ND		9.7	0.16	ug/L		01/11/23 08:49	01/12/23 19:44	1

Client Sample ID: P114R-ROX-010623

Date Collected: 01/06/23 13:15
Date Received: 01/07/23 09:10

Lab Sample ID: 400-231426-10

Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		01/11/23 08:49	01/12/23 19:44	1
Hexachloroethane	ND		9.7	4.1	ug/L		01/11/23 08:49	01/12/23 19:44	1
Indene	ND		9.7	0.97	ug/L		01/11/23 08:49	01/12/23 19:44	1
Isophorone	ND		9.7	0.14	ug/L		01/11/23 08:49	01/12/23 19:44	1
2-Methylphenol	ND		9.7	1.7	ug/L		01/11/23 08:49	01/12/23 19:44	1
3 & 4 Methylphenol	ND		19	0.38	ug/L		01/11/23 08:49	01/12/23 19:44	1
2-Nitroaniline	ND		9.7	2.1	ug/L		01/11/23 08:49	01/12/23 19:44	1
3-Nitroaniline	ND	*+	9.7	1.7	ug/L		01/11/23 08:49	01/12/23 19:44	1
4-Nitroaniline	ND		9.7	1.5	ug/L		01/11/23 08:49	01/12/23 19:44	1
Nitrobenzene	ND		9.7	0.13	ug/L		01/11/23 08:49	01/12/23 19:44	1
2-Nitrophenol	ND		9.7	5.0	ug/L		01/11/23 08:49	01/12/23 19:44	1
4-Nitrophenol	ND		9.7	2.0	ug/L		01/11/23 08:49	01/12/23 19:44	1
N-Nitrosodimethylamine	ND		9.7	3.4	ug/L		01/11/23 08:49	01/12/23 19:44	1
N-Nitrosodi-n-propylamine	ND		9.7	3.2	ug/L		01/11/23 08:49	01/12/23 19:44	1
N-Nitrosodiphenylamine	ND		9.7	0.17	ug/L		01/11/23 08:49	01/12/23 19:44	1
Pentachlorophenol	ND		19	1.4	ug/L		01/11/23 08:49	01/12/23 19:44	1
Phenol	ND		9.7	2.5	ug/L		01/11/23 08:49	01/12/23 19:44	1
Pyridine	ND		9.7	3.1	ug/L		01/11/23 08:49	01/12/23 19:44	1
Quinoline	ND		9.7	4.4	ug/L		01/11/23 08:49	01/12/23 19:44	1
2,4,5-Trichlorophenol	ND		9.7	3.6	ug/L		01/11/23 08:49	01/12/23 19:44	1
2,4,6-Trichlorophenol	ND		9.7	3.4	ug/L		01/11/23 08:49	01/12/23 19:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*95*		*46 - 124*	*01/11/23 08:49*	*01/12/23 19:44*	*1*
2-Fluorophenol	*2*	*S1-*	*13 - 113*	*01/11/23 08:49*	*01/12/23 19:44*	*1*
Nitrobenzene-d5	*88*		*36 - 126*	*01/11/23 08:49*	*01/12/23 19:44*	*1*
Phenol-d5	*19*		*17 - 127*	*01/11/23 08:49*	*01/12/23 19:44*	*1*
Terphenyl-d14	*80*		*44 - 149*	*01/11/23 08:49*	*01/12/23 19:44*	*1*
2,4,6-Tribromophenol	*76*		*26 - 150*	*01/11/23 08:49*	*01/12/23 19:44*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.030	0.017	ug/L		01/17/23 10:00	01/17/23 19:04	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/17/23 10:00	01/17/23 19:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*119*	*p*	*51 - 149*	*01/17/23 10:00*	*01/17/23 19:04*	*1*

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds 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/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
B	Compound was found in the blank and sample.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231426-1

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	(72-119)	(75-126)	(64-132)
400-231426-1	TB-ROX-010623-8260-A	101	100	96
400-231426-3	P54-ROX-010623	101	101	95
400-231426-3 MS	P54-ROX-010623	98	99	95
400-231426-3 MSD	P54-ROX-010623	98	100	95
400-231426-4	MW26-ROX-010623	101	103	95
400-231426-5	MW27-ROX-010623	104	98	95
400-231426-6	TB-ROX-010623-8260-B	101	100	96
400-231426-8	MW12-ROX-010623	103	101	96
400-231426-9	ROST4PZG-ROX-010623	99	104	96
400-231426-10	P114R-ROX-010623	97	105	94
400-231426-10 MS	P114R-ROX-010623	97	103	97
400-231426-10 MSD	P114R-ROX-010623	99	102	98
LCS 400-607992/1004	Lab Control Sample	99	96	95
LCS 400-608295/1002	Lab Control Sample	96	103	98
MB 400-607992/6	Method Blank	102	99	95
MB 400-608295/4	Method Blank	98	108	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	(46-124)	(13-113)	(36-126)	(17-127)	(44-149)	(26-150)
400-231426-3	P54-ROX-010623	103	15	93	49	120	76
400-231426-4	MW26-ROX-010623	113	31	103	72	120	84
400-231426-5	MW27-ROX-010623	105	6 S1-	96	35	112	73
400-231426-8	MW12-ROX-010623	101	34	95	57	88	49
400-231426-9	ROST4PZG-ROX-010623	109	18	100	61	115	93
400-231426-10	P114R-ROX-010623	95	2 S1-	88	19	80	76
LCS 400-607999/2-A	Lab Control Sample	105	41	112	82	111	100
LCS 400-607999/4-A	Lab Control Sample	116	33	104	79	126	56
LCSD 400-607999/3-A	Lab Control Sample Dup	111	36	117	86	122	107
LCSD 400-607999/5-A	Lab Control Sample Dup	116	47	104	85	123	64
MB 400-607999/1-A	Method Blank	114	14	102	59	121	72

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 GW

Job ID: 400-231426-1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	NBZ	TPHL
Lab Sample ID	Client Sample ID	(15-122)	(19-130)	(33-138)
400-231426-3	P54-ROX-010623	105	71	117
400-231426-4	MW26-ROX-010623	116	79	125
400-231426-5	MW27-ROX-010623	102	70	108
400-231426-8	MW12-ROX-010623	104	72	87
400-231426-9	ROST4PZG-ROX-010623	101	74	107
400-231426-10	P114R-ROX-010623	91	62	79
400-231426-10 - RE	P114R-ROX-010623	76	71	92
LCS 400-607999/2-A	Lab Control Sample	102	70	104
LCS 400-611779/2-A	Lab Control Sample	93	118	104
LCSD 400-607999/3-A	Lab Control Sample Dup	104	66	99
LCSD 400-611779/3-A	Lab Control Sample Dup	90	115	100
MB 400-607999/1-A	Method Blank	110	74	118
MB 400-611779/1-A	Method Blank	110	95	98

Surrogate Legend

FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14

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)
400-231426-2	TB-ROX-010623-8011-A	124 p
400-231426-3	P54-ROX-010623	124 p
400-231426-4	MW26-ROX-010623	123 p
400-231426-5	MW27-ROX-010623	96 p
400-231426-7	TB-ROX-010623-8011-B	124 p
400-231426-8	MW12-ROX-010623	122 p
400-231426-9	ROST4PZG-ROX-010623	122 p
400-231426-10	P114R-ROX-010623	119 p
LCS 400-608768/2-A	Lab Control Sample	114
LCSD 400-608768/3-A	Lab Control Sample Dup	110
MB 400-608768/1-A	Method Blank	105

Surrogate Legend

BFB = 4-Bromofluorobenzene

Method Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231426-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	EET PEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	EET PEN
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	EET PEN
8011	EDB and DBCP in Water by Microextraction	EPA	EET PEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	EET PEN
5030B	Purge and Trap	SW846	EET PEN
8011	Microextraction	SW846	EET 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:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Client Sample ID: TB-ROX-010623-8260-A

Lab Sample ID: 400-231426-1

Date Collected: 01/06/23 12:00

Matrix: Water

Date Received: 01/07/23 09:10

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	607992	01/11/23 15:22	BPO	EET PEN

Client Sample ID: TB-ROX-010623-8011-A

Lab Sample ID: 400-231426-2

Date Collected: 01/06/23 12:00

Matrix: Water

Date Received: 01/07/23 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			34.7 mL	35 mL	608768	01/17/23 10:00	DS	EET PEN
Total/NA	Analysis	8011		1			608815	01/17/23 16:40	DS	EET PEN

Client Sample ID: P54-ROX-010623

Lab Sample ID: 400-231426-3

Date Collected: 01/06/23 09:40

Matrix: Water

Date Received: 01/07/23 09:10

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	607992	01/11/23 12:05	BPO	EET PEN
Total/NA	Prep	3520C			245.8 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608161	01/12/23 17:54	S1B	EET PEN
Total/NA	Prep	3520C			245.8 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608329	01/13/23 13:44	KJA	EET PEN
Total/NA	Prep	3520C	RA		245.8 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D LL	RA	1	0.4 mL	0.4 mL	610183	01/27/23 22:02	PP1	EET PEN
Total/NA	Prep	8011			35.9 mL	35 mL	608768	01/17/23 10:00	DS	EET PEN
Total/NA	Analysis	8011		1			608815	01/17/23 17:01	DS	EET PEN

Client Sample ID: MW26-ROX-010623

Lab Sample ID: 400-231426-4

Date Collected: 01/06/23 10:45

Matrix: Water

Date Received: 01/07/23 09:10

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	607992	01/11/23 19:27	BPO	EET PEN
Total/NA	Prep	3520C			245.2 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608161	01/12/23 18:16	S1B	EET PEN
Total/NA	Prep	3520C			245.2 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608245	01/12/23 18:44	PP1	EET PEN
Total/NA	Prep	8011			36.3 mL	35 mL	608768	01/17/23 10:00	DS	EET PEN
Total/NA	Analysis	8011		1			608815	01/17/23 17:21	DS	EET PEN

Client Sample ID: MW27-ROX-010623

Lab Sample ID: 400-231426-5

Date Collected: 01/06/23 13:15

Matrix: Water

Date Received: 01/07/23 09:10

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	607992	01/11/23 19:51	BPO	EET PEN

Client Sample ID: MW27-ROX-010623

Lab Sample ID: 400-231426-5

Date Collected: 01/06/23 13:15

Matrix: Water

Date Received: 01/07/23 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			253 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608161	01/12/23 18:38	S1B	EET PEN
Total/NA	Prep	3520C			253 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608329	01/13/23 14:01	KJA	EET PEN
Total/NA	Prep	3520C			253 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	610183	01/27/23 22:19	PP1	EET PEN
Total/NA	Prep	8011			35.4 mL	35 mL	608768	01/17/23 10:00	DS	EET PEN
Total/NA	Analysis	8011		1			608815	01/17/23 17:42	DS	EET PEN

Client Sample ID: TB-ROX-010623-8260-B

Lab Sample ID: 400-231426-6

Date Collected: 01/06/23 12:00

Matrix: Water

Date Received: 01/07/23 09:10

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	607992	01/11/23 15:46	BPO	EET PEN

Client Sample ID: TB-ROX-010623-8011-B

Lab Sample ID: 400-231426-7

Date Collected: 01/06/23 12:00

Matrix: Water

Date Received: 01/07/23 09:10

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	608768	01/17/23 10:00	DS	EET PEN
Total/NA	Analysis	8011		1			608815	01/17/23 18:02	DS	EET PEN

Client Sample ID: MW12-ROX-010623

Lab Sample ID: 400-231426-8

Date Collected: 01/06/23 09:45

Matrix: Water

Date Received: 01/07/23 09:10

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	607992	01/11/23 20:16	BPO	EET PEN
Total/NA	Prep	3520C			261.8 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608161	01/12/23 19:00	S1B	EET PEN
Total/NA	Prep	3520C			261.8 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608329	01/13/23 14:18	KJA	EET PEN
Total/NA	Prep	3520C			261.8 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	610183	01/27/23 22:36	PP1	EET PEN
Total/NA	Prep	8011			36.2 mL	35 mL	608768	01/17/23 10:00	DS	EET PEN
Total/NA	Analysis	8011		1			608815	01/17/23 18:23	DS	EET PEN

Client Sample ID: ROST4PZG-ROX-010623

Lab Sample ID: 400-231426-9

Date Collected: 01/06/23 10:55

Matrix: Water

Date Received: 01/07/23 09:10

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	608295	01/13/23 14:38	AGW	EET PEN

Client Sample ID: ROST4PZG-ROX-010623

Lab Sample ID: 400-231426-9

Date Collected: 01/06/23 10:55

Matrix: Water

Date Received: 01/07/23 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			258.8 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608161	01/12/23 19:22	S1B	EET PEN
Total/NA	Prep	3520C			258.8 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608329	01/13/23 14:35	KJA	EET PEN
Total/NA	Prep	3520C			258.8 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	610183	01/27/23 22:53	PP1	EET PEN
Total/NA	Prep	8011			35.4 mL	35 mL	608768	01/17/23 10:00	DS	EET PEN
Total/NA	Analysis	8011		1			608815	01/17/23 18:43	DS	EET PEN

Client Sample ID: P114R-ROX-010623

Lab Sample ID: 400-231426-10

Date Collected: 01/06/23 13:15

Matrix: Water

Date Received: 01/07/23 09:10

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	608295	01/13/23 10:14	AGW	EET PEN
Total/NA	Prep	3520C			258 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608161	01/12/23 19:44	S1B	EET PEN
Total/NA	Prep	3520C			258 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608329	01/13/23 14:53	KJA	EET PEN
Total/NA	Prep	3520C	RA		258 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D LL	RA	1	0.4 mL	0.4 mL	610183	01/27/23 23:10	PP1	EET PEN
Total/NA	Prep	3520C	RE		262.6 mL	1 mL	611779	02/09/23 13:26	KWS	EET PEN
Total/NA	Analysis	8270D LL	RE	1	0.4 mL	0.4 mL	614729	03/03/23 17:23	DHW	EET PEN
Total/NA	Prep	8011			35.3 mL	35 mL	608768	01/17/23 10:00	DS	EET PEN
Total/NA	Analysis	8011		1			608815	01/17/23 19:04	DS	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-607992/6

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	607992	01/11/23 11:16	BPO	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-607999/1-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			250 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608161	01/12/23 14:11	S1B	EET PEN
Total/NA	Prep	3520C			250 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608245	01/12/23 16:09	PP1	EET PEN
Total/NA	Prep	3520C			250 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	614729	03/03/23 10:23	DHW	EET PEN

Client Sample ID: Method Blank — Lab Sample ID: MB 400-608295/4

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	608295	01/13/23 09:48	AGW	EET PEN

Client Sample ID: Method Blank — Lab Sample ID: MB 400-608768/1-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	608768	01/17/23 10:00	DS	EET PEN
Total/NA	Analysis	8011		1			608815	01/17/23 13:00	DS	EET PEN

Client Sample ID: Method Blank — Lab Sample ID: MB 400-611779/1-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			250 mL	1 mL	611779	02/09/23 13:26	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	612404	02/14/23 14:41	PP1	EET PEN

Client Sample ID: Lab Control Sample — Lab Sample ID: LCS 400-607992/1004

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	607992	01/11/23 10:18	BPO	EET PEN

Client Sample ID: Lab Control Sample — Lab Sample ID: LCS 400-607999/2-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			250 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608161	01/12/23 15:18	S1B	EET PEN
Total/NA	Prep	3520C			250 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D LL		5	0.4 mL	0.4 mL	608245	01/12/23 16:26	PP1	EET PEN

Client Sample ID: Lab Control Sample — Lab Sample ID: LCS 400-607999/4-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			250 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608161	01/12/23 14:33	S1B	EET PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-608295/1002
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	608295	01/13/23 08:48	AGW	EET PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-608768/2-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	608768	01/17/23 10:00	DS	EET PEN
Total/NA	Analysis	8011		1			608815	01/17/23 13:21	DS	EET PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-611779/2-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			250 mL	1 mL	611779	02/09/23 13:26	KWS	EET PEN
Total/NA	Analysis	8270D LL		5	0.4 mL	0.4 mL	611978	02/10/23 17:23	PP1	EET PEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-607999/3-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			250 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608161	01/12/23 15:40	S1B	EET PEN
Total/NA	Prep	3520C			250 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D LL		5	0.4 mL	0.4 mL	608245	01/12/23 16:43	PP1	EET PEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-607999/5-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			250 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608161	01/12/23 14:55	S1B	EET PEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-608768/3-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	608768	01/17/23 10:00	DS	EET PEN
Total/NA	Analysis	8011		1			608815	01/17/23 13:41	DS	EET PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231426-1

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-611779/3-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			250 mL	1 mL	611779	02/09/23 13:26	KWS	EET PEN
Total/NA	Analysis	8270D LL		5	0.4 mL	0.4 mL	611978	02/10/23 17:40	PP1	EET PEN

Client Sample ID: P54-ROX-010623
Lab Sample ID: 400-231426-3 MS
Date Collected: 01/06/23 09:40
Matrix: Water
Date Received: 01/07/23 09:10

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	607992	01/11/23 13:43	BPO	EET PEN

Client Sample ID: P54-ROX-010623
Lab Sample ID: 400-231426-3 MSD
Date Collected: 01/06/23 09:40
Matrix: Water
Date Received: 01/07/23 09:10

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	607992	01/11/23 14:08	BPO	EET PEN

Client Sample ID: P114R-ROX-010623
Lab Sample ID: 400-231426-10 MS
Date Collected: 01/06/23 13:15
Matrix: Water
Date Received: 01/07/23 09:10

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	608295	01/13/23 11:07	AGW	EET PEN

Client Sample ID: P114R-ROX-010623
Lab Sample ID: 400-231426-10 MSD
Date Collected: 01/06/23 13:15
Matrix: Water
Date Received: 01/07/23 09:10

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	608295	01/13/23 11:33	AGW	EET PEN

Laboratory References:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

GC/MS VOA

Analysis Batch: 607992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231426-1	TB-ROX-010623-8260-A	Total/NA	Water	8260B	
400-231426-3	P54-ROX-010623	Total/NA	Water	8260B	
400-231426-4	MW26-ROX-010623	Total/NA	Water	8260B	
400-231426-5	MW27-ROX-010623	Total/NA	Water	8260B	
400-231426-6	TB-ROX-010623-8260-B	Total/NA	Water	8260B	
400-231426-8	MW12-ROX-010623	Total/NA	Water	8260B	
MB 400-607992/6	Method Blank	Total/NA	Water	8260B	
LCS 400-607992/1004	Lab Control Sample	Total/NA	Water	8260B	
400-231426-3 MS	P54-ROX-010623	Total/NA	Water	8260B	
400-231426-3 MSD	P54-ROX-010623	Total/NA	Water	8260B	

Analysis Batch: 608295

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231426-9	ROST4PZG-ROX-010623	Total/NA	Water	8260B	
400-231426-10	P114R-ROX-010623	Total/NA	Water	8260B	
MB 400-608295/4	Method Blank	Total/NA	Water	8260B	
LCS 400-608295/1002	Lab Control Sample	Total/NA	Water	8260B	
400-231426-10 MS	P114R-ROX-010623	Total/NA	Water	8260B	
400-231426-10 MSD	P114R-ROX-010623	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 607999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231426-3 - RA	P54-ROX-010623	Total/NA	Water	3520C	
400-231426-3	P54-ROX-010623	Total/NA	Water	3520C	
400-231426-4	MW26-ROX-010623	Total/NA	Water	3520C	
400-231426-5	MW27-ROX-010623	Total/NA	Water	3520C	
400-231426-8	MW12-ROX-010623	Total/NA	Water	3520C	
400-231426-9	ROST4PZG-ROX-010623	Total/NA	Water	3520C	
400-231426-10 - RA	P114R-ROX-010623	Total/NA	Water	3520C	
400-231426-10	P114R-ROX-010623	Total/NA	Water	3520C	
MB 400-607999/1-A	Method Blank	Total/NA	Water	3520C	
LCS 400-607999/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 400-607999/4-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-607999/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
LCSD 400-607999/5-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 608161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231426-3	P54-ROX-010623	Total/NA	Water	8270D	607999
400-231426-4	MW26-ROX-010623	Total/NA	Water	8270D	607999
400-231426-5	MW27-ROX-010623	Total/NA	Water	8270D	607999
400-231426-8	MW12-ROX-010623	Total/NA	Water	8270D	607999
400-231426-9	ROST4PZG-ROX-010623	Total/NA	Water	8270D	607999
400-231426-10	P114R-ROX-010623	Total/NA	Water	8270D	607999
MB 400-607999/1-A	Method Blank	Total/NA	Water	8270D	607999
LCS 400-607999/2-A	Lab Control Sample	Total/NA	Water	8270D	607999
LCS 400-607999/4-A	Lab Control Sample	Total/NA	Water	8270D	607999
LCSD 400-607999/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	607999
LCSD 400-607999/5-A	Lab Control Sample Dup	Total/NA	Water	8270D	607999

GC/MS Semi VOA

Analysis Batch: 608245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231426-4	MW26-ROX-010623	Total/NA	Water	8270D LL	607999
MB 400-607999/1-A	Method Blank	Total/NA	Water	8270D LL	607999
LCS 400-607999/2-A	Lab Control Sample	Total/NA	Water	8270D LL	607999
LCSD 400-607999/3-A	Lab Control Sample Dup	Total/NA	Water	8270D LL	607999

Analysis Batch: 608329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231426-3	P54-ROX-010623	Total/NA	Water	8270D LL	607999
400-231426-5	MW27-ROX-010623	Total/NA	Water	8270D LL	607999
400-231426-8	MW12-ROX-010623	Total/NA	Water	8270D LL	607999
400-231426-9	ROST4PZG-ROX-010623	Total/NA	Water	8270D LL	607999
400-231426-10	P114R-ROX-010623	Total/NA	Water	8270D LL	607999

Analysis Batch: 610183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231426-3 - RA	P54-ROX-010623	Total/NA	Water	8270D LL	607999
400-231426-5	MW27-ROX-010623	Total/NA	Water	8270D LL	607999
400-231426-8	MW12-ROX-010623	Total/NA	Water	8270D LL	607999
400-231426-9	ROST4PZG-ROX-010623	Total/NA	Water	8270D LL	607999
400-231426-10 - RA	P114R-ROX-010623	Total/NA	Water	8270D LL	607999

Prep Batch: 611779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231426-10 - RE	P114R-ROX-010623	Total/NA	Water	3520C	
MB 400-611779/1-A	Method Blank	Total/NA	Water	3520C	
LCS 400-611779/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-611779/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 611978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-611779/2-A	Lab Control Sample	Total/NA	Water	8270D LL	611779
LCSD 400-611779/3-A	Lab Control Sample Dup	Total/NA	Water	8270D LL	611779

Analysis Batch: 612404

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-611779/1-A	Method Blank	Total/NA	Water	8270D LL	611779

Analysis Batch: 614729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231426-10 - RE	P114R-ROX-010623	Total/NA	Water	8270D LL	611779
MB 400-607999/1-A	Method Blank	Total/NA	Water	8270D LL	607999

GC Semi VOA

Prep Batch: 608768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231426-2	TB-ROX-010623-8011-A	Total/NA	Water	8011	
400-231426-3	P54-ROX-010623	Total/NA	Water	8011	
400-231426-4	MW26-ROX-010623	Total/NA	Water	8011	
400-231426-5	MW27-ROX-010623	Total/NA	Water	8011	
400-231426-7	TB-ROX-010623-8011-B	Total/NA	Water	8011	

GC Semi VOA (Continued)

Prep Batch: 608768 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231426-8	MW12-ROX-010623	Total/NA	Water	8011	
400-231426-9	ROST4PZG-ROX-010623	Total/NA	Water	8011	
400-231426-10	P114R-ROX-010623	Total/NA	Water	8011	
MB 400-608768/1-A	Method Blank	Total/NA	Water	8011	
LCS 400-608768/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 400-608768/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 608815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231426-2	TB-ROX-010623-8011-A	Total/NA	Water	8011	608768
400-231426-3	P54-ROX-010623	Total/NA	Water	8011	608768
400-231426-4	MW26-ROX-010623	Total/NA	Water	8011	608768
400-231426-5	MW27-ROX-010623	Total/NA	Water	8011	608768
400-231426-7	TB-ROX-010623-8011-B	Total/NA	Water	8011	608768
400-231426-8	MW12-ROX-010623	Total/NA	Water	8011	608768
400-231426-9	ROST4PZG-ROX-010623	Total/NA	Water	8011	608768
400-231426-10	P114R-ROX-010623	Total/NA	Water	8011	608768
MB 400-608768/1-A	Method Blank	Total/NA	Water	8011	608768
LCS 400-608768/2-A	Lab Control Sample	Total/NA	Water	8011	608768
LCSD 400-608768/3-A	Lab Control Sample Dup	Total/NA	Water	8011	608768

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-607992/6
Matrix: Water
Analysis Batch: 607992

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			01/11/23 11:16	1
Acrolein	ND		20	3.3	ug/L			01/11/23 11:16	1
Acrylonitrile	ND		10	2.8	ug/L			01/11/23 11:16	1
Benzene	ND		1.0	0.13	ug/L			01/11/23 11:16	1
Bromobenzene	ND		1.0	0.54	ug/L			01/11/23 11:16	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/11/23 11:16	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/11/23 11:16	1
Bromoform	ND		5.0	0.25	ug/L			01/11/23 11:16	1
Bromomethane	ND		1.0	0.98	ug/L			01/11/23 11:16	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/11/23 11:16	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/11/23 11:16	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/11/23 11:16	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/11/23 11:16	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/11/23 11:16	1
Chloroethane	ND		1.0	0.76	ug/L			01/11/23 11:16	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/11/23 11:16	1
Chloroform	ND		1.0	1.0	ug/L			01/11/23 11:16	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/11/23 11:16	1
Chloromethane	ND		1.0	0.32	ug/L			01/11/23 11:16	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/11/23 11:16	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/11/23 11:16	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/11/23 11:16	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/11/23 11:16	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/11/23 11:16	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/11/23 11:16	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/11/23 11:16	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/11/23 11:16	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/11/23 11:16	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/11/23 11:16	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/11/23 11:16	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/11/23 11:16	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/11/23 11:16	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/11/23 11:16	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/11/23 11:16	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/11/23 11:16	1
2-Hexanone	ND		25	1.4	ug/L			01/11/23 11:16	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/11/23 11:16	1
Methylene bromide	ND		5.0	0.22	ug/L			01/11/23 11:16	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/11/23 11:16	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/11/23 11:16	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/11/23 11:16	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/11/23 11:16	1
Naphthalene	ND		5.0	3.0	ug/L			01/11/23 11:16	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/11/23 11:16	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/11/23 11:16	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/11/23 11:16	1
o-Xylene	ND		5.0	0.60	ug/L			01/11/23 11:16	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/11/23 11:16	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-607992/6
Matrix: Water
Analysis Batch: 607992

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			01/11/23 11:16	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			01/11/23 11:16	1
Styrene	ND		1.0	1.0	ug/L			01/11/23 11:16	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/11/23 11:16	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/11/23 11:16	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/11/23 11:16	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/11/23 11:16	1
Toluene	ND		1.0	0.41	ug/L			01/11/23 11:16	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/11/23 11:16	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/11/23 11:16	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/11/23 11:16	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/11/23 11:16	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/11/23 11:16	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/11/23 11:16	1
Trichloroethene	ND		1.0	0.15	ug/L			01/11/23 11:16	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/11/23 11:16	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/11/23 11:16	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/11/23 11:16	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/11/23 11:16	1
Vinyl acetate	ND		25	0.93	ug/L			01/11/23 11:16	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/11/23 11:16	1
Xylenes, Total	ND		10	1.6	ug/L			01/11/23 11:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*		*72 - 119*		*01/11/23 11:16*	*1*
Dibromofluoromethane	*99*		*75 - 126*		*01/11/23 11:16*	*1*
Toluene-d8 (Surr)	*95*		*64 - 132*		*01/11/23 11:16*	*1*

Lab Sample ID: LCS 400-607992/1004
Matrix: Water
Analysis Batch: 607992

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	200	182		ug/L		91	43 - 160
Acrolein	500	557		ug/L		111	38 - 160
Acrylonitrile	500	440		ug/L		88	64 - 142
Benzene	50.0	46.0		ug/L		92	70 - 130
Bromobenzene	50.0	46.2		ug/L		92	70 - 132
Bromochloromethane	50.0	48.0		ug/L		96	70 - 130
Bromodichloromethane	50.0	46.6		ug/L		93	67 - 133
Bromoform	50.0	45.7		ug/L		91	57 - 140
Bromomethane	50.0	47.0		ug/L		94	10 - 160
2-Butanone (MEK)	200	174		ug/L		87	61 - 145
Carbon disulfide	50.0	41.8		ug/L		84	61 - 137
Carbon tetrachloride	50.0	44.5		ug/L		89	61 - 137
Chlorobenzene	50.0	46.2		ug/L		92	70 - 130
Dibromochloromethane	50.0	46.1		ug/L		92	67 - 135
Chloroethane	50.0	40.5		ug/L		81	55 - 141

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-607992/1004
Matrix: Water
Analysis Batch: 607992

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	68.7		ug/L		137	10 - 160
Chloroform	50.0	43.7		ug/L		87	69 - 130
1-Chlorohexane	50.0	43.5		ug/L		87	69 - 130
Chloromethane	50.0	43.6		ug/L		87	58 - 137
cis-1,2-Dichloroethene	50.0	43.0		ug/L		86	68 - 130
cis-1,3-Dichloropropene	50.0	49.1		ug/L		98	69 - 132
1,2-Dichlorobenzene	50.0	48.1		ug/L		96	67 - 130
1,3-Dichlorobenzene	50.0	48.5		ug/L		97	70 - 130
1,4-Dichlorobenzene	50.0	48.1		ug/L		96	70 - 130
Dichlorodifluoromethane	50.0	38.1		ug/L		76	41 - 146
1,1-Dichloroethane	50.0	45.0		ug/L		90	70 - 130
1,2-Dichloroethane	50.0	44.8		ug/L		90	69 - 130
1,1-Dichloroethene	50.0	45.1		ug/L		90	63 - 134
1,2-Dichloropropane	50.0	46.3		ug/L		93	70 - 130
1,3-Dichloropropane	50.0	47.5		ug/L		95	70 - 130
2,2-Dichloropropane	50.0	48.2		ug/L		96	52 - 135
1,1-Dichloropropene	50.0	46.1		ug/L		92	70 - 130
Ethylbenzene	50.0	44.8		ug/L		90	70 - 130
Ethyl methacrylate	50.0	46.5		ug/L		93	68 - 130
Hexachlorobutadiene	50.0	51.1		ug/L		102	53 - 140
2-Hexanone	200	179		ug/L		89	65 - 137
Isopropy benzene	50.0	45.0		ug/L		90	70 - 130
Methylene bromide	50.0	47.6		ug/L		95	70 - 130
Methylene Chloride	50.0	48.0		ug/L		96	66 - 135
4-Methyl-2-pentanone (MIBK)	200	194		ug/L		97	69 - 138
Methyl tert-butyl ether	50.0	49.4		ug/L		99	66 - 130
m-Xylene & p-Xylene	50.0	45.3		ug/L		91	70 - 130
Naphthalene	50.0	57.1		ug/L		114	47 - 149
n-Butylbenzene	50.0	47.4		ug/L		95	67 - 130
N-Propylbenzene	50.0	44.7		ug/L		89	70 - 130
o-Chlorotoluene	50.0	43.5		ug/L		87	70 - 130
o-Xylene	50.0	45.3		ug/L		91	70 - 130
p-Chlorotoluene	50.0	44.4		ug/L		89	70 - 130
p-Isopropyltoluene	50.0	45.1		ug/L		90	65 - 130
sec-Butylbenzene	50.0	44.5		ug/L		89	66 - 130
Styrene	50.0	45.9		ug/L		92	70 - 130
tert-Butylbenzene	50.0	49.5		ug/L		99	64 - 139
1,1,1,2-Tetrachloroethane	50.0	46.6		ug/L		93	67 - 131
1,1,2,2-Tetrachloroethane	50.0	44.7		ug/L		89	70 - 131
Tetrachloroethene	50.0	48.4		ug/L		97	65 - 130
Toluene	50.0	44.5		ug/L		89	70 - 130
trans-1,2-Dichloroethene	50.0	44.5		ug/L		89	70 - 130
trans-1,3-Dichloropropene	50.0	46.4		ug/L		93	63 - 130
1,2,3-Trichlorobenzene	50.0	54.0		ug/L		108	60 - 138
1,2,4-Trichlorobenzene	50.0	52.5		ug/L		105	60 - 140
1,1,1-Trichloroethane	50.0	44.2		ug/L		88	68 - 130
1,1,2-Trichloroethane	50.0	46.0		ug/L		92	70 - 130
Trichloroethene	50.0	47.5		ug/L		95	70 - 130
Trichlorofluoromethane	50.0	38.7		ug/L		77	65 - 138

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-607992/1004
Matrix: Water
Analysis Batch: 607992

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	50.0	44.5		ug/L		89	70 - 130
1,2,4-Trimethy benzene	50.0	45.1		ug/L		90	70 - 130
1,3,5-Trimethy benzene	50.0	44.1		ug/L		88	69 - 130
Vinyl acetate	100	120		ug/L		120	26 - 160
Vinyl chloride	50.0	50.4		ug/L		101	59 - 136
Xylenes, Total	100	90.6		ug/L		91	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*99*		*72 - 119*
Dibromofluoromethane	*96*		*75 - 126*
Toluene-d8 (Surr)	*95*		*64 - 132*

Lab Sample ID: 400-231426-3 MS
Matrix: Water
Analysis Batch: 607992

Client Sample ID: P54-ROX-010623
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	ND		200	179		ug/L		89	43 - 150
Acrolein	ND		500	518		ug/L		104	38 - 150
Acrylonitrile	ND		500	435		ug/L		87	62 - 149
Benzene	ND		50.0	41.7		ug/L		83	56 - 142
Bromobenzene	ND		50.0	40.0		ug/L		80	59 - 136
Bromochloromethane	ND		50.0	44.6		ug/L		89	64 - 140
Bromodichloromethane	ND		50.0	42.8		ug/L		86	59 - 143
Bromoform	ND		50.0	41.4		ug/L		83	50 - 140
Bromomethane	ND		50.0	36.2		ug/L		72	10 - 150
2-Butanone (MEK)	ND		200	169		ug/L		85	55 - 150
Carbon disulfide	ND		50.0	36.3		ug/L		73	48 - 150
Carbon tetrachloride	ND		50.0	38.1		ug/L		76	55 - 145
Chlorobenzene	ND		50.0	39.8		ug/L		80	64 - 130
Dibromochloromethane	ND		50.0	41.3		ug/L		83	56 - 143
Chloroethane	ND		50.0	31.8		ug/L		64	50 - 150
2-Chloroethyl vinyl ether	ND	F1	50.0	ND	F1	ug/L		0	10 - 150
Chloroform	ND		50.0	40.1		ug/L		80	60 - 141
1-Chlorohexane	ND		50.0	36.3		ug/L		73	56 - 136
Chloromethane	ND		50.0	35.5		ug/L		71	49 - 148
cis-1,2-Dichloroethene	ND		50.0	39.6		ug/L		79	59 - 143
cis-1,3-Dichloropropene	ND		50.0	44.0		ug/L		88	57 - 140
1,2-Dichlorobenzene	ND		50.0	41.6		ug/L		83	52 - 137
1,3-Dichlorobenzene	ND		50.0	39.9		ug/L		80	54 - 135
1,4-Dichlorobenzene	ND		50.0	40.0		ug/L		80	53 - 135
Dichlorodifluoromethane	ND		50.0	28.8		ug/L		58	16 - 150
1,1-Dichloroethane	ND		50.0	40.9		ug/L		82	61 - 144
1,2-Dichloroethane	ND		50.0	42.1		ug/L		84	60 - 141
1,1-Dichloroethene	ND		50.0	40.9		ug/L		82	54 - 147
1,2-Dichloropropane	ND		50.0	41.2		ug/L		82	66 - 137
1,3-Dichloropropane	ND		50.0	43.9		ug/L		88	66 - 133
2,2-Dichloropropane	ND		50.0	40.8		ug/L		82	42 - 144

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231426-3 MS
Matrix: Water
Analysis Batch: 607992

Client Sample ID: P54-ROX-010623
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloropropene	ND		50.0	40.3		ug/L		81	65 - 136
Ethylbenzene	ND		50.0	38.5		ug/L		77	58 - 131
Ethyl methacrylate	ND		50.0	43.1		ug/L		86	64 - 130
Hexachlorobutadiene	ND		50.0	40.0		ug/L		80	31 - 149
2-Hexanone	ND		200	171		ug/L		85	65 - 140
Isopropy benzene	ND		50.0	37.4		ug/L		75	56 - 133
Methylene bromide	ND		50.0	44.7		ug/L		89	63 - 138
Methylene Chloride	ND		50.0	43.4		ug/L		87	60 - 146
4-Methyl-2-pentanone (MIBK)	ND		200	189		ug/L		94	63 - 146
Methyl tert-butyl ether	ND		50.0	44.4		ug/L		89	59 - 137
m-Xylene & p-Xylene	ND		50.0	38.6		ug/L		77	57 - 130
Naphthalene	ND		50.0	50.1		ug/L		100	25 - 150
n-Butylbenzene	ND		50.0	36.2		ug/L		72	41 - 142
N-Propylbenzene	ND		50.0	36.7		ug/L		73	51 - 138
o-Chlorotoluene	ND		50.0	37.6		ug/L		75	53 - 134
o-Xylene	ND		50.0	38.6		ug/L		77	61 - 130
p-Chlorotoluene	ND		50.0	36.7		ug/L		73	54 - 133
p-Isopropyltoluene	ND		50.0	36.2		ug/L		72	48 - 139
sec-Butylbenzene	ND		50.0	36.2		ug/L		72	50 - 138
Styrene	ND		50.0	39.2		ug/L		78	58 - 131
tert-Butylbenzene	ND		50.0	40.8		ug/L		82	54 - 146
1,1,1,2-Tetrachloroethane	ND		50.0	40.3		ug/L		81	59 - 137
1,1,2,2-Tetrachloroethane	ND		50.0	42.4		ug/L		85	66 - 135
Tetrachloroethene	ND		50.0	38.7		ug/L		77	52 - 133
Toluene	ND		50.0	38.1		ug/L		76	65 - 130
trans-1,2-Dichloroethene	ND		50.0	38.7		ug/L		77	61 - 143
trans-1,3-Dichloropropene	ND		50.0	41.3		ug/L		83	53 - 133
1,2,3-Trichlorobenzene	ND		50.0	46.1		ug/L		92	43 - 145
1,2,4-Trichlorobenzene	ND		50.0	42.6		ug/L		85	39 - 148
1,1,1-Trichloroethane	ND		50.0	39.3		ug/L		79	57 - 142
1,1,2-Trichloroethane	ND		50.0	42.2		ug/L		84	66 - 131
Trichloroethene	ND		50.0	40.9		ug/L		82	64 - 136
Trichlorofluoromethane	ND		50.0	42.3		ug/L		85	54 - 150
1,2,3-Trichloropropane	ND		50.0	41.5		ug/L		83	65 - 133
1,2,4-Trimethy benzene	ND		50.0	36.9		ug/L		74	50 - 139
1,3,5-Trimethy benzene	ND		50.0	36.6		ug/L		73	52 - 135
Vinyl acetate	ND		100	103		ug/L		103	26 - 150
Vinyl chloride	ND		50.0	41.4		ug/L		83	46 - 150
Xylenes, Total	ND		100	77.2		ug/L		77	59 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*98*		*72 - 119*
Dibromofluoromethane	*99*		*75 - 126*
Toluene-d8 (Surr)	*95*		*64 - 132*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231426-3 MSD
Matrix: Water
Analysis Batch: 607992

Client Sample ID: P54-ROX-010623
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	190		ug/L		95	43 - 150	6	30
Acrolein	ND		500	576		ug/L		115	38 - 150	11	31
Acrylonitrile	ND		500	467		ug/L		93	62 - 149	7	30
Benzene	ND		50.0	40.5		ug/L		81	56 - 142	3	30
Bromobenzene	ND		50.0	35.8		ug/L		72	59 - 136	11	30
Bromochloromethane	ND		50.0	45.0		ug/L		90	64 - 140	1	30
Bromodichloromethane	ND		50.0	41.6		ug/L		83	59 - 143	3	30
Bromoform	ND		50.0	42.3		ug/L		85	50 - 140	2	30
Bromomethane	ND		50.0	41.2		ug/L		82	10 - 150	13	50
2-Butanone (MEK)	ND		200	187		ug/L		94	55 - 150	10	30
Carbon disulfide	ND		50.0	37.1		ug/L		74	48 - 150	2	30
Carbon tetrachloride	ND		50.0	39.0		ug/L		78	55 - 145	2	30
Chlorobenzene	ND		50.0	36.3		ug/L		73	64 - 130	9	30
Dibromochloromethane	ND		50.0	41.0		ug/L		82	56 - 143	1	30
Chloroethane	ND		50.0	36.4		ug/L		73	50 - 150	13	30
2-Chloroethyl vinyl ether	ND	F1	50.0	ND	F1	ug/L		0	10 - 150	NC	50
Chloroform	ND		50.0	40.9		ug/L		82	60 - 141	2	30
1-Chlorohexane	ND		50.0	31.6		ug/L		63	56 - 136	14	30
Chloromethane	ND		50.0	38.3		ug/L		77	49 - 148	8	31
cis-1,2-Dichloroethene	ND		50.0	40.3		ug/L		81	59 - 143	2	30
cis-1,3-Dichloropropene	ND		50.0	43.3		ug/L		87	57 - 140	2	30
1,2-Dichlorobenzene	ND		50.0	36.2		ug/L		72	52 - 137	14	30
1,3-Dichlorobenzene	ND		50.0	34.6		ug/L		69	54 - 135	14	30
1,4-Dichlorobenzene	ND		50.0	34.5		ug/L		69	53 - 135	15	30
Dichlorodifluoromethane	ND		50.0	33.7		ug/L		67	16 - 150	15	31
1,1-Dichloroethane	ND		50.0	40.9		ug/L		82	61 - 144	0	30
1,2-Dichloroethane	ND		50.0	42.4		ug/L		85	60 - 141	1	30
1,1-Dichloroethene	ND		50.0	33.9		ug/L		68	54 - 147	19	30
1,2-Dichloropropane	ND		50.0	42.1		ug/L		84	66 - 137	2	30
1,3-Dichloropropane	ND		50.0	43.4		ug/L		87	66 - 133	1	30
2,2-Dichloropropane	ND		50.0	43.2		ug/L		86	42 - 144	6	31
1,1-Dichloropropene	ND		50.0	40.1		ug/L		80	65 - 136	0	30
Ethylbenzene	ND		50.0	34.5		ug/L		69	58 - 131	11	30
Ethyl methacrylate	ND		50.0	44.3		ug/L		89	64 - 130	3	30
Hexachlorobutadiene	ND		50.0	30.3		ug/L		61	31 - 149	28	36
2-Hexanone	ND		200	183		ug/L		92	65 - 140	7	30
Isopropy benzene	ND		50.0	32.5		ug/L		65	56 - 133	14	30
Methylene bromide	ND		50.0	45.3		ug/L		91	63 - 138	1	30
Methylene Chloride	ND		50.0	44.1		ug/L		88	60 - 146	2	32
4-Methyl-2-pentanone (MIBK)	ND		200	198		ug/L		99	63 - 146	5	30
Methyl tert-butyl ether	ND		50.0	47.5		ug/L		95	59 - 137	7	30
m-Xylene & p-Xylene	ND		50.0	33.2		ug/L		66	57 - 130	15	30
Naphthalene	ND		50.0	51.2		ug/L		102	25 - 150	2	30
n-Butylbenzene	ND		50.0	29.3		ug/L		59	41 - 142	21	31
N-Propylbenzene	ND		50.0	31.5		ug/L		63	51 - 138	15	30
o-Chlorotoluene	ND		50.0	31.6		ug/L		63	53 - 134	17	30
o-Xylene	ND		50.0	34.7		ug/L		69	61 - 130	11	30
p-Chlorotoluene	ND		50.0	31.6		ug/L		63	54 - 133	15	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231426-3 MSD
Matrix: Water
Analysis Batch: 607992

Client Sample ID: P54-ROX-010623
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	29.8		ug/L		60	48 - 139	20	30
sec-Butylbenzene	ND		50.0	29.8		ug/L		60	50 - 138	19	30
Styrene	ND		50.0	35.2		ug/L		70	58 - 131	11	30
tert-Butylbenzene	ND		50.0	35.3		ug/L		71	54 - 146	14	30
1,1,1,2-Tetrachloroethane	ND		50.0	38.7		ug/L		77	59 - 137	4	30
1,1,2,2-Tetrachloroethane	ND		50.0	43.3		ug/L		87	66 - 135	2	30
Tetrachloroethene	ND		50.0	35.6		ug/L		71	52 - 133	8	30
Toluene	ND		50.0	36.4		ug/L		73	65 - 130	5	30
trans-1,2-Dichloroethene	ND		50.0	38.7		ug/L		77	61 - 143	0	30
trans-1,3-Dichloropropene	ND		50.0	40.6		ug/L		81	53 - 133	2	30
1,2,3-Trichlorobenzene	ND		50.0	41.7		ug/L		83	43 - 145	10	30
1,2,4-Trichlorobenzene	ND		50.0	37.8		ug/L		76	39 - 148	12	30
1,1,1-Trichloroethane	ND		50.0	39.5		ug/L		79	57 - 142	1	30
1,1,2-Trichloroethane	ND		50.0	42.7		ug/L		85	66 - 131	1	30
Trichloroethene	ND		50.0	40.1		ug/L		80	64 - 136	2	30
Trichlorofluoromethane	ND		50.0	45.6		ug/L		91	54 - 150	8	30
1,2,3-Trichloropropane	ND		50.0	43.5		ug/L		87	65 - 133	5	30
1,2,4-Trimethy benzene	ND		50.0	31.7		ug/L		63	50 - 139	15	30
1,3,5-Trimethy benzene	ND		50.0	31.1		ug/L		62	52 - 135	16	30
Vinyl acetate	ND		100	119		ug/L		119	26 - 150	14	33
Vinyl chloride	ND		50.0	44.5		ug/L		89	46 - 150	7	30
Xylenes, Total	ND		100	68.0		ug/L		68	59 - 130	13	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*98*		*72 - 119*
Dibromofluoromethane	*100*		*75 - 126*
Toluene-d8 (Surr)	*95*		*64 - 132*

Lab Sample ID: MB 400-608295/4
Matrix: Water
Analysis Batch: 608295

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			01/13/23 09:48	1
Acrolein	ND		20	3.3	ug/L			01/13/23 09:48	1
Acrylonitrile	ND		10	2.8	ug/L			01/13/23 09:48	1
Benzene	ND		1.0	0.13	ug/L			01/13/23 09:48	1
Bromobenzene	ND		1.0	0.54	ug/L			01/13/23 09:48	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/13/23 09:48	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/13/23 09:48	1
Bromoform	ND		5.0	0.25	ug/L			01/13/23 09:48	1
Bromomethane	ND		1.0	0.98	ug/L			01/13/23 09:48	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/13/23 09:48	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/13/23 09:48	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/13/23 09:48	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/13/23 09:48	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/13/23 09:48	1
Chloroethane	ND		1.0	0.76	ug/L			01/13/23 09:48	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-608295/4
Matrix: Water
Analysis Batch: 608295

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			01/13/23 09:48	1
Chloroform	ND		1.0	1.0	ug/L			01/13/23 09:48	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/13/23 09:48	1
Chloromethane	ND		1.0	0.32	ug/L			01/13/23 09:48	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/13/23 09:48	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/13/23 09:48	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/13/23 09:48	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/13/23 09:48	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/13/23 09:48	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/13/23 09:48	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/13/23 09:48	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/13/23 09:48	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 09:48	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 09:48	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 09:48	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 09:48	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/13/23 09:48	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/13/23 09:48	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/13/23 09:48	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/13/23 09:48	1
2-Hexanone	ND		25	1.4	ug/L			01/13/23 09:48	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/13/23 09:48	1
Methylene bromide	ND		5.0	0.22	ug/L			01/13/23 09:48	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/13/23 09:48	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/13/23 09:48	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/13/23 09:48	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/13/23 09:48	1
Naphthalene	ND		5.0	3.0	ug/L			01/13/23 09:48	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/13/23 09:48	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/13/23 09:48	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/13/23 09:48	1
o-Xylene	ND		5.0	0.60	ug/L			01/13/23 09:48	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/13/23 09:48	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/13/23 09:48	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			01/13/23 09:48	1
Styrene	ND		1.0	1.0	ug/L			01/13/23 09:48	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/13/23 09:48	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/13/23 09:48	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/13/23 09:48	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/13/23 09:48	1
Toluene	ND		1.0	0.41	ug/L			01/13/23 09:48	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 09:48	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/13/23 09:48	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/13/23 09:48	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/13/23 09:48	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/13/23 09:48	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/13/23 09:48	1
Trichloroethene	ND		1.0	0.15	ug/L			01/13/23 09:48	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/13/23 09:48	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-608295/4
Matrix: Water
Analysis Batch: 608295

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/13/23 09:48	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/13/23 09:48	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/13/23 09:48	1
Vinyl acetate	ND		25	0.93	ug/L			01/13/23 09:48	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/13/23 09:48	1
Xylenes, Total	ND		10	1.6	ug/L			01/13/23 09:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*72 - 119*		*01/13/23 09:48*	*1*
Dibromofluoromethane	*108*		*75 - 126*		*01/13/23 09:48*	*1*
Toluene-d8 (Surr)	*95*		*64 - 132*		*01/13/23 09:48*	*1*

Lab Sample ID: LCS 400-608295/1002
Matrix: Water
Analysis Batch: 608295

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	200	239		ug/L		120	43 - 160
Acrolein	500	643		ug/L		129	38 - 160
Acrylonitrile	500	567		ug/L		113	64 - 142
Benzene	50.0	50.8		ug/L		102	70 - 130
Bromobenzene	50.0	50.5		ug/L		101	70 - 132
Bromochloromethane	50.0	52.5		ug/L		105	70 - 130
Bromodichloromethane	50.0	48.4		ug/L		97	67 - 133
Bromoform	50.0	49.7		ug/L		99	57 - 140
Bromomethane	50.0	41.6		ug/L		83	10 - 160
2-Butanone (MEK)	200	224		ug/L		112	61 - 145
Carbon disulfide	50.0	49.1		ug/L		98	61 - 137
Carbon tetrachloride	50.0	51.3		ug/L		103	61 - 137
Chlorobenzene	50.0	50.0		ug/L		100	70 - 130
Dibromochloromethane	50.0	47.6		ug/L		95	67 - 135
Chloroethane	50.0	54.3		ug/L		109	55 - 141
2-Chloroethyl vinyl ether	50.0	44.2		ug/L		88	10 - 160
Chloroform	50.0	50.4		ug/L		101	69 - 130
1-Chlorohexane	50.0	52.8		ug/L		106	69 - 130
Chloromethane	50.0	41.1		ug/L		82	58 - 137
cis-1,2-Dichloroethene	50.0	51.1		ug/L		102	68 - 130
cis-1,3-Dichloropropene	50.0	48.6		ug/L		97	69 - 132
1,2-Dichlorobenzene	50.0	50.1		ug/L		100	67 - 130
1,3-Dichlorobenzene	50.0	51.5		ug/L		103	70 - 130
1,4-Dichlorobenzene	50.0	50.7		ug/L		101	70 - 130
Dichlorodifluoromethane	50.0	36.4		ug/L		73	41 - 146
1,1-Dichloroethane	50.0	51.7		ug/L		103	70 - 130
1,2-Dichloroethane	50.0	48.8		ug/L		98	69 - 130
1,1-Dichloroethene	50.0	53.3		ug/L		107	63 - 134
1,2-Dichloropropane	50.0	50.6		ug/L		101	70 - 130
1,3-Dichloropropane	50.0	48.8		ug/L		98	70 - 130
2,2-Dichloropropane	50.0	48.6		ug/L		97	52 - 135

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-608295/1002
Matrix: Water
Analysis Batch: 608295

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloropropene	50.0	52.5		ug/L		105	70 - 130
Ethylbenzene	50.0	50.5		ug/L		101	70 - 130
Ethyl methacrylate	50.0	47.4		ug/L		95	68 - 130
Hexachlorobutadiene	50.0	53.0		ug/L		106	53 - 140
2-Hexanone	200	217		ug/L		108	65 - 137
Isopropy benzene	50.0	50.4		ug/L		101	70 - 130
Methylene bromide	50.0	50.7		ug/L		101	70 - 130
Methylene Chloride	50.0	53.1		ug/L		106	66 - 135
4-Methyl-2-pentanone (MIBK)	200	217		ug/L		108	69 - 138
Methyl tert-butyl ether	50.0	45.4		ug/L		91	66 - 130
m-Xylene & p-Xylene	50.0	49.2		ug/L		98	70 - 130
Naphthalene	50.0	49.6		ug/L		99	47 - 149
n-Butylbenzene	50.0	52.3		ug/L		105	67 - 130
N-Propylbenzene	50.0	54.5		ug/L		109	70 - 130
o-Chlorotoluene	50.0	51.6		ug/L		103	70 - 130
o-Xylene	50.0	48.2		ug/L		96	70 - 130
p-Chlorotoluene	50.0	50.8		ug/L		102	70 - 130
p-Isopropyltoluene	50.0	52.8		ug/L		106	65 - 130
sec-Butylbenzene	50.0	53.3		ug/L		107	66 - 130
Styrene	50.0	47.3		ug/L		95	70 - 130
tert-Butylbenzene	50.0	51.3		ug/L		103	64 - 139
1,1,1,2-Tetrachloroethane	50.0	48.5		ug/L		97	67 - 131
1,1,2,2-Tetrachloroethane	50.0	51.3		ug/L		103	70 - 131
Tetrachloroethene	50.0	51.2		ug/L		102	65 - 130
Toluene	50.0	48.8		ug/L		98	70 - 130
trans-1,2-Dichloroethene	50.0	52.5		ug/L		105	70 - 130
trans-1,3-Dichloropropene	50.0	47.3		ug/L		95	63 - 130
1,2,3-Trichlorobenzene	50.0	50.5		ug/L		101	60 - 138
1,2,4-Trichlorobenzene	50.0	51.2		ug/L		102	60 - 140
1,1,1-Trichloroethane	50.0	50.4		ug/L		101	68 - 130
1,1,2-Trichloroethane	50.0	48.5		ug/L		97	70 - 130
Trichloroethene	50.0	53.4		ug/L		107	70 - 130
Trichlorofluoromethane	50.0	57.1		ug/L		114	65 - 138
1,2,3-Trichloropropane	50.0	52.0		ug/L		104	70 - 130
1,2,4-Trimethy benzene	50.0	50.2		ug/L		100	70 - 130
1,3,5-Trimethy benzene	50.0	51.2		ug/L		102	69 - 130
Vinyl acetate	100	107		ug/L		107	26 - 160
Vinyl chloride	50.0	54.9		ug/L		110	59 - 136
Xylenes, Total	100	97.4		ug/L		97	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*96*		*72 - 119*
Dibromofluoromethane	*103*		*75 - 126*
Toluene-d8 (Surr)	*98*		*64 - 132*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231426-10 MS
Matrix: Water
Analysis Batch: 608295

Client Sample ID: P114R-ROX-010623
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	ND		200	189		ug/L		94	43 - 150
Acrolein	ND		500	582		ug/L		116	38 - 150
Acrylonitrile	ND		500	484		ug/L		97	62 - 149
Benzene	ND		50.0	47.3		ug/L		95	56 - 142
Bromobenzene	ND		50.0	46.7		ug/L		93	59 - 136
Bromochloromethane	ND		50.0	50.1		ug/L		100	64 - 140
Bromodichloromethane	ND		50.0	45.8		ug/L		92	59 - 143
Bromoform	ND		50.0	46.3		ug/L		93	50 - 140
Bromomethane	ND		50.0	38.7		ug/L		77	10 - 150
2-Butanone (MEK)	ND		200	188		ug/L		94	55 - 150
Carbon disulfide	ND		50.0	45.5		ug/L		91	48 - 150
Carbon tetrachloride	ND		50.0	46.8		ug/L		94	55 - 145
Chlorobenzene	ND		50.0	46.4		ug/L		93	64 - 130
Dibromochloromethane	ND		50.0	46.1		ug/L		92	56 - 143
Chloroethane	ND		50.0	52.2		ug/L		104	50 - 150
2-Chloroethyl vinyl ether	ND	F1	50.0	6.22		ug/L		12	10 - 150
Chloroform	ND		50.0	47.1		ug/L		94	60 - 141
1-Chlorohexane	ND		50.0	47.1		ug/L		94	56 - 136
Chloromethane	ND		50.0	38.3		ug/L		77	49 - 148
cis-1,2-Dichloroethene	ND		50.0	47.3		ug/L		95	59 - 143
cis-1,3-Dichloropropene	ND		50.0	47.4		ug/L		95	57 - 140
1,2-Dichlorobenzene	ND		50.0	45.9		ug/L		92	52 - 137
1,3-Dichlorobenzene	ND		50.0	47.0		ug/L		94	54 - 135
1,4-Dichlorobenzene	ND		50.0	45.8		ug/L		92	53 - 135
Dichlorodifluoromethane	ND		50.0	34.7		ug/L		69	16 - 150
1,1-Dichloroethane	ND		50.0	48.6		ug/L		97	61 - 144
1,2-Dichloroethane	ND		50.0	47.1		ug/L		94	60 - 141
1,1-Dichloroethene	ND		50.0	47.9		ug/L		96	54 - 147
1,2-Dichloropropane	ND		50.0	49.3		ug/L		99	66 - 137
1,3-Dichloropropane	ND		50.0	46.1		ug/L		92	66 - 133
2,2-Dichloropropane	ND		50.0	45.3		ug/L		91	42 - 144
1,1-Dichloropropene	ND		50.0	47.8		ug/L		96	65 - 136
Ethylbenzene	ND		50.0	45.6		ug/L		91	58 - 131
Ethyl methacrylate	ND		50.0	45.1		ug/L		90	64 - 130
Hexachlorobutadiene	ND		50.0	42.8		ug/L		86	31 - 149
2-Hexanone	ND		200	182		ug/L		91	65 - 140
Isopropy benzene	ND		50.0	45.4		ug/L		91	56 - 133
Methylene bromide	ND		50.0	48.8		ug/L		98	63 - 138
Methylene Chloride	ND		50.0	48.9		ug/L		98	60 - 146
4-Methyl-2-pentanone (MIBK)	ND		200	191		ug/L		96	63 - 146
Methyl tert-butyl ether	1.4		50.0	46.5		ug/L		90	59 - 137
m-Xylene & p-Xylene	ND		50.0	44.4		ug/L		89	57 - 130
Naphthalene	ND		50.0	45.5		ug/L		91	25 - 150
n-Butylbenzene	ND		50.0	44.2		ug/L		88	41 - 142
N-Propylbenzene	ND		50.0	47.3		ug/L		95	51 - 138
o-Chlorotoluene	ND		50.0	45.4		ug/L		91	53 - 134
o-Xylene	ND		50.0	44.4		ug/L		89	61 - 130
p-Chlorotoluene	ND		50.0	44.8		ug/L		90	54 - 133

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231426-10 MS
Matrix: Water
Analysis Batch: 608295

Client Sample ID: P114R-ROX-010623
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
p-Isopropyltoluene	ND		50.0	45.7		ug/L		91	48 - 139
sec-Butylbenzene	ND		50.0	46.2		ug/L		92	50 - 138
Styrene	ND		50.0	43.9		ug/L		88	58 - 131
tert-Butylbenzene	ND		50.0	45.3		ug/L		91	54 - 146
1,1,1,2-Tetrachloroethane	ND		50.0	46.2		ug/L		92	59 - 137
1,1,2,2-Tetrachloroethane	ND		50.0	47.4		ug/L		95	66 - 135
Tetrachloroethene	ND		50.0	45.2		ug/L		90	52 - 133
Toluene	ND		50.0	45.3		ug/L		91	65 - 130
trans-1,2-Dichloroethene	ND		50.0	47.5		ug/L		95	61 - 143
trans-1,3-Dichloropropene	ND		50.0	45.5		ug/L		91	53 - 133
1,2,3-Trichlorobenzene	ND		50.0	47.2		ug/L		94	43 - 145
1,2,4-Trichlorobenzene	ND		50.0	47.1		ug/L		94	39 - 148
1,1,1-Trichloroethane	ND		50.0	46.5		ug/L		93	57 - 142
1,1,2-Trichloroethane	ND		50.0	45.8		ug/L		92	66 - 131
Trichloroethene	ND		50.0	48.4		ug/L		97	64 - 136
Trichlorofluoromethane	ND		50.0	54.2		ug/L		108	54 - 150
1,2,3-Trichloropropane	ND		50.0	45.9		ug/L		92	65 - 133
1,2,4-Trimethy benzene	ND		50.0	44.8		ug/L		90	50 - 139
1,3,5-Trimethy benzene	ND		50.0	44.8		ug/L		90	52 - 135
Vinyl acetate	ND		100	107		ug/L		107	26 - 150
Vinyl chloride	ND		50.0	51.8		ug/L		104	46 - 150
Xylenes, Total	ND		100	88.8		ug/L		89	59 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*97*		*72 - 119*
Dibromofluoromethane	*103*		*75 - 126*
Toluene-d8 (Surr)	*97*		*64 - 132*

Lab Sample ID: 400-231426-10 MSD
Matrix: Water
Analysis Batch: 608295

Client Sample ID: P114R-ROX-010623
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	187		ug/L		93	43 - 150	1	30
Acrolein	ND		500	575		ug/L		115	38 - 150	1	31
Acrylonitrile	ND		500	478		ug/L		96	62 - 149	1	30
Benzene	ND		50.0	48.0		ug/L		96	56 - 142	2	30
Bromobenzene	ND		50.0	48.1		ug/L		96	59 - 136	3	30
Bromochloromethane	ND		50.0	50.7		ug/L		101	64 - 140	1	30
Bromodichloromethane	ND		50.0	47.2		ug/L		94	59 - 143	3	30
Bromoform	ND		50.0	46.9		ug/L		94	50 - 140	1	30
Bromomethane	ND		50.0	39.8		ug/L		80	10 - 150	3	50
2-Butanone (MEK)	ND		200	189		ug/L		95	55 - 150	0	30
Carbon disulfide	ND		50.0	45.7		ug/L		91	48 - 150	1	30
Carbon tetrachloride	ND		50.0	48.2		ug/L		96	55 - 145	3	30
Chlorobenzene	ND		50.0	47.9		ug/L		96	64 - 130	3	30
Dibromochloromethane	ND		50.0	46.2		ug/L		92	56 - 143	0	30
Chloroethane	ND		50.0	51.8		ug/L		104	50 - 150	1	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231426-10 MSD
Matrix: Water
Analysis Batch: 608295

Client Sample ID: P114R-ROX-010623
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-Chloroethyl vinyl ether	ND	F1	50.0	ND	F1	ug/L		0	10 - 150	NC	50
Chloroform	ND		50.0	48.0		ug/L		96	60 - 141	2	30
1-Chlorohexane	ND		50.0	49.8		ug/L		100	56 - 136	6	30
Chloromethane	ND		50.0	38.8		ug/L		78	49 - 148	1	31
cis-1,2-Dichloroethene	ND		50.0	48.1		ug/L		96	59 - 143	2	30
cis-1,3-Dichloropropene	ND		50.0	48.4		ug/L		97	57 - 140	2	30
1,2-Dichlorobenzene	ND		50.0	48.9		ug/L		98	52 - 137	6	30
1,3-Dichlorobenzene	ND		50.0	48.6		ug/L		97	54 - 135	3	30
1,4-Dichlorobenzene	ND		50.0	47.8		ug/L		96	53 - 135	4	30
Dichlorodifluoromethane	ND		50.0	34.3		ug/L		69	16 - 150	1	31
1,1-Dichloroethane	ND		50.0	49.1		ug/L		98	61 - 144	1	30
1,2-Dichloroethane	ND		50.0	47.2		ug/L		94	60 - 141	0	30
1,1-Dichloroethene	ND		50.0	48.1		ug/L		96	54 - 147	0	30
1,2-Dichloropropane	ND		50.0	49.4		ug/L		99	66 - 137	0	30
1,3-Dichloropropane	ND		50.0	47.5		ug/L		95	66 - 133	3	30
2,2-Dichloropropane	ND		50.0	45.7		ug/L		91	42 - 144	1	31
1,1-Dichloropropene	ND		50.0	48.5		ug/L		97	65 - 136	2	30
Ethylbenzene	ND		50.0	47.2		ug/L		94	58 - 131	3	30
Ethyl methacrylate	ND		50.0	45.9		ug/L		92	64 - 130	2	30
Hexachlorobutadiene	ND		50.0	49.8		ug/L		100	31 - 149	15	36
2-Hexanone	ND		200	183		ug/L		92	65 - 140	1	30
Isopropy benzene	ND		50.0	47.8		ug/L		96	56 - 133	5	30
Methylene bromide	ND		50.0	49.6		ug/L		99	63 - 138	1	30
Methylene Chloride	ND		50.0	49.2		ug/L		98	60 - 146	1	32
4-Methyl-2-pentanone (MIBK)	ND		200	192		ug/L		96	63 - 146	0	30
Methyl tert-butyl ether	1.4		50.0	47.5		ug/L		92	59 - 137	2	30
m-Xylene & p-Xylene	ND		50.0	46.5		ug/L		93	57 - 130	5	30
Naphthalene	ND		50.0	46.7		ug/L		93	25 - 150	3	30
n-Butylbenzene	ND		50.0	48.2		ug/L		96	41 - 142	9	31
N-Propylbenzene	ND		50.0	49.8		ug/L		100	51 - 138	5	30
o-Chlorotoluene	ND		50.0	47.5		ug/L		95	53 - 134	4	30
o-Xylene	ND		50.0	46.6		ug/L		93	61 - 130	5	30
p-Chlorotoluene	ND		50.0	47.1		ug/L		94	54 - 133	5	30
p-Isopropyltoluene	ND		50.0	49.3		ug/L		99	48 - 139	8	30
sec-Butylbenzene	ND		50.0	49.2		ug/L		98	50 - 138	6	30
Styrene	ND		50.0	46.1		ug/L		92	58 - 131	5	30
tert-Butylbenzene	ND		50.0	46.9		ug/L		94	54 - 146	3	30
1,1,1,2-Tetrachloroethane	ND		50.0	47.6		ug/L		95	59 - 137	3	30
1,1,2,2-Tetrachloroethane	ND		50.0	47.6		ug/L		95	66 - 135	0	30
Tetrachloroethene	ND		50.0	46.8		ug/L		94	52 - 133	3	30
Toluene	ND		50.0	46.4		ug/L		93	65 - 130	2	30
trans-1,2-Dichloroethene	ND		50.0	48.1		ug/L		96	61 - 143	1	30
trans-1,3-Dichloropropene	ND		50.0	46.3		ug/L		93	53 - 133	2	30
1,2,3-Trichlorobenzene	ND		50.0	50.1		ug/L		100	43 - 145	6	30
1,2,4-Trichlorobenzene	ND		50.0	50.7		ug/L		101	39 - 148	7	30
1,1,1-Trichloroethane	ND		50.0	46.8		ug/L		94	57 - 142	1	30
1,1,2-Trichloroethane	ND		50.0	46.2		ug/L		92	66 - 131	1	30
Trichloroethene	ND		50.0	49.6		ug/L		99	64 - 136	2	30
Trichlorofluoromethane	ND		50.0	53.2		ug/L		106	54 - 150	2	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231426-10 MSD
Matrix: Water
Analysis Batch: 608295

Client Sample ID: P114R-ROX-010623
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,3-Trichloropropane	ND		50.0	45.5		ug/L		91	65 - 133	1	30
1,2,4-Trimethy benzene	ND		50.0	47.9		ug/L		96	50 - 139	7	30
1,3,5-Trimethy benzene	ND		50.0	47.5		ug/L		95	52 - 135	6	30
Vinyl acetate	ND		100	106		ug/L		106	26 - 150	2	33
Vinyl chloride	ND		50.0	51.6		ug/L		103	46 - 150	0	30
Xylenes, Total	ND		100	93.1		ug/L		93	59 - 130	5	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*99*		*72 - 119*
Dibromofluoromethane	*102*		*75 - 126*
Toluene-d8 (Surr)	*98*		*64 - 132*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-607999/1-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 607999

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.8	ug/L		01/11/23 08:49	01/12/23 14:11	1
Benzenethiol	ND		10	1.7	ug/L		01/11/23 08:49	01/12/23 14:11	1
Benzoic acid	ND		30	7.3	ug/L		01/11/23 08:49	01/12/23 14:11	1
Benzyl alcohol	ND		10	2.0	ug/L		01/11/23 08:49	01/12/23 14:11	1
Bis(2-chloroethoxy)methane	ND		10	0.16	ug/L		01/11/23 08:49	01/12/23 14:11	1
Bis(2-chloroethyl)ether	ND		10	2.7	ug/L		01/11/23 08:49	01/12/23 14:11	1
bis (2-chloroisopropyl) ether	ND		10	0.16	ug/L		01/11/23 08:49	01/12/23 14:11	1
Bis(2-ethylhexyl) phthalate	ND		10	5.0	ug/L		01/11/23 08:49	01/12/23 14:11	1
4-Bromophenyl phenyl ether	ND		10	0.20	ug/L		01/11/23 08:49	01/12/23 14:11	1
Butyl benzyl phthalate	ND		10	0.19	ug/L		01/11/23 08:49	01/12/23 14:11	1
4-Chloroaniline	ND		10	3.4	ug/L		01/11/23 08:49	01/12/23 14:11	1
4-Chloro-3-methylphenol	ND		10	3.8	ug/L		01/11/23 08:49	01/12/23 14:11	1
2-Chloronaphthalene	ND		10	0.14	ug/L		01/11/23 08:49	01/12/23 14:11	1
2-Chlorophenol	ND		10	2.2	ug/L		01/11/23 08:49	01/12/23 14:11	1
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		01/11/23 08:49	01/12/23 14:11	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/11/23 08:49	01/12/23 14:11	1
Dibenzofuran	ND		10	0.17	ug/L		01/11/23 08:49	01/12/23 14:11	1
3,3'-Dichlorobenzidine	ND		10	2.6	ug/L		01/11/23 08:49	01/12/23 14:11	1
2,4-Dichlorophenol	ND		10	3.0	ug/L		01/11/23 08:49	01/12/23 14:11	1
Diethyl phthalate	ND		10	0.24	ug/L		01/11/23 08:49	01/12/23 14:11	1
2,4-Dimethylphenol	ND		10	3.5	ug/L		01/11/23 08:49	01/12/23 14:11	1
Dimethyl phthalate	ND		10	0.17	ug/L		01/11/23 08:49	01/12/23 14:11	1
Di-n-butyl phthalate	ND		10	2.7	ug/L		01/11/23 08:49	01/12/23 14:11	1
4,6-Dinitro-ortho-cresol	ND		10	1.6	ug/L		01/11/23 08:49	01/12/23 14:11	1
2,4-Dinitrophenol	ND		30	3.4	ug/L		01/11/23 08:49	01/12/23 14:11	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		01/11/23 08:49	01/12/23 14:11	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		01/11/23 08:49	01/12/23 14:11	1
Di-n-octyl phthalate	ND		10	0.17	ug/L		01/11/23 08:49	01/12/23 14:11	1
1,4-Dioxane	ND		10	1.0	ug/L		01/11/23 08:49	01/12/23 14:11	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-607999/1-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 607999

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/11/23 08:49	01/12/23 14:11	1
Hexachlorobenzene	ND		10	0.17	ug/L		01/11/23 08:49	01/12/23 14:11	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		01/11/23 08:49	01/12/23 14:11	1
Hexachloroethane	ND		10	4.2	ug/L		01/11/23 08:49	01/12/23 14:11	1
Indene	ND		10	1.0	ug/L		01/11/23 08:49	01/12/23 14:11	1
Isophorone	ND		10	0.14	ug/L		01/11/23 08:49	01/12/23 14:11	1
2-Methylphenol	ND		10	1.8	ug/L		01/11/23 08:49	01/12/23 14:11	1
3 & 4 Methylphenol	ND		20	0.39	ug/L		01/11/23 08:49	01/12/23 14:11	1
2-Nitroaniline	ND		10	2.2	ug/L		01/11/23 08:49	01/12/23 14:11	1
3-Nitroaniline	ND		10	1.8	ug/L		01/11/23 08:49	01/12/23 14:11	1
4-Nitroaniline	ND		10	1.5	ug/L		01/11/23 08:49	01/12/23 14:11	1
Nitrobenzene	ND		10	0.13	ug/L		01/11/23 08:49	01/12/23 14:11	1
2-Nitrophenol	ND		10	5.2	ug/L		01/11/23 08:49	01/12/23 14:11	1
4-Nitrophenol	ND		10	2.1	ug/L		01/11/23 08:49	01/12/23 14:11	1
N-Nitrosodimethylamine	ND		10	3.5	ug/L		01/11/23 08:49	01/12/23 14:11	1
N-Nitrosodi-n-propylamine	ND		10	3.3	ug/L		01/11/23 08:49	01/12/23 14:11	1
N-Nitrosodiphenylamine	ND		10	0.18	ug/L		01/11/23 08:49	01/12/23 14:11	1
Pentachlorophenol	ND		20	1.4	ug/L		01/11/23 08:49	01/12/23 14:11	1
Phenol	ND		10	2.6	ug/L		01/11/23 08:49	01/12/23 14:11	1
Pyridine	ND		10	3.2	ug/L		01/11/23 08:49	01/12/23 14:11	1
Quinoline	ND		10	4.5	ug/L		01/11/23 08:49	01/12/23 14:11	1
2,4,5-Trichlorophenol	ND		10	3.7	ug/L		01/11/23 08:49	01/12/23 14:11	1
2,4,6-Trichlorophenol	ND		10	3.5	ug/L		01/11/23 08:49	01/12/23 14:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*114*		*46 - 124*	*01/11/23 08:49*	*01/12/23 14:11*	*1*
2-Fluorophenol	*14*		*13 - 113*	*01/11/23 08:49*	*01/12/23 14:11*	*1*
Nitrobenzene-d5	*102*		*36 - 126*	*01/11/23 08:49*	*01/12/23 14:11*	*1*
Phenol-d5	*59*		*17 - 127*	*01/11/23 08:49*	*01/12/23 14:11*	*1*
Terphenyl-d14	*121*		*44 - 149*	*01/11/23 08:49*	*01/12/23 14:11*	*1*
2,4,6-Tribromophenol	*72*		*26 - 150*	*01/11/23 08:49*	*01/12/23 14:11*	*1*

Lab Sample ID: LCS 400-607999/2-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 607999

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aniline	120	135		ug/L		113	21 - 120
Benzoic acid	554	396		ug/L		72	10 - 144
Benzyl alcohol	120	119		ug/L		99	28 - 120
Bis(2-chloroethoxy)methane	120	121		ug/L		100	47 - 120
Bis(2-chloroethyl)ether	120	123		ug/L		102	44 - 120
bis (2-chloroisopropyl) ether	120	132		ug/L		110	33 - 121
Bis(2-ethylhexyl) phthalate	120	139		ug/L		116	52 - 147
4-Bromophenyl phenyl ether	120	115		ug/L		96	54 - 122
Butyl benzyl phthalate	120	135		ug/L		112	54 - 133
4-Chloroaniline	120	149	*+	ug/L		124	26 - 120
4-Chloro-3-methylphenol	120	125		ug/L		105	48 - 131

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-607999/2-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 607999

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Chloronaphthalene	120	128		ug/L		107	52 - 121
2-Chlorophenol	120	79.4		ug/L		66	40 - 120
4-Chlorophenyl phenyl ether	120	130		ug/L		108	56 - 125
Dibenz[a,h]acridine	120	66.8		ug/L		56	31 - 150
Dibenzofuran	120	132		ug/L		110	56 - 122
3,3'-Dichlorobenzidine	160	257	*+	ug/L		161	36 - 132
2,4-Dichlorophenol	120	107		ug/L		89	49 - 120
Diethyl phthalate	120	132		ug/L		110	50 - 137
2,4-Dimethylphenol	120	121		ug/L		101	48 - 120
Dimethyl phthalate	120	130		ug/L		108	57 - 124
Di-n-butyl phthalate	120	141		ug/L		117	58 - 126
4,6-Dinitro-ortho-cresol	240	264		ug/L		110	23 - 148
2,4-Dinitrophenol	240	286		ug/L		119	10 - 150
2,4-Dinitrotoluene	120	137		ug/L		114	54 - 142
2,6-Dinitrotoluene	120	132		ug/L		110	55 - 130
Di-n-octyl phthalate	120	144		ug/L		120	57 - 138
1,4-Dioxane	120	43.3		ug/L		36	31 - 120
1,2-Diphenylhydrazine (as Azobenzene)	120	130		ug/L		108	45 - 124
Hexachlorobenzene	120	119		ug/L		99	52 - 129
Hexachlorocyclopentadiene	120	102		ug/L		85	10 - 134
Hexachloroethane	120	107		ug/L		89	20 - 120
Indene	120	115		ug/L		96	49 - 120
Isophorone	120	122		ug/L		102	48 - 120
2-Methylphenol	120	115		ug/L		95	46 - 124
3 & 4 Methylphenol	120	114		ug/L		95	45 - 120
2-Nitroaniline	120	145		ug/L		121	51 - 145
3-Nitroaniline	120	159	*+	ug/L		132	37 - 127
4-Nitroaniline	120	149		ug/L		124	36 - 137
Nitrobenzene	120	122		ug/L		101	45 - 120
2-Nitrophenol	120	106		ug/L		88	40 - 124
4-Nitrophenol	240	256		ug/L		107	23 - 146
N-Nitrosodimethylamine	120	125		ug/L		104	29 - 137
N-Nitrosodi-n-propylamine	120	126		ug/L		105	45 - 120
N-Nitrosodiphenylamine	119	119		ug/L		100	54 - 120
Pentachlorophenol	240	227		ug/L		95	31 - 130
Phenol	120	95.0		ug/L		79	11 - 120
Pyridine	240	196		ug/L		82	16 - 120
Quinoline	120	69.7		ug/L		58	49 - 130
2,4,5-Trichlorophenol	120	121		ug/L		101	51 - 136
2,4,6-Trichlorophenol	120	117		ug/L		98	50 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*105*		*46 - 124*
2-Fluorophenol	*41*		*13 - 113*
Nitrobenzene-d5	*112*		*36 - 126*
Phenol-d5	*82*		*17 - 127*
Terphenyl-d14	*111*		*44 - 149*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-607999/2-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 607999

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*100*		*26 - 150*

Lab Sample ID: LCS 400-607999/4-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 607999

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzenethiol			120	6.47	J *-	ug/L		5	10 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*116*		*46 - 124*
2-Fluorophenol	*33*		*13 - 113*
Nitrobenzene-d5	*104*		*36 - 126*
Phenol-d5	*79*		*17 - 127*
Terphenyl-d14	*126*		*44 - 149*
2,4,6-Tribromophenol	*56*		*26 - 150*

Lab Sample ID: LCSD 400-607999/3-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 607999

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aniline			120	132		ug/L		110	21 - 120	2	30
Benzoic acid			554	498		ug/L		90	10 - 144	23	30
Benzyl alcohol			120	124		ug/L		103	28 - 120	4	30
Bis(2-chloroethoxy)methane			120	126		ug/L		105	47 - 120	5	30
Bis(2-chloroethyl)ether			120	132		ug/L		110	44 - 120	8	30
bis (2-chloroisopropyl) ether			120	138		ug/L		115	33 - 121	5	30
Bis(2-ethylhexyl) phthalate			120	151		ug/L		126	52 - 147	8	30
4-Bromophenyl phenyl ether			120	120		ug/L		100	54 - 122	4	30
Butyl benzyl phthalate			120	146		ug/L		122	54 - 133	8	30
4-Chloroaniline			120	152	*+	ug/L		127	26 - 120	2	30
4-Chloro-3-methylphenol			120	133		ug/L		111	48 - 131	6	30
2-Chloronaphthalene			120	133		ug/L		111	52 - 121	4	30
2-Chlorophenol			120	83.2		ug/L		69	40 - 120	5	30
4-Chlorophenyl phenyl ether			120	136		ug/L		114	56 - 125	5	30
Dibenz[a,h]acridine			120	72.7		ug/L		61	31 - 150	9	30
Dibenzofuran			120	140		ug/L		117	56 - 122	5	30
3,3'-Dichlorobenzidine			160	259	*+	ug/L		162	36 - 132	1	30
2,4-Dichlorophenol			120	115		ug/L		96	49 - 120	7	30
Diethyl phthalate			120	140		ug/L		117	50 - 137	6	30
2,4-Dimethylphenol			120	126		ug/L		105	48 - 120	4	30
Dimethyl phthalate			120	137		ug/L		114	57 - 124	5	30
Di-n-butyl phthalate			120	148		ug/L		123	58 - 126	5	30
4,6-Dinitro-ortho-cresol			240	274		ug/L		114	23 - 148	4	30
2,4-Dinitrophenol			240	290		ug/L		121	10 - 150	1	30
2,4-Dinitrotoluene			120	144		ug/L		120	54 - 142	5	30
2,6-Dinitrotoluene			120	138		ug/L		115	55 - 130	5	30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-607999/3-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 607999

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Di-n-octyl phthalate			120	156		ug/L		130	57 - 138	8	30
1,4-Dioxane			120	81.7	*1	ug/L		68	31 - 120	61	30
1,2-Diphenylhydrazine (as Azobenzene)			120	138		ug/L		115	45 - 124	6	30
Hexachlorobenzene			120	125		ug/L		104	52 - 129	4	30
Hexachlorocyclopentadiene			120	102		ug/L		85	10 - 134	0	30
Hexachloroethane			120	105		ug/L		87	20 - 120	2	30
Indene			120	120		ug/L		100	49 - 120	5	30
Isophorone			120	127		ug/L		106	48 - 120	4	30
2-Methylphenol			120	124		ug/L		103	46 - 124	8	30
3 & 4 Methylphenol			120	120		ug/L		100	45 - 120	6	30
2-Nitroaniline			120	150		ug/L		125	51 - 145	3	30
3-Nitroaniline			120	162	*+	ug/L		135	37 - 127	2	30
4-Nitroaniline			120	151		ug/L		126	36 - 137	1	30
Nitrobenzene			120	126		ug/L		105	45 - 120	3	30
2-Nitrophenol			120	118		ug/L		98	40 - 124	11	30
4-Nitrophenol			240	263		ug/L		110	23 - 146	3	30
N-Nitrosodimethylamine			120	129		ug/L		108	29 - 137	3	30
N-Nitrosodi-n-propylamine			120	130		ug/L		109	45 - 120	3	30
N-Nitrosodiphenylamine			119	124		ug/L		104	54 - 120	4	30
Pentachlorophenol			240	239		ug/L		99	31 - 130	5	30
Phenol			120	99.4		ug/L		83	11 - 120	5	30
Pyridine			240	209		ug/L		87	16 - 120	7	30
Quinoline			120	72.6		ug/L		61	49 - 130	4	30
2,4,5-Trichlorophenol			120	124		ug/L		104	51 - 136	3	30
2,4,6-Trichlorophenol			120	126		ug/L		105	50 - 127	7	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*111*		*46 - 124*
2-Fluorophenol	*36*		*13 - 113*
Nitrobenzene-d5	*117*		*36 - 126*
Phenol-d5	*86*		*17 - 127*
Terphenyl-d14	*122*		*44 - 149*
2,4,6-Tribromophenol	*107*		*26 - 150*

Lab Sample ID: LCSD 400-607999/5-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 607999

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzenethiol			120	6.95	J *-	ug/L		6	10 - 120	7	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*116*		*46 - 124*
2-Fluorophenol	*47*		*13 - 113*
Nitrobenzene-d5	*104*		*36 - 126*
Phenol-d5	*85*		*17 - 127*
Terphenyl-d14	*123*		*44 - 149*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-607999/5-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 607999

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol	64		26 - 150

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 400-607999/1-A
Matrix: Water
Analysis Batch: 608245

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 607999

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.032	ug/L		01/11/23 08:49	01/12/23 16:09	1
Acenaphthylene	ND		0.20	0.045	ug/L		01/11/23 08:49	01/12/23 16:09	1
Anthracene	ND		0.20	0.032	ug/L		01/11/23 08:49	01/12/23 16:09	1
Benzo[a]anthracene	ND		0.20	0.046	ug/L		01/11/23 08:49	01/12/23 16:09	1
Benzo[g,h,i]perylene	ND		0.20	0.13	ug/L		01/11/23 08:49	01/12/23 16:09	1
Chrysene	ND		0.20	0.074	ug/L		01/11/23 08:49	01/12/23 16:09	1
Dibenz(a,h)anthracene	ND		0.20	0.050	ug/L		01/11/23 08:49	01/12/23 16:09	1
Fluoranthene	ND		0.20	0.068	ug/L		01/11/23 08:49	01/12/23 16:09	1
Fluorene	ND		0.20	0.11	ug/L		01/11/23 08:49	01/12/23 16:09	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.043	ug/L		01/11/23 08:49	01/12/23 16:09	1
1-Methylnaphthalene	ND		0.20	0.074	ug/L		01/11/23 08:49	01/12/23 16:09	1
2-Methylnaphthalene	ND		0.20	0.060	ug/L		01/11/23 08:49	01/12/23 16:09	1
Phenanthrene	ND		0.20	0.036	ug/L		01/11/23 08:49	01/12/23 16:09	1
Pyrene	ND		0.20	0.040	ug/L		01/11/23 08:49	01/12/23 16:09	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	110		15 - 122	01/11/23 08:49	01/12/23 16:09	1
Nitrobenzene-d5	74		19 - 130	01/11/23 08:49	01/12/23 16:09	1
Terphenyl-d14	118		33 - 138	01/11/23 08:49	01/12/23 16:09	1

Lab Sample ID: MB 400-607999/1-A
Matrix: Water
Analysis Batch: 614729

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 607999

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		0.20	0.042	ug/L		01/11/23 08:49	03/03/23 10:23	1
Benzo[b]fluoranthene	0.0629	J	0.20	0.034	ug/L		01/11/23 08:49	03/03/23 10:23	1
Benzo[k]fluoranthene	ND		0.20	0.10	ug/L		01/11/23 08:49	03/03/23 10:23	1

Lab Sample ID: LCS 400-607999/2-A
Matrix: Water
Analysis Batch: 608245

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 607999

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	120	123		ug/L		103	41 - 120
Acenaphthylene	120	125		ug/L		104	44 - 120
Anthracene	120	129		ug/L		107	49 - 120
Benzo[a]anthracene	120	127		ug/L		106	61 - 135
Benzo[a]pyrene	120	109		ug/L		91	52 - 120
Benzo[b]fluoranthene	120	105		ug/L		87	53 - 134

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCS 400-607999/2-A
Matrix: Water
Analysis Batch: 608245

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 607999

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzo[g,h,i]perylene			120	115		ug/L		96	47 - 133		
Benzo[k]fluoranthene			120	112		ug/L		93	57 - 134		
Chrysene			120	120		ug/L		100	55 - 122		
Dibenz(a,h)anthracene			120	116		ug/L		96	48 - 146		
Fluoranthene			120	122		ug/L		101	54 - 128		
Fluorene			120	121		ug/L		101	45 - 125		
Indeno[1,2,3-cd]pyrene			120	120		ug/L		100	43 - 142		
1-Methylnaphthalene			120	107		ug/L		89	41 - 120		
2-Methylnaphthalene			120	103		ug/L		86	32 - 124		
Phenanthrene			120	124		ug/L		103	48 - 120		
Pyrene			120	125		ug/L		104	48 - 132		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*102*		*15 - 122*
Nitrobenzene-d5	*70*		*19 - 130*
Terphenyl-d14	*104*		*33 - 138*

Lab Sample ID: LCSD 400-607999/3-A
Matrix: Water
Analysis Batch: 608245

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 607999

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene			120	124		ug/L		104	41 - 120	1	56
Acenaphthylene			120	126		ug/L		105	44 - 120	1	56
Anthracene			120	127		ug/L		106	49 - 120	1	51
Benzo[a]anthracene			120	124		ug/L		103	61 - 135	2	49
Benzo[a]pyrene			120	109		ug/L		91	52 - 120	1	50
Benzo[b]fluoranthene			120	107		ug/L		89	53 - 134	2	54
Benzo[g,h,i]perylene			120	118		ug/L		98	47 - 133	2	50
Benzo[k]fluoranthene			120	110		ug/L		92	57 - 134	1	52
Chrysene			120	117		ug/L		98	55 - 122	3	50
Dibenz(a,h)anthracene			120	119		ug/L		99	48 - 146	3	50
Fluoranthene			120	122		ug/L		102	54 - 128	0	52
Fluorene			120	123		ug/L		103	45 - 125	2	56
Indeno[1,2,3-cd]pyrene			120	125		ug/L		104	43 - 142	4	51
1-Methylnaphthalene			120	103		ug/L		86	41 - 120	3	55
2-Methylnaphthalene			120	99.8		ug/L		83	32 - 124	3	57
Phenanthrene			120	124		ug/L		103	48 - 120	0	56
Pyrene			120	121		ug/L		101	48 - 132	4	52

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*104*		*15 - 122*
Nitrobenzene-d5	*66*		*19 - 130*
Terphenyl-d14	*99*		*33 - 138*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: MB 400-611779/1-A
Matrix: Water
Analysis Batch: 612404

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 611779

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	0.0406	J	0.20	0.034	ug/L		02/09/23 13:26	02/14/23 14:41	1
Fluoranthene	ND		0.20	0.068	ug/L		02/09/23 13:26	02/14/23 14:41	1
Pyrene	ND		0.20	0.040	ug/L		02/09/23 13:26	02/14/23 14:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*110*		*15 - 122*	*02/09/23 13:26*	*02/14/23 14:41*	*1*
Nitrobenzene-d5	*95*		*19 - 130*	*02/09/23 13:26*	*02/14/23 14:41*	*1*
Terphenyl-d14	*98*		*33 - 138*	*02/09/23 13:26*	*02/14/23 14:41*	*1*

Lab Sample ID: LCS 400-611779/2-A
Matrix: Water
Analysis Batch: 611978

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 611779

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzo[b]fluoranthene			120	115		ug/L		96	53 - 134		
Fluoranthene			120	136		ug/L		114	54 - 128		
Pyrene			120	121		ug/L		101	48 - 132		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*93*		*15 - 122*
Nitrobenzene-d5	*118*		*19 - 130*
Terphenyl-d14	*104*		*33 - 138*

Lab Sample ID: LCSD 400-611779/3-A
Matrix: Water
Analysis Batch: 611978

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 611779

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzo[b]fluoranthene			120	125		ug/L		104	53 - 134	9	54
Fluoranthene			120	139		ug/L		116	54 - 128	2	52
Pyrene			120	122		ug/L		101	48 - 132	1	52

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*90*		*15 - 122*
Nitrobenzene-d5	*115*		*19 - 130*
Terphenyl-d14	*100*		*33 - 138*

Method: 8011 - EDB and DBCP in Water by Microextraction

Lab Sample ID: MB 400-608768/1-A
Matrix: Water
Analysis Batch: 608815

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 608768

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND		0.030	0.017	ug/L		01/17/23 10:00	01/17/23 13:00	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/17/23 10:00	01/17/23 13:00	1

Method: 8011 - EDB and DBCP in Water by Microextraction (Continued)

Lab Sample ID: MB 400-608768/1-A
Matrix: Water
Analysis Batch: 608815

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 608768

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	105		51 - 149	01/17/23 10:00	01/17/23 13:00	1

Lab Sample ID: LCS 400-608768/2-A
Matrix: Water
Analysis Batch: 608815

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 608768

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,2-D bromo-3-Chloropropane			0.101	0.165	*+	ug/L		164	60 - 140		
1,2-D bromoethane			0.101	0.0951		ug/L		94	60 - 140		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	114		51 - 149

Lab Sample ID: LCSD 400-608768/3-A
Matrix: Water
Analysis Batch: 608815

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 608768

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-D bromo-3-Chloropropane			0.101	0.163	*+	ug/L		163	60 - 140	1	30
1,2-D bromoethane			0.101	0.0949		ug/L		94	60 - 140	0	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	110		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 (_____)

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
Melissa Remiger	25278	DATE: 1/6/2023
PO #	**GSAP Project ID**	PAGE: 1 of 2
60697537 – 3.1.2	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 60697537 – 3.1.2

ADDRESS: 100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA

EDF DELIVERABLE TO (Name, Company, Office Location): Melissa Remiger - please see special instructions
PHONE NO.: 314-802-1207
E-MAIL: melissa.remiger@aecom.com
AECOM Other ID:

PROJECT CONTACT (Hardcopy or PDF Report to): Melissa Remiger, Mary Massa, Brett Howell

SAMPLER NAME(S) (Print): Mary Massa, Joe Mayer

LAB USE ONLY

TELEPHONE: 314-429-0100
FAX: 314-429-0462
Bill To Contact E-MAIL: 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 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) _EDD_____

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :

Email reports to: melissa.remiger@aecom.com; mary.massa@aecom.com; brett.howell@aecom.com

Please include "J" values on Reports.
Please provide sample receipt upon login.
Please send EQuiS EDDs to EDDSubmissions@aecomshell.com; loredana.filimon@aecom.com

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS
60697537 – 3.1.2

FIELD NOTES:
0.0 °C IR4

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	8011 EDB + DBCP	SVOC 8270	PAH 8270LL
	TB-ROX-010623-8260-A	1/6/2023	0000	Water	2					2	X			
	TB-ROX-010623-8011-A	1/6/2023	0000	Water	2					2		X		
	P54-ROX-010623	1/6/2023	0940	Water	6			2		8	X	X	X	X
	MW26-ROX-010623	1/6/2023	1045	Water	6			2		8	X	X	X	X
	MW27-ROX-010623	1/6/2023	1315	Water	6			2		8	X	X	X	X

400-231426 COC

MM 1/6/23

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
MARY MASSA	FEDEX: 5564 3935 7439	1/6/2023	1600
		1-7-23	940

Version: 13Oct22

CUSTODY SEALS: 2026355, 2026354

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3/24/2023 (Rev. 4)

LAB (LOCATION)

☑ ACCUTEST (_____)

☐ CALSCIENCE (_____)

☑ TESTAMERICA (TestAmerica Pensacola; 3355 McLemore Dr. Pensacola, FL 32514 (850-474-1001))

☐ Other (_____)

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
Melissa Remiger	25278	DATE: 1/6/2023
PO #	**GSAP Project ID**	PAGE: 2 of 2
60697537 – 3.1.2	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 60697537 – 3.1.2

ADDRESS: 100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA

EDF DELIVERABLE TO (Name, Company, Office Location): Melissa Remiger - please see special instructions

PHONE NO.: 314-802-1207

E-MAIL: melissa.remiger@aecom.com

AECOM Other ID:

PROJECT CONTACT (Hardcopy or PDF Report to): Melissa Remiger, Mary Massa, Brett Howell

SAMPLER NAME(S) (Print): T. Jones, S. Beadle

LAB USE ONLY

TELEPHONE: 314-429-0100 FAX: 314-429-0462 Bill To Contact E-MAIL: 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 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) __EDD_____

TEMPERATURE ON RECEIPT C° | Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :

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"Please include "J" values on Reports.
"Please provide sample receipt upon login.
"Please send EQuiS EDDs to EDDSubmissions@aecomshell.com; luredana.fitimon@aecom.com

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS
60697537 – 3.1.2

FIELD NOTES:

TEMPERATURE ON RECEIPT C°: 0.0°C IR4

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	8011 EDB + DBCP	SVOC 8270	PAH 8270LL
	TB-ROX-010623-8260-B	1/6/2023	0000	Water	2					2	X			
	TB-ROX-010623-8011-B	1/6/2023	0000	Water	2					2		X		
	MW12-ROX-010623	1/6/2023	0945	Water	6			2		8	X	X	X	X
	ROST4PZG-ROX-010623	1/6/2023	1055	Water	6			2		8	X	X	X	X
	P114R-ROX-010623	1/6/2023	1315	Water	6			2		8	X	X	X	X

Sam Beadle 1/6/23

	Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
	Sam Beadle	FEDEX: See page 1	1/6/2023	1600
			1-7-23	940

CUSTODY SEALS: See page 1

Version: 13Oct22

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3/24/2023 (Rev. 4)

Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 400-231426-1

Login Number: 231426
List Number: 1
Creator: Whitley, Adrian

List Source: Eurofins 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.	N/A	
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	0.0°C IR9
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.	N/A	
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. Job ID: 400-231426-1
Project/Site: ROXANA QUARTERLY GW

Laboratory: Eurofins Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	06-30-23
ANAB	ISO/IEC 17025	L2471	02-22-26
Arkansas DEQ	State	88-0689	09-01-23
California	State	2510	06-30-23
Florida	NELAP	E81010	06-30-23
Georgia	State	E81010(FL)	06-30-23
Illinois	NELAP	200041	10-09-23
Kansas	NELAP	E-10253	10-31-23
Kentucky (UST)	State	53	06-30-23
Louisiana (All)	NELAP	30976	06-30-23
Louisiana (DW)	State	LA017	12-31-23
Maryland	State	233	09-30-23
Michigan	State	9912	06-30-23
North Carolina (WW/SW)	State	314	12-31-23
Oklahoma	NELAP	9810	08-31-23
Pennsylvania	NELAP	68-00467	01-31-24
South Carolina	State	96026	06-30-23
Tennessee	State	TN02907	06-30-23
Texas	NELAP	T104704286	09-30-23
US Fish & Wildlife	US Federal Programs	A22340	06-30-23
USDA	US Federal Programs	P330-21-00056	05-17-24
USDA	US Federal Programs	FLGNV23001	01-08-26
Virginia	NELAP	460166	06-14-23
West Virginia DEP	State	136	03-05-23

1.0 VALIDATION OF VOC DATA – SDG 400-231505-1-R2

This section describes the validation for seven investigative groundwater samples, two field duplicates, two equipment blanks, and two trip blanks which were prepared by USEPA SW-846 Method 5030B and analyzed for Volatile Organic Compounds (VOCs) by USEPA SW-846 Method 8260B. The samples were analyzed by TestAmerica Laboratories, Inc. of Pensacola, Florida, and submitted as part of the sample delivery group (SDG) 400-231505-1-R2-1. The samples included as part of this validation are listed below.

Sample Identification	Sample Identification
TB-ROX-010923-8260-A	TB-ROX-010923-8260-B
MW4-ROX-010923-EB	MW13-ROX-010923-EB
MW4-ROX-010923	MW13-ROX-010923
MW25-ROX-010923	MW14-ROX-010923
MW8-ROX-010923	MW14-ROX-010923-DUP
MW8-ROX-010923-DUP	P56-ROX-010923
MW7-ROX-010923	

Evaluation of the analytical data followed procedures outlined in the USEPA Contract Laboratory National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2020).

Criteria evaluated included the following method performance criteria:

- Data package completeness
- Laboratory case narrative/cooler receipt form
- Holding times and sample preservation
- GC/MS instrument performance
- Initial calibration (ICAL)
- Calibration verification (CV)
- Blank samples
- Laboratory control spike (LCS) samples
- Surrogate spike recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) samples
- Internal standards
- Field duplicate results
- Target compound identification and quantification
- Overall data assessment

1.1 Data Package Completeness

The data package was reviewed to make certain it contained the data contractually required in the deliverable. This included checking the data package for the results against the analyses requested on the chain-of custody, along with requested QC documentation for the respective methods.

1.2 Laboratory Case Narrative/Cooler Receipt Form

The laboratory case narrative indicated that LCS recovery for several VOCs were outside evaluation criteria. VOCs in field duplicate pair MW8-ROX-010923/MW8-ROX-010923-DUP were qualified due to sample dilution and historical detections. These issues are addressed further in the appropriate sections of this data review. The report was revised on March 3, 2023, to include a missing initial calibration verification. The laboratory report was revised on March 24, 2023, to include missing CCVIS data.

Additionally, the laboratory case narrative indicated three (2-chloroethyl vinyl ether, acrolein, and acrylonitrile) of 70 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 issues.

1.3 Holding Times and Sample Preservation

Review of the sample collection and analysis dates involved comparing the sample chain-of-custody, the summary forms and the raw data forms for accuracy, consistency, and holding time compliance. The samples were in good condition and were received and maintained at temperatures of ≤ 6ºC and samples were preserved at a pH < 2.0. Additionally, samples were analyzed within the analysis holding time (14 days).

1.4 GC/MS Instrument Performance

GC/MS instrument performance checks were performed to ensure mass resolution, identification, and instrument sensitivity. Criteria for evaluation of instrument performance included possible transcription/calculation errors, adherence to instrument tuning frequency requirements, mass assignments, and ion abundance criteria. Instrument performance check samples were evaluated against criteria established in USEPA SW-846 Method 8260B.

Based on the summary forms, the ion abundance criteria were within evaluation criteria for all masses. No qualifications to the data were required based on instrument performance criteria.

1.5 Initial Calibration (ICAL)

An ICAL was established to assess whether the instrument was capable of producing acceptable qualitative and quantitative data for volatiles analyses. Validated samples included in SDG 400-231505-1-R2 were analyzed using instrument Brutus. The ICAL for instrument Brutus was established on 12/16/2022. At least five standard concentrations were used to establish the ICAL curves as required by Method 8260B.

The ICAL response factors (RFs) were reviewed and were greater than 0.10 for chloromethane, 0.10 for 1,1-dichloroethane, 0.10 for bromoform, 0.30 for chlorobenzene, and 0.30 for 1,1,2,2-tetrachloroethane. No qualification of data was required.

Review of the initial calibration summary forms indicated %RSDs were $\leq$ 30% for calibration check compounds (CCCs) [1,1-dichloroethene, toluene, chloroform, ethylbenzene, 1,2-dichloropropane, and vinyl chloride], and $\leq$ 15% for non-CCCs.

An initial calibration verification (ICV) was analyzed following the initial calibration. Percent difference (%D) values from comparing ICV RF to the average ICAL RFs were within the laboratory quality control criteria.

A recalculation of the %RSDs and RFs for a compound associated with each internal standard was performed from the raw data and no errors in calculation were noted.

1.6 Calibration Verification (CV)

Review of CV summary forms indicated RFs met the evaluation criteria of greater than 0.10 for chloromethane, 0.10 for 1,1-dichloroethane, 0.10 for bromoform, 0.30 for chlorobenzene, and 0.30 for 1,1,2,2-tetrachloroethane. No qualification of data was required.

Percent differences or percent drifts (%D) met the evaluation criteria of ≤ 20% for target analytes.

Recalculations of the RFs and %Ds for select target compounds were completed for each CV, and no errors in calculation were noted.

1.7 Blank Samples

The purpose of the method blank samples is to evaluate the existence and magnitude of contamination problems emanating from laboratory activities. Method blank samples were analyzed with each analytical batch as required by Method 8260B. The purpose of trip blank samples is to evaluate the existence and magnitude of contamination emanating from field and transport activities. The purpose of equipment blank samples is to evaluate the existence and magnitude of contamination emanating from field activities. Target compounds were reported as non-detect in all blanks. No qualification of data was required.

1.8 Laboratory Control Spike (LCS) Samples

Laboratory control samples were analyzed with each analytical batch to assess the accuracy of the analytical process. LCS data were within evaluation

Approximately 10% of spiking compound recoveries for the LCS were recalculated and verified using the LCS summary forms, and no calculation or transcription errors were noted.

1.9 Surrogate Spike Recoveries

Surrogate compounds were used to evaluate the overall laboratory sample preparation efficiency on a per sample basis. All surrogate recoveries were within the method acceptance criteria for the validated samples. Approximately 10% of the samples were recalculated, and no calculation or transcription errors were noted.

1.10 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

MS/MSD samples are analyzed to assess potential matrix effects. The validated samples in this SDG were not chosen for an MS/MSD analysis.

1.11 Internal Standards

Internal standard (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during each analytical run. IS areas must be within -50% to +100%, and the IS

retention times must be within 30 seconds of the IS continuing calibration retention time. IS areas and retention times for the validated samples in this SDG were within evaluation criteria.

The summary forms versus the raw data were verified and no transcription errors were noted.

1.12 Field Duplicate Results

Field duplicates are used to assess the field precision. Samples MW8-ROX-010923/ MW8-ROX-010923-DUP and MW14-ROX-010923// MW14-ROX-010923-DUP were the field duplicate samples in this data set.
Field duplicate results were within the evaluation criteria of $\leq$ 25% relative percent difference (RPD) when both results are $\geq$ 5x the quantitation limit (QL) or $\leq$ 2x the QL when one or both results is <5x QL.

1.13 Target Compound Identification and Quantification

For validation of the compound identification, method specified compound identification criteria were reviewed in approximately 10% of the samples. No anomalies were noted with the identification of the target compounds in the samples.

For the validation of compound quantitation, approximately 10% of the detected target compounds were recalculated from the raw data, and no calculation errors were noted. Additionally, the reporting limits (RLs) were verified to determine if RLs were adjusted for dilutions.

1.14 Overall Data Assessment

Based on the criteria outlined, it is recommended that the results for these analyses are accepted for their intended use. Acceptable levels of accuracy and precision based on the method performance criteria were achieved for this SDG.

1.0 VALIDATION OF SVOC DATA – SDG 400-231505-1-R2

This section describes the validation for seven investigative groundwater samples, two field duplicates, and two equipment blanks which were prepared by USEPA SW-846 Method 3520C and analyzed for Semi-Volatile Organic Compounds (SVOCs) by USEPA SW-846 Method 8270D and for Polycyclic Aromatic Hydrocarbons (PAHs) by USEPA SW-846 Method 8270D Low Level. Samples were analyzed by TestAmerica Laboratories, Inc. of Pensacola, Florida, and submitted as part of sample delivery group (SDG) 400-231505-1-R2. Samples included as part of this validation are listed below:

Sample Identification	Sample Identification
MW4-ROX-010923-EB	MW13-ROX-010923-EB
MW4-ROX-010923	MW13-ROX-010923
MW25-ROX-010923	MW14-ROX-010923
MW8-ROX-010923	MW14-ROX-010923-DUP
MW8-ROX-010923-DUP	P56-ROX-010923
MW7-ROX-010923	

Evaluation of the analytical data followed procedures outlined in the USEPA Contract Laboratory National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2020).

Criteria evaluated included the following method performance criteria:

- Data package completeness
- Laboratory case narrative/cooler receipt form
- Holding times and sample preservation
- GC/MS instrument performance
- Initial calibration (ICAL)
- Calibration verification (CV)
- Blank samples
- Laboratory control sample (LCS)
- Surrogate spike recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) samples
- Internal standard areas
- Field duplicate results
- Target compound identification and quantitation
- Overall data assessment

1.1 Data Package Completeness

The data package was reviewed to make certain it contained the data contractually required in the deliverable. This included checking the data package for the results against the analyses requested on the chain-of custody, along with requested QC documentation for the respective methods.

1.2 Laboratory Case Narrative/Cooler Receipt Form

The laboratory case narrative indicated that benzo[b]fluoranthene in sample MW4-ROX-010923-EB was re-extracted outside of the extraction time criteria. Benzo[b]fluoranthene was detected in equipment blank MW4-ROX-010923-EB and pyrene was detected in the method blank (MB 400-608610/1-A). Several SVOC LCS/LCSD recoveries or RPDs were outside evaluation criteria. Several SVOC surrogate recoveries were outside criteria in several investigative and quality control samples. The continuing calibration verifications for several compounds were outside evaluation criteria. These issues are addressed further in the appropriate sections of this data review. The laboratory report was revised on March 3, 2023, to include the correct the false positive benzo(a)pyrene result for MW14-ROX-010923-DUP (400-231505-14). Additionally, the report was revised to include a missing initial calibration verification. The laboratory report was revised on March 24, 2023, to include missing CCVIS data.

No issues were indicated in the cooler receipt form.

1.3 Holding Times and Sample Preservation

Review of the sample collection and analysis dates involved comparing the chain-of-custody, the summary forms and the raw data forms for accuracy, consistency, and holding time compliance. Benzo[b]fluoranthene in equipment blank MW4-ROX-010923-EB was re-extracted 24 days outside of extraction time criteria (7 days) and then re-analyzed for confirmation. The re-extracted and re-analyzed sample was out of hold time and the results were non-detect; both sets of data are reported. With regard to initial MW4-ROX-010923-EB PAH data, the laboratory issued a Corrective Action Report (CAR) stating that through confirmation analyses, many previous detections were not confirmed and were therefore deemed laboratory contamination. Equipment blanks are quality control samples and do not require qualification. No qualification of data was required.

1.4 GC/MS Instrument Performance

GC/MS instrument performance checks were performed to ensure mass resolution, identification, and instrument sensitivity. Criteria for evaluation of instrument performance included possible transcription/calculation errors, adherence to instrument tuning frequency requirements, mass assignments, and ion abundance criteria. Instrument performance check samples were evaluated against the laboratory tuning criteria established in Method 8270D.

Based on the raw data, the ion abundance criteria were within evaluation criteria for all masses, therefore; no qualification of the data was required. The raw data forms were checked against the summary forms and no calculation or transcription errors were noted.

1.5 Initial Calibration (ICAL)

An ICAL was established to assess whether the instrument was capable of producing acceptable qualitative and quantitative data for semi-volatile analysis. SVOC samples as part of SDG 400-231505-1-R2 were analyzed using instruments Pigpen and Snoopy. PAH samples were analyzed using instrument Lucy. The ICALs for instruments Pigpen and Snoopy were established on 11/16/2022 and, 01/03/2023 respectively. ICALs for instruments Lucy, Snoopy and Pigpen were established prior to sample analysis and using at least five concentration standards to establish the initial calibration curve as required by Method 8270D and 8270D Low Level. An average response factor (RF) was determined for each target compound, and the RFs were reviewed and verified as greater than the minimum RF as specified in Method 8270D.

Review of the initial calibration summary forms for SVOCs and PAHs indicated target compounds had percent relative standard deviations (%RSDs) ≤ the maximum RSD of ≤ 20% specified in Method 8270D. Linear regression or quadratic equations were applied to data for select target analytes and the resulting correlation coefficients (r) were greater than 0.990.

An initial calibration verification (ICV) was analyzed following the initial calibration. Percent difference (%D) values from comparing ICV RF to the average ICAL RFs were within the Method 8270D quality control criteria.

Recalculations of the RFs and %RSD for one compound per internal standard were performed, and no errors in calculation were noted.

1.6 Calibration Verification (CV)

Review of continuing calibration summary forms for SVOCs and PAHs indicated all RFs met the evaluation criteria of greater than the method specified minimum RF for all target compounds. In addition, %Ds met the evaluation criteria of ≤ 20% specified in Method 8270D with the exceptions summarized in the table below.

CV (Date/Time)	Compound	%D
400-608937/3 01/18/2023 13:21	Aniline	**28.2**
	Nitrobenzene	**22.0**
	2-Nitrophenol	**25.8**
	2,4-Dichlorophenol	**20.6**
	4-Chloro-3-methylphenol	**25.3**
	Hexachlorocyclopentadiene	**20.5**
	2-Chloronaphthalene	**20.9**
	2,6-Dinitrotoluene	**21.0**
	2,4-Dinitrotoluene	**21.9**
	Dibenzofuran	**23.4**
	1,2-Diphenylhydrazine (as Azobenzene)	**21.0**
	Butyl benzyl phthalate	**21.1**
	Bis(2-ethylhexyl) phthalate	**21.8**
	Di-n-octyl phthalate	**23.9**
400-608937/601/18/2023 14:28	Benzenethiol	**40.4**
Associated samples: MW4-ROX-010923, MW25-ROX-010923, MW8-ROX-010923-DUP, MW7-ROX-010923, MW13-ROX-010923, MW14-ROX-010923, MW14-ROX-010923-DUP, P56-ROX-010923		

Recalculations of the RFs and %RSD for one compound per internal standard were performed, and no errors in calculation were noted.

1.7 Blank Samples

The purpose of method blank samples is to evaluate the existence and magnitude of contamination problems emanating from laboratory activities. Method blank samples were prepared with each preparation batch as required by Method 8270D. Target compounds in the method blank were reported as non-detect with the exceptions summarized in the table below. An equipment blank sample was analyzed to evaluate contamination problems emanating from

field activities. Target compounds were reported as non-detect with the exceptions summarized in the table below.

Blank ID	Parameter	Analyte	Concentration/ Amount
MW4-ROX-010923-EB	PAHs	Benzo[b]fluoranthene	0.31 ug/L
MB 400-608610/1-A	PAHs	Pyrene	0.0856 ug/L

Qualifications due to blank contamination are included in following table. 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
MW25-ROX-010923	PAHs	Pyrene	--	**U**
MW7-ROX-010923	PAHs	Pyrene	--	**U**
MW14-ROX-010923-DUP	PAHs	Pyrene	0.33	**U**
P56-ROX-010923	PAHs	Pyrene	--	**U**

1.8 Laboratory Control Spike (LCS) Samples

Laboratory control samples (LCS) and laboratory control sample duplicates (LCSD) were analyzed with each analytical batch to assess the accuracy of the analytical process. LCS/LCSD recoveries and LCS/LCSD RPDs were within evaluation criteria with the exceptions summarized in the table below.

LCS/LCSD ID	Parameter	Analyte	LCS/ LCSD Recovery	RPD	LCS/LCSD /RPD Criteria
LCS 400-608610/2-A/ LCSD 400-608610/3-A	SVOC	2-Chlorophenol	82/61	**31**	40-120/30
LCS 400-608610/2-A/ LCSD 400-608610/3-A	SVOC	3,3'-Dichlorobenzidine	**139/138**	1	36-132/30
LCS 400-608610/4-A/ LCSD 400-608610/5-A	SVOC	Benzenethiol	**9/8**	11	10-120/30

Analytical data that required qualification based on LCS/LCSD data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Professional judgment was used to qualify, however not reject, data associated with benzenethiol below evaluation criteria; benzenethiol has been identified as a poor performing analyte under Method 8270. Analytical data associated with LCS/LCSD RPD alone outside evaluation criteria did not require qualification.

Sample ID	Parameter	Analyte	Qualification
MW8-ROX-010923	SVOCs	Benzenethiol	**UJ**
MW8-ROX-010923-DUP	SVOCs	Benzenethiol	**UJ**
MW7-ROX-010923	SVOCs	Benzenethiol	**UJ**

Sample ID	Parameter	Analyte	Qualification
MW13-ROX-010923	SVOCs	Benzenethiol	**UJ**
MW14-ROX-010923	SVOCs	Benzenethiol	**UJ**
MW14-ROX-010923-DUP	SVOCs	Benzenethiol	**UJ**
P56-ROX-010923	SVOCs	Benzenethiol	**UJ**
MW4-ROX-010923	SVOCs	Benzenethiol	**UJ**
MW25-ROX-010923	SVOCs	Benzenethiol	**UJ**

Approximately 10% of the laboratory control spike recoveries were recalculated, and the summary forms versus the raw data were verified. No calculation or transcription errors were noted.

1.9 Surrogate Spike Recoveries

Surrogate compounds were used to evaluate the overall laboratory sample preparation efficiency on a per-sample basis. Surrogate recoveries were within the method acceptance criteria for the validated samples with the exceptions summarized in the following table.

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
MW7-ROX-010923	SVOCs	2-Fluorophenol	**3**	13-113
MW13-ROX-010923	SVOCs	2-Fluorophenol	**9**	13-113
MW14-ROX-010923	SVOCs	2-Fluorophenol	**9**	13-113
P56-ROX-010923	SVOCs	2-Fluorophenol	**11**	13-113

Analytical data that required qualification based on surrogate data are included in the table below. Qualifications due to surrogate recoveries were not required if only one of three acid or base/neutral SVOC surrogate recoveries were outside evaluation criteria.

Approximately 10% of the sample recoveries were recalculated and no calculation or transcription errors were noted.

1.10 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

MS/MSD samples are analyzed to assess potential matrix effects. The validated samples in this SDG were not chosen for an MS/MSD analysis.

1.11 Internal Standards

Internal standard (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during each analytical run. Following Method 8270C, the IS areas for the samples and CVs must be within –50% to +100% and retention times must be within 30 seconds of the IS area and retention time of the midpoint of the ICAL or the CCV on days when the ICAL does not precede the samples.

The IS areas for the CVs and the validated samples in this SDG were within evaluation criteria. No qualification of data was required. The summary forms versus the raw data were verified and no transcription errors were noted.

1.12 Field Duplicate Results

Field duplicates are used to assess the field precision. Samples MW8-ROX-010923/ MW8-ROX-010923-DUP and MW14-ROX-010923/ MW14-ROX-010923-DUP were the field duplicate samples in this data set.

Field duplicate results were within the evaluation criteria of $\leq$ 25% relative percent difference (RPD) when both results are $\geq$ 5x the quantitation limit (QL) or $\leq$ 2x the QL when one or both results is <5x QL.

1.13 Target Compound Identification and Quantification

For validation of the compound identification, method specified compound identification criteria were reviewed in approximately 10% of the samples. No anomalies were noted with the identification of the target compounds in the samples.

For the validation of compound quantitation, 10% of the samples were recalculated from the raw data, and no calculation errors were noted. Additionally, the reporting limits (RLs) were verified to determine if RLs were adjusted for dilutions. No qualification of the data was required, and review of the data indicated the correct RLs were reported.

1.14 Overall Data Assessment

Based on the criteria outlined, it is recommended that the results for these analyses are accepted for their intended use. Acceptable levels of accuracy and precision based on the method performance criteria were achieved for this SDG.

1.0 VALIDATION OF DBCP AND EDB DATA – SDG 400-231505-1-R2

This section describes the validation for seven investigative groundwater samples, two field duplicate samples, two equipment blanks, and two trip blanks that were prepared and analyzed for 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by USEPA SW-846 Method 8011. The samples were analyzed by TestAmerica Laboratories, Inc. of Pensacola, Florida, and submitted as part of the sample delivery group (SDG) 400-231505-1-R2. The samples included as part of this validation are listed below.

Sample Identification	Sample Identification
TB-ROX-010923-8011-A	TB-ROX-010923-8011-B
MW4-ROX-010923-EB	MW13-ROX-010923-EB
MW4-ROX-010923	MW13-ROX-010923
MW25-ROX-010923	MW14-ROX-010923
MW8-ROX-010923	MW14-ROX-010923-DUP
MW8-ROX-010923-DUP	P56-ROX-010923
MW7-ROX-010923	

Evaluation of the analytical data followed procedures outlined in the USEPA Contract Laboratory National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2020).

Criteria evaluated included the following method performance criteria:

- Data package completeness
- Laboratory case narrative/cooler receipt form
- Holding times and sample preservation
- Initial calibration (ICAL)
- Calibration verification (CV)
- Blank samples
- Laboratory control spike (LCS) samples
- Surrogate spike recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) samples
- Field duplicate results
- Target compound identification and quantification
- Overall data assessment

1.1 Data Package Completeness

The data package was reviewed to make certain it contained the data contractually required in the deliverable. This included checking the data package for the results against the analyses requested on the chain-of custody, along with requested QC documentation for the respective methods.

1.2 Laboratory Case Narrative/Cooler Receipt Form

The laboratory case narrative indicated the continuing calibration verification (CCV) and LSC/LCSD recoveries for 1,2-dibromo-3-chloropropane were outside evaluation criteria, biased high. These issues are discussed further in Sections 1.5 and 1.7 of this validation report.

No issues were indicated in the cooler receipt form.

1.3 Holding Times and Sample Preservation

Review of the sample collection and analysis dates involved comparing the sample chain-of-custody, the summary forms, and the raw data forms for accuracy, consistency, and holding time compliance. The samples were received in good condition and were received and maintained at temperatures of ≤ 6ºC. In addition, the samples were analyzed within 14 days of collection. No qualifications to the data were required based on holding times and sample preservation.

1.4 Initial Calibration

An ICAL was established to assess whether the instrument was capable of producing acceptable qualitative and quantitative data for EDB/DBCP analyses. Validated samples included in SDG 400-231505-1-R2 were analyzed using instrument Toto. The ICAL for instrument Toto was established on 10/21/2021. At least five standard concentrations were used to establish the ICAL curve as required by Method 8011.

Review of the ICAL summary forms indicated percent relative standard deviations (%RSDs) were ≤ 15% for target compounds or were determined using linear regression and correlation coefficients (r^2) were greater than 0.990. A recalculation of the weighted linear regression was performed from the raw data and no errors in calculation were noted.

Review of the summary forms indicated that an initial calibration verification (ICV) was performed following the initial calibration. Review of ICV summary forms indicated percent differences (%Ds) were within the evaluation criterion of ≤ 30% for both target compounds. No qualification of data was required.

Summary forms and raw data are provided for the primary column only since all target compounds were reported as non-detect in the samples and did not require confirmation.

1.5 Calibration Verification (CV)

Review of the CV summary forms indicated that all CVs were performed before the start of sample analysis, every ten sample injections, and at the end of sample analysis. %Ds met the evaluation criteria of ≤ 15% for both target compounds with the exceptions summarized in the table below.

CV (Date/Time)	Compound	%D
400-608768/25-A/ 01/17/2023 16:20	1,2-Dibromo-3-chloropropane	**57.9**
400-608768/24-A/ 01/17/2023 20:05	1,2-Dibromo-3-chloropropane	**59.7**
400-608768/25-A/01/17/1023 22:08	1,2-Dibromo-3-chloropropane	**58.0**
400-609095/27-A /01/19/2023 18:27	1,2-Dibromo-3-chloropropane	**64.9**
400-609095/26-A/01/19/2023 22:11	1,2-Dibromo-3-chloropropane	**60.2**

1,2-Dibromo-3-Chloropropane was outside evaluation criteria, biased high in the continuing calibration verifications. Samples MW8-ROX-010923, MW8-ROX-010923-DUP, and MW7-ROX-010923 are qualified in Section 1.7 of this validation report due to an LCS/LCSD criteria exceedance. No further qualification of 1,2-dibromo-3-chloropropane is required.

Summary forms and raw data are provided for the primary column only since all target compounds were reported as non-detect in the samples and did not require confirmation.

Recalculations of the %D for one target compound was completed for the CV, and no errors in calculation were noted.

1.6 Blank Samples

The purpose of the method blank samples is to evaluate the existence and magnitude of contamination problems emanating from laboratory activities. Method blank samples were analyzed with each analytical batch as required by USEPA SW-846 Method 8011. Also, trip blanks were analyzed to evaluate the existence and magnitude of contamination problems emanating from sample shipment to the laboratory. Equipment blank samples were used to evaluate the efficiency of the decontamination of sampling equipment. Target compounds were reported as non-detect in all blanks. No qualification of data was required.

1.7 Laboratory Control Spike (LCS) Samples

Laboratory control samples were analyzed with each analytical batch to assess the accuracy of the analytical process. LCS/LCSD recoveries and LCS/LCSD RPDs were within evaluation criteria with the exceptions summarized in the table below.

LCS/LCSD ID	Parameter	Analyte	LCS/ LCSD Recovery	RPD	LCS/LCSD /RPD Criteria
LCS/LCSD 400-608768/2-A/3-A	VOCs by 8011	1,2-Dibromo-3-Chloropropane	**164/163**	1	60-140/30
LCS/LCSD 400-609095/2-A/3-A	VOCs by 8011	1,2-Dibromo-3-Chloropropane	**156/154**	1	60-140/30

Analytical data that required qualification based on LCS/LCSD data are included in the table below. 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
MW8-ROX-010923	VOCs by 8011	1,2-Dibromo-3-Chloropropane	**J**
MW8-ROX-010923-DUP	VOCs by 8011	1,2-Dibromo-3-Chloropropane	**J**
MW7-ROX-010923	VOCs by 8011	1,2-Dibromo-3-Chloropropane	**J**

Approximately 10% of spiking compound recoveries for the LCS were recalculated and verified using the LCS summary forms, and no calculation or transcription errors were noted.

1.8 Surrogate Spike Recoveries

Surrogate compounds were used to evaluate the overall laboratory sample preparation efficiency on a per sample basis. Surrogate recoveries were within the method acceptance criteria for the validated samples. No qualification of data was required.

Approximately 10% of the recoveries were recalculated and no calculation or transcription errors were noted.

1.9 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

MS/MSD samples are analyzed to assess potential matrix effects. The validated samples in this SDG were not chosen for MS/MSD analysis.

1.10 Field Duplicate Results

Field duplicates are used to assess the field precision. Samples MW8-ROX-010923/MW8-ROX-010923-DUP and MW14-ROX-010923/MW14-ROX-010923-DUP were the field duplicate samples in this data set. Target compounds were not detected in either sample of both field duplicate pairs. Field duplicate precision was deemed acceptable.

1.11 Target Compound Identification and Quantification

For validation of the compound identification, chromatograms were reviewed to verify the major peaks were identified, and the relative retention time was no greater than 0.06 minutes different from the associated CV retention times. Target compounds were not detected in any of the investigative groundwater samples in this data set.

For the validation of compound quantitation, the LCS results were recalculated from the raw data since all target compounds were non-detect, and no calculation errors were noted. Additionally, the reporting limits (RLs) were verified to determine if RLs were adjusted for dilutions when applicable.

1.12 Overall Data Assessment

Based on the criteria outlined, it is recommended that the results reported for these analyses are accepted for their intended use. Acceptable levels of accuracy and precision based on the method performance criteria were achieved for this SDG.

Roxana Groundwater Quarterly – 1st Quarter 2023 Data Review

Laboratory SDG: 400-231505-1-Rev.2

Data Reviewer: Andrei Niculau

Peer Reviewer: Cheyana Cokley

Date Reviewed: 03/08/2023

Guidance: USEPA National Functional Guidelines for Organic Superfund Methods Data Review 2020

Sample Identification	Sample Identification
TB-ROX-010923-8260-A	TB-ROX-010923-8260-B
TB-ROX-010923-8011-A	TB-ROX-010923-8011-B
MW4-ROX-010923-EB	MW13-ROX-010923-EB
MW4-ROX-010923	MW13-ROX-010923
MW25-ROX-010923	MW14-ROX-010923
MW8-ROX-010923	MW14-ROX-010923-DUP
MW8-ROX-010923-DUP	P56-ROX-010923
MW7-ROX-010923	--

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 that benzo[b]fluoranthene in equipment blank MW4-ROX-010923-EB was re-extracted outside of the extraction time criteria. Benzo[b]fluoranthene was detected in equipment blank MW4-ROX-010923-EB and pyrene was detected in the method blank. LCS/LCSD recoveries or LCS/LCSD RPDs for several VOCs by 8011 and SVOCs were outside evaluation criteria. Surrogate recoveries for SVOC 2-fluorophenol in samples MW7-ROX-010923, MW13-ROX-010923, MW14-ROX-010923 and P56-ROX-010923 were outside criteria. VOCs in field duplicate pair MW8-ROX-010923/MW8-ROX-010923-DUP were qualified due to sample dilution and historical detections. The continuing calibration verification (CCV) for 1,2-dibromo-3-chloropropane was outside evaluation criteria, biased high. These issues are addressed further in the appropriate sections of this data review. The laboratory report was revised on March 3, 2023, to correct the false positive benzo(a)pyrene result for MW14-ROX-010923-DUP. Additionally, the report was revised to include a missing initial calibration verification. The laboratory report was revised on March 24, 2023, to include missing CCVIS data.

Three of 70 (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?

No, benzo[b]fluoranthene in equipment blank MW4-ROX-010923-EB was re-extracted 24 days outside of extraction time criteria (7 days) and then re-analyzed for confirmation. The re-extracted and re-analyzed sample was out of hold time and the results were non-detect; both sets of data are reported. With regard to initial MW4-ROX-010923-EB PAH data, the laboratory issued a Corrective Action Report (CAR) stating that through confirmation analyses, many previous detections were not confirmed and were therefore deemed laboratory contamination. Equipment blanks are quality control samples and do not require qualification. No qualification of data was required.

4.0 Blank Contamination

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

Yes

Blank ID	Parameter	Analyte	Concentration /Amount
MW4-ROX-010923-EB	PAHs	Benzo[b]fluoranthene	0.31 ug/L
MB 400-608610/1-A	PAHs	Pyrene	0.0856 ug/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
MW25-ROX-010923	PAHs	Pyrene	--	**U**
MW7-ROX-010923	PAHs	Pyrene	--	**U**
MW14-ROX-010923-DUP	PAHs	Pyrene	0.33	**U**
P56-ROX-010923	PAHs	Pyrene	--	**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 400-608610/2-A/3-A	SVOC	2-Chlorophenol	82/61	**31**	40-120/30
LCS/LCSD 400-608610/2-A/3-A	SVOC	3,3'-Dichlorobenzidine	**139/138**	1	36-132/30
LCS/LCSD 400-608610/4-A/5-A	SVOC	Benzenethiol	**9/8**	11	10-120/30
LCS/LCSD 400-608768/2-A/3-A	VOCs by 8011	1,2-Dibromo-3-Chloropropane	**164/163**	1	60-140/30
LCS/LCSD 400-609095/2-A/3-A	VOCs by 8011	1,2-Dibromo-3-Chloropropane	**156/154**	1	60-140/30

Analytical data that required qualification based on LCS/LCSD data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Professional judgment was used to qualify, however not reject, data associated with benzenethiol below evaluation criteria; benzenethiol has been identified as a poor performing analyte under Method 8270. Analytical data associated with LCS/LCSD RPD alone outside evaluation criteria did not require qualification.

Sample ID	Parameter	Analyte	Qualification
MW8-ROX-010923	VOCs by 8011	1,2-Dibromo-3-Chloropropane	**J**
MW8-ROX-010923-DUP	VOCs by 8011	1,2-Dibromo-3-Chloropropane	**J**
MW7-ROX-010923	VOCs by 8011	1,2-Dibromo-3-Chloropropane	**J**
MW8-ROX-010923	SVOCs	Benzenethiol	**UJ**
MW8-ROX-010923-DUP	SVOCs	Benzenethiol	**UJ**
MW7-ROX-010923	SVOCs	Benzenethiol	**UJ**
MW13-ROX-010923	SVOCs	Benzenethiol	**UJ**
MW14-ROX-010923	SVOCs	Benzenethiol	**UJ**
MW14-ROX-010923-DUP	SVOCs	Benzenethiol	**UJ**
P56-ROX-010923	SVOCs	Benzenethiol	**UJ**
MW4-ROX-010923	SVOCs	Benzenethiol	**UJ**
MW25-ROX-010923	SVOCs	Benzenethiol	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
MW7-ROX-010923	SVOCs	2-Fluorophenol	**3**	13-113
MW13-ROX-010923	SVOCs	2-Fluorophenol	**9**	13-113
MW14-ROX-010923	SVOCs	2-Fluorophenol	**9**	13-113
P56-ROX-010923	SVOCs	2-Fluorophenol	**11**	13-113

Qualifications due to surrogate recoveries were not required if only one of three base/neutral and/or acid surrogate recoveries were outside evaluation criteria. 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
MW8-ROX-010923	MW8-ROX-010923-DUP
MW14-ROX-010923	MW14-ROX-010923-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 except for the non-detect VOCs in samples MW8-ROX-010923 and MW8-ROX-010923-DUP. These samples were diluted to bring benzene into calibration range of the instrument. VOCs were non-detect at a dilution factor of 1000X, with raised reporting limits of between 1000 and 25,000 µg/L. Due to historical detections, please see section 12.0 of the data review for additional qualifications.

12.0 Additional Qualifications

Were additional qualifications applied?

Yes, certain VOCs in samples MW8-ROX-010923 and MW8-ROX-010923-DUP were qualified as estimated non-detect due to sample dilution and historical detections. Analytes are qualified as summarized in the following table.

Sample ID	Parameter	Analyte	Qualification
MW8-ROX-010923	VOCs	All non-detects	**UJ**
MW8-ROX-010923-DUP	VOCs	All non-detects	**UJ**

1,2-Dibromo-3-chloropropane was outside evaluation criteria, biased high, in the continuing calibration verifications. Field duplicate pair MW8-ROX-010923/MW8-ROX-010923-DUP and sample MW7-ROX-010923 were previously qualified in Section 5.0 of this data review due to LCS/LCSD criteria exceedance. No further qualification of 1,2-dibromo-3-chloropropane is required.

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ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

ROXANA QUARTERLY GW

JOB NUMBER

400-231505-1

Eurofins Pensacola
3355 McLemore Drive
Pensacola FL 32514

See page two for job notes and contact information.

my EOL

Job Notes

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Authorization

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Job ID: 400-231505-1

Laboratory: Eurofins Pensacola

Narrative

Job Narrative
400-231505-1

Comment
Revised Report
Report revised to correct benzo(a)pyrene result for MW14-ROX-010923-DUP (400-231505-14). After inspection of the extracted ion chromatograms and reference spectra it was determined this result was a false positive and the data has been re-reported as non-detect. Supersedes report dated 1-23-2023.

Receipt
The samples were received on 1/10/2023 9:43 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.3°C and 1.5°C

GC/MS VOA
Method 8260B: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW8-ROX-010923 (400-231505-6), MW8-ROX-010923-DUP (400-231505-7) and MW7-ROX-010923 (400-231505-8). Elevated reporting limits (RLs) are provided.

Method 8260B: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW8-ROX-010923 (400-231505-6) and MW8-ROX-010923-DUP (400-231505-7). Elevated reporting limits (RLs) are provided.

Method 8260B: The preservative used in the sample containers provided is not compatible with one of the Method 8260 analytes requested. The following sample was received preserved with hydrochloric acid: MW13-ROX-010923 (400-231505-12). The requested target analyte list includes 2-Chloroethyl vinyl ether, an acid-labile compound that degrades in an acidic medium.

Method 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-010923-8260-A (400-231505-1), MW4-ROX-010923-EB (400-231505-3), MW4-ROX-010923 (400-231505-4), MW25-ROX-010923 (400-231505-5), MW8-ROX-010923 (400-231505-6), MW8-ROX-010923-DUP (400-231505-7), MW7-ROX-010923 (400-231505-8), TB-ROX-010923-8260-B (400-231505-9), MW13-ROX-010923-EB (400-231505-11), MW14-ROX-010923 (400-231505-13), MW14-ROX-010923-DUP (400-231505-14) and P56-ROX-010923 (400-231505-15). The requested target analyte list includes 2-Chloroethyl vinyl ether, 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 8270D: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 400-608610 and analytical batch 400-608937 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 8270D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 400-608610 and analytical batch 400-608937 recovered outside control limits for the following analyte(s): 3,3'-Dichlorobenzidine. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 400-608610 and analytical batch 400-608937 recovered outside control limits for the following analytes: 2-Chlorophenol.

Method 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: MW7-ROX-010923 (400-231505-8), MW13-ROX-010923 (400-231505-12), MW14-ROX-010923 (400-231505-13) and P56-ROX-010923 (400-231505-15). These results have been reported and qualified.

Job ID: 400-231505-1 (Continued)

Laboratory: Eurofins Pensacola (Continued)

Method 8270D: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW8-ROX-010923 (400-231505-6) and MW8-ROX-010923-DUP (400-231505-7). Elevated reporting limits (RLs) are provided.

Method 8270D_LL: The method blank for preparation batch 400-608610 and analytical batch 400-608984 contained Pyrene 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 8270D LL: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 400-611779 and analytical batch 400-611978 recovered outside control limits for the following analytes: Anthracene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8270D LL: Benzo[a]pyrene was originally reported with a positive detection for sample: MW14-ROX-010923-DUP (400-231505-14). After inspection of the extracted ion chromatograms and reference spectra it was determined this result was a false positive and the data has been re-reported as non-detect.

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

GC Semi VOA

Method 8011: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 400-608768.

Method 8011: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 400-608768 and analytical batch 400-608815 recovered outside control limits for the following analytes: 1,2-Dibromo-3-Chloropropane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8011: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 400-609095 and analytical batch 400-609205 recovered outside control limits for the following analytes: 1,2-Dibromo-3-Chloropropane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

Sample Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-231505-1	TB-ROX-010923-8260-A	Water	01/09/23 12:00	01/10/23 09:43
400-231505-2	TB-ROX-010923-8011-A	Water	01/09/23 12:00	01/10/23 09:43
400-231505-3	MW4-ROX-010923-EB	Water	01/09/23 08:20	01/10/23 09:43
400-231505-4	MW4-ROX-010923	Water	01/09/23 09:25	01/10/23 09:43
400-231505-5	MW25-ROX-010923	Water	01/09/23 10:45	01/10/23 09:43
400-231505-6	MW8-ROX-010923	Water	01/09/23 11:40	01/10/23 09:43
400-231505-7	MW8-ROX-010923-DUP	Water	01/09/23 11:40	01/10/23 09:43
400-231505-8	MW7-ROX-010923	Water	01/09/23 13:00	01/10/23 09:43
400-231505-9	TB-ROX-010923-8260-B	Water	01/09/23 12:00	01/10/23 09:43
400-231505-10	TB-ROX-010923-8011-B	Water	01/09/23 12:00	01/10/23 09:43
400-231505-11	MW13-ROX-010923-EB	Water	01/09/23 08:50	01/10/23 09:43
400-231505-12	MW13-ROX-010923	Water	01/09/23 09:50	01/10/23 09:43
400-231505-13	MW14-ROX-010923	Water	01/09/23 11:45	01/10/23 09:43
400-231505-14	MW14-ROX-010923-DUP	Water	01/09/23 11:45	01/10/23 09:43
400-231505-15	P56-ROX-010923	Water	01/09/23 13:35	01/10/23 09:43

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: TB-ROX-010923-8260-A — Lab Sample ID: 400-231505-1

No Detections.

Client Sample ID: TB-ROX-010923-8011-A — Lab Sample ID: 400-231505-2

No Detections.

Client Sample ID: MW4-ROX-010923-EB — Lab Sample ID: 400-231505-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	0.31		0.20	0.034	ug/L	1		8270D LL	Total/NA

Client Sample ID: MW4-ROX-010923 — Lab Sample ID: 400-231505-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	0.41	J	1.0	0.22	ug/L	1		8260B	Total/NA

Client Sample ID: MW25-ROX-010923 — Lab Sample ID: 400-231505-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	24		1.0	0.13	ug/L	1		8260B	Total/NA
Methyl tert-butyl ether	0.71	J	1.0	0.22	ug/L	1		8260B	Total/NA
Pyrene	0.11	J B	0.21	0.042	ug/L	1		8270D LL	Total/NA

Client Sample ID: MW8-ROX-010923 — Lab Sample ID: 400-231505-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene - DL	390000		2000	260	ug/L	2000		8260B	Total/NA
1-Methylnaphthalene	11		0.19	0.072	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	4.2		0.19	0.058	ug/L	1		8270D LL	Total/NA
Phenanthrene	0.18	J	0.19	0.035	ug/L	1		8270D LL	Total/NA
Dibenzofuran	0.42	J	9.7	0.17	ug/L	1		8270D	Total/NA
Phenol - DL	270		49	13	ug/L	5		8270D	Total/NA
1,2-D bromo-3-Chloropropane	0.028	J *+	0.029	0.017	ug/L	1		8011	Total/NA

Client Sample ID: MW8-ROX-010923-DUP — Lab Sample ID: 400-231505-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene - DL	380000		2000	260	ug/L	2000		8260B	Total/NA
1-Methylnaphthalene	9.6		0.20	0.075	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	3.7		0.20	0.061	ug/L	1		8270D LL	Total/NA
Phenanthrene	0.24		0.20	0.037	ug/L	1		8270D LL	Total/NA
Indene	1.1	J	10	1.0	ug/L	1		8270D	Total/NA
Phenol - DL	230		51	13	ug/L	5		8270D	Total/NA
1,2-D bromo-3-Chloropropane	0.028	J *+	0.030	0.017	ug/L	1		8011	Total/NA

Client Sample ID: MW7-ROX-010923 — Lab Sample ID: 400-231505-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	420000		2000	260	ug/L	2000		8260B	Total/NA
Fluoranthene	0.18	J	0.20	0.069	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene	1.1		0.20	0.075	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	1.5		0.20	0.061	ug/L	1		8270D LL	Total/NA
Phenanthrene	0.12	J	0.20	0.037	ug/L	1		8270D LL	Total/NA
Pyrene	0.15	J B	0.20	0.041	ug/L	1		8270D LL	Total/NA
Phenol	34		10	2.6	ug/L	1		8270D	Total/NA
1,2-D bromo-3-Chloropropane	0.020	J *+	0.032	0.018	ug/L	1		8011	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: TB-ROX-010923-8260-B — Lab Sample ID: 400-231505-9

No Detections.

Client Sample ID: TB-ROX-010923-8011-B — Lab Sample ID: 400-231505-10

No Detections.

Client Sample ID: MW13-ROX-010923-EB — Lab Sample ID: 400-231505-11

No Detections.

Client Sample ID: MW13-ROX-010923 — Lab Sample ID: 400-231505-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	0.74	J	1.0	0.22	ug/L	1		8260B	Total/NA

Client Sample ID: MW14-ROX-010923 — Lab Sample ID: 400-231505-13

No Detections.

Client Sample ID: MW14-ROX-010923-DUP — Lab Sample ID: 400-231505-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chrysene	0.23		0.19	0.072	ug/L	1		8270D LL	Total/NA
Fluoranthene	0.32		0.19	0.066	ug/L	1		8270D LL	Total/NA
Pyrene	0.33	B	0.19	0.039	ug/L	1		8270D LL	Total/NA

Client Sample ID: P56-ROX-010923 — Lab Sample ID: 400-231505-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	1.2		1.0	0.50	ug/L	1		8260B	Total/NA
Isopropy benzene	12		1.0	0.53	ug/L	1		8260B	Total/NA
m-Xylene & p-Xylene	15		5.0	0.63	ug/L	1		8260B	Total/NA
n-Butylbenzene	0.89	J	1.0	0.76	ug/L	1		8260B	Total/NA
N-Propylbenzene	14		1.0	0.69	ug/L	1		8260B	Total/NA
p-Isopropyltoluene	0.87	J	1.0	0.71	ug/L	1		8260B	Total/NA
sec-Butylbenzene	1.6		1.0	0.70	ug/L	1		8260B	Total/NA
Toluene	0.54	J	1.0	0.41	ug/L	1		8260B	Total/NA
1,2,4-Trimethy benzene	7.0		1.0	0.82	ug/L	1		8260B	Total/NA
1,3,5-Trimethy benzene	2.8		1.0	0.56	ug/L	1		8260B	Total/NA
Xylenes, Total	15		10	1.6	ug/L	1		8260B	Total/NA
Acenaphthene	0.84		0.19	0.031	ug/L	1		8270D LL	Total/NA
Fluorene	0.39		0.19	0.11	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene	12		0.19	0.071	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	12		0.19	0.058	ug/L	1		8270D LL	Total/NA
Phenanthrene	1.1		0.19	0.035	ug/L	1		8270D LL	Total/NA
Pyrene	0.087	J B	0.19	0.039	ug/L	1		8270D LL	Total/NA
Dibenzofuran	0.66	J	9.7	0.16	ug/L	1		8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: TB-ROX-010923-8260-A
Date Collected: 01/09/23 12:00
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-1
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/13/23 12:48	1
Acrolein	ND		20	3.3	ug/L			01/13/23 12:48	1
Acrylonitrile	ND		10	2.8	ug/L			01/13/23 12:48	1
Benzene	ND		1.0	0.13	ug/L			01/13/23 12:48	1
Bromobenzene	ND		1.0	0.54	ug/L			01/13/23 12:48	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/13/23 12:48	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/13/23 12:48	1
Bromoform	ND		5.0	0.25	ug/L			01/13/23 12:48	1
Bromomethane	ND		1.0	0.98	ug/L			01/13/23 12:48	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/13/23 12:48	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/13/23 12:48	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/13/23 12:48	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/13/23 12:48	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/13/23 12:48	1
Chloroethane	ND		1.0	0.76	ug/L			01/13/23 12:48	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/13/23 12:48	1
Chloroform	ND		1.0	1.0	ug/L			01/13/23 12:48	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/13/23 12:48	1
Chloromethane	ND		1.0	0.32	ug/L			01/13/23 12:48	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/13/23 12:48	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/13/23 12:48	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/13/23 12:48	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/13/23 12:48	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/13/23 12:48	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/13/23 12:48	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/13/23 12:48	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/13/23 12:48	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 12:48	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 12:48	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 12:48	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 12:48	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/13/23 12:48	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/13/23 12:48	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/13/23 12:48	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/13/23 12:48	1
2-Hexanone	ND		25	1.4	ug/L			01/13/23 12:48	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/13/23 12:48	1
Methylene bromide	ND		5.0	0.22	ug/L			01/13/23 12:48	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/13/23 12:48	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/13/23 12:48	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/13/23 12:48	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/13/23 12:48	1
Naphthalene	ND		5.0	3.0	ug/L			01/13/23 12:48	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/13/23 12:48	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/13/23 12:48	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/13/23 12:48	1
o-Xylene	ND		5.0	0.60	ug/L			01/13/23 12:48	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/13/23 12:48	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/13/23 12:48	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: TB-ROX-010923-8260-A
Date Collected: 01/09/23 12:00
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-1
Matrix: Water

Method: SW846 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			01/13/23 12:48	1
Styrene	ND		1.0	1.0	ug/L			01/13/23 12:48	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/13/23 12:48	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/13/23 12:48	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/13/23 12:48	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/13/23 12:48	1
Toluene	ND		1.0	0.41	ug/L			01/13/23 12:48	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 12:48	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/13/23 12:48	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/13/23 12:48	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/13/23 12:48	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/13/23 12:48	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/13/23 12:48	1
Trichloroethene	ND		1.0	0.15	ug/L			01/13/23 12:48	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/13/23 12:48	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/13/23 12:48	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/13/23 12:48	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/13/23 12:48	1
Vinyl acetate	ND		25	0.93	ug/L			01/13/23 12:48	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/13/23 12:48	1
Xylenes, Total	ND		10	1.6	ug/L			01/13/23 12:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*		*72 - 119*		*01/13/23 12:48*	*1*
Dibromofluoromethane	*103*		*75 - 126*		*01/13/23 12:48*	*1*
Toluene-d8 (Surr)	*95*		*64 - 132*		*01/13/23 12:48*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: TB-ROX-010923-8011-A
Date Collected: 01/09/23 12:00
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-2
Matrix: Water

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.029	0.017	ug/L		01/17/23 10:00	01/17/23 21:47	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/17/23 10:00	01/17/23 21:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*120*	*p*	*51 - 149*	*01/17/23 10:00*	*01/17/23 21:47*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW4-ROX-010923-EB
Date Collected: 01/09/23 08:20
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-3
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/13/23 13:13	1
Acrolein	ND		20	3.3	ug/L			01/13/23 13:13	1
Acrylonitrile	ND		10	2.8	ug/L			01/13/23 13:13	1
Benzene	ND		1.0	0.13	ug/L			01/13/23 13:13	1
Bromobenzene	ND		1.0	0.54	ug/L			01/13/23 13:13	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/13/23 13:13	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/13/23 13:13	1
Bromoform	ND		5.0	0.25	ug/L			01/13/23 13:13	1
Bromomethane	ND		1.0	0.98	ug/L			01/13/23 13:13	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/13/23 13:13	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/13/23 13:13	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/13/23 13:13	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/13/23 13:13	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/13/23 13:13	1
Chloroethane	ND		1.0	0.76	ug/L			01/13/23 13:13	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/13/23 13:13	1
Chloroform	ND		1.0	1.0	ug/L			01/13/23 13:13	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/13/23 13:13	1
Chloromethane	ND		1.0	0.32	ug/L			01/13/23 13:13	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/13/23 13:13	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/13/23 13:13	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/13/23 13:13	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/13/23 13:13	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/13/23 13:13	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/13/23 13:13	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/13/23 13:13	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/13/23 13:13	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 13:13	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 13:13	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 13:13	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 13:13	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/13/23 13:13	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/13/23 13:13	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/13/23 13:13	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/13/23 13:13	1
2-Hexanone	ND		25	1.4	ug/L			01/13/23 13:13	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/13/23 13:13	1
Methylene bromide	ND		5.0	0.22	ug/L			01/13/23 13:13	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/13/23 13:13	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/13/23 13:13	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/13/23 13:13	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/13/23 13:13	1
Naphthalene	ND		5.0	3.0	ug/L			01/13/23 13:13	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/13/23 13:13	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/13/23 13:13	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/13/23 13:13	1
o-Xylene	ND		5.0	0.60	ug/L			01/13/23 13:13	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/13/23 13:13	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/13/23 13:13	1

Client Sample ID: MW4-ROX-010923-EB

Date Collected: 01/09/23 08:20
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-3

Matrix: Water

Method: SW846 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			01/13/23 13:13	1
Styrene	ND		1.0	1.0	ug/L			01/13/23 13:13	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/13/23 13:13	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/13/23 13:13	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/13/23 13:13	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/13/23 13:13	1
Toluene	ND		1.0	0.41	ug/L			01/13/23 13:13	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 13:13	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/13/23 13:13	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/13/23 13:13	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/13/23 13:13	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/13/23 13:13	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/13/23 13:13	1
Trichloroethene	ND		1.0	0.15	ug/L			01/13/23 13:13	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/13/23 13:13	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/13/23 13:13	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/13/23 13:13	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/13/23 13:13	1
Vinyl acetate	ND		25	0.93	ug/L			01/13/23 13:13	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/13/23 13:13	1
Xylenes, Total	ND		10	1.6	ug/L			01/13/23 13:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*72 - 119*		*01/13/23 13:13*	*1*
Dibromofluoromethane	*100*		*75 - 126*		*01/13/23 13:13*	*1*
Toluene-d8 (Surr)	*95*		*64 - 132*		*01/13/23 13:13*	*1*

Method: SW846 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	0.032	ug/L		01/16/23 09:16	01/18/23 16:03	1
Acenaphthylene	ND		0.20	0.045	ug/L		01/16/23 09:16	01/18/23 16:03	1
Anthracene	ND		0.20	0.032	ug/L		01/16/23 09:16	01/18/23 16:03	1
Benzo[a]anthracene	ND		0.20	0.046	ug/L		01/16/23 09:16	01/18/23 16:03	1
Benzo[a]pyrene	ND		0.20	0.042	ug/L		01/16/23 09:16	01/18/23 16:03	1
Benzo[b]fluoranthene	**0.31**		0.20	0.034	ug/L		01/16/23 09:16	01/18/23 16:03	1
Benzo[g,h,i]perylene	ND		0.20	0.13	ug/L		01/16/23 09:16	01/18/23 16:03	1
Benzo[k]fluoranthene	ND		0.20	0.10	ug/L		01/16/23 09:16	01/18/23 16:03	1
Chrysene	ND		0.20	0.075	ug/L		01/16/23 09:16	01/18/23 16:03	1
Dibenz(a,h)anthracene	ND		0.20	0.051	ug/L		01/16/23 09:16	01/18/23 16:03	1
Fluoranthene	ND		0.20	0.069	ug/L		01/16/23 09:16	01/18/23 16:03	1
Fluorene	ND		0.20	0.11	ug/L		01/16/23 09:16	01/18/23 16:03	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.043	ug/L		01/16/23 09:16	01/18/23 16:03	1
1-Methylnaphthalene	ND		0.20	0.075	ug/L		01/16/23 09:16	01/18/23 16:03	1
2-Methylnaphthalene	ND		0.20	0.061	ug/L		01/16/23 09:16	01/18/23 16:03	1
Phenanthrene	ND		0.20	0.036	ug/L		01/16/23 09:16	01/18/23 16:03	1
Pyrene	ND		0.20	0.040	ug/L		01/16/23 09:16	01/18/23 16:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*118*		*15 - 122*	*01/16/23 09:16*	*01/18/23 16:03*	*1*
Nitrobenzene-d5	*78*		*19 - 130*	*01/16/23 09:16*	*01/18/23 16:03*	*1*

Client Sample ID: MW4-ROX-010923-EB
Date Collected: 01/09/23 08:20
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-3
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*132*		*33 - 138*	*01/16/23 09:16*	*01/18/23 16:03*	*1*

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND	H	0.20	0.034	ug/L		02/09/23 13:26	02/28/23 17:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*98*		*15 - 122*	*02/09/23 13:26*	*02/28/23 17:13*	*1*
Nitrobenzene-d5	*97*		*19 - 130*	*02/09/23 13:26*	*02/28/23 17:13*	*1*
Terphenyl-d14	*120*		*33 - 138*	*02/09/23 13:26*	*02/28/23 17:13*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.8	ug/L		01/16/23 09:16	01/18/23 20:03	1
Benzenethiol	ND	*-	10	1.7	ug/L		01/16/23 09:16	01/18/23 20:03	1
Benzoic acid	ND		30	7.4	ug/L		01/16/23 09:16	01/18/23 20:03	1
Benzyl alcohol	ND		10	2.0	ug/L		01/16/23 09:16	01/18/23 20:03	1
Bis(2-chloroethoxy)methane	ND		10	0.16	ug/L		01/16/23 09:16	01/18/23 20:03	1
Bis(2-chloroethyl)ether	ND		10	2.7	ug/L		01/16/23 09:16	01/18/23 20:03	1
bis (2-chloroisopropyl) ether	ND		10	0.16	ug/L		01/16/23 09:16	01/18/23 20:03	1
Bis(2-ethylhexyl) phthalate	ND		10	5.1	ug/L		01/16/23 09:16	01/18/23 20:03	1
4-Bromophenyl phenyl ether	ND		10	0.20	ug/L		01/16/23 09:16	01/18/23 20:03	1
Butyl benzyl phthalate	ND		10	0.19	ug/L		01/16/23 09:16	01/18/23 20:03	1
4-Chloroaniline	ND		10	3.4	ug/L		01/16/23 09:16	01/18/23 20:03	1
4-Chloro-3-methylphenol	ND		10	3.8	ug/L		01/16/23 09:16	01/18/23 20:03	1
2-Chloronaphthalene	ND		10	0.14	ug/L		01/16/23 09:16	01/18/23 20:03	1
2-Chlorophenol	ND	*1	10	2.2	ug/L		01/16/23 09:16	01/18/23 20:03	1
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		01/16/23 09:16	01/18/23 20:03	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/16/23 09:16	01/18/23 20:03	1
Dibenzofuran	ND		10	0.17	ug/L		01/16/23 09:16	01/18/23 20:03	1
3,3'-Dichlorobenzidine	ND	*+	10	2.6	ug/L		01/16/23 09:16	01/18/23 20:03	1
2,4-Dichlorophenol	ND		10	3.0	ug/L		01/16/23 09:16	01/18/23 20:03	1
Diethyl phthalate	ND		10	0.24	ug/L		01/16/23 09:16	01/18/23 20:03	1
2,4-Dimethylphenol	ND		10	3.5	ug/L		01/16/23 09:16	01/18/23 20:03	1
Dimethyl phthalate	ND		10	0.17	ug/L		01/16/23 09:16	01/18/23 20:03	1
Di-n-butyl phthalate	ND		10	2.7	ug/L		01/16/23 09:16	01/18/23 20:03	1
4,6-Dinitro-ortho-cresol	ND		10	1.6	ug/L		01/16/23 09:16	01/18/23 20:03	1
2,4-Dinitrophenol	ND		30	3.4	ug/L		01/16/23 09:16	01/18/23 20:03	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		01/16/23 09:16	01/18/23 20:03	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		01/16/23 09:16	01/18/23 20:03	1
Di-n-octyl phthalate	ND		10	0.17	ug/L		01/16/23 09:16	01/18/23 20:03	1
1,4-Dioxane	ND		10	1.0	ug/L		01/16/23 09:16	01/18/23 20:03	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/16/23 09:16	01/18/23 20:03	1
Hexachlorobenzene	ND		10	0.17	ug/L		01/16/23 09:16	01/18/23 20:03	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		01/16/23 09:16	01/18/23 20:03	1
Hexachloroethane	ND		10	4.2	ug/L		01/16/23 09:16	01/18/23 20:03	1
Indene	ND		10	1.0	ug/L		01/16/23 09:16	01/18/23 20:03	1
Isophorone	ND		10	0.14	ug/L		01/16/23 09:16	01/18/23 20:03	1
2-Methylphenol	ND		10	1.8	ug/L		01/16/23 09:16	01/18/23 20:03	1

Client Sample ID: MW4-ROX-010923-EB

Date Collected: 01/09/23 08:20
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-3

Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	ND		20	0.39	ug/L		01/16/23 09:16	01/18/23 20:03	1
2-Nitroaniline	ND		10	2.2	ug/L		01/16/23 09:16	01/18/23 20:03	1
3-Nitroaniline	ND		10	1.8	ug/L		01/16/23 09:16	01/18/23 20:03	1
4-Nitroaniline	ND		10	1.5	ug/L		01/16/23 09:16	01/18/23 20:03	1
Nitrobenzene	ND		10	0.13	ug/L		01/16/23 09:16	01/18/23 20:03	1
2-Nitrophenol	ND		10	5.3	ug/L		01/16/23 09:16	01/18/23 20:03	1
4-Nitrophenol	ND		10	2.1	ug/L		01/16/23 09:16	01/18/23 20:03	1
N-Nitrosodimethylamine	ND		10	3.5	ug/L		01/16/23 09:16	01/18/23 20:03	1
N-Nitrosodi-n-propylamine	ND		10	3.3	ug/L		01/16/23 09:16	01/18/23 20:03	1
N-Nitrosodiphenylamine	ND		10	0.18	ug/L		01/16/23 09:16	01/18/23 20:03	1
Pentachlorophenol	ND		20	1.4	ug/L		01/16/23 09:16	01/18/23 20:03	1
Phenol	ND		10	2.6	ug/L		01/16/23 09:16	01/18/23 20:03	1
Pyridine	ND		10	3.2	ug/L		01/16/23 09:16	01/18/23 20:03	1
Quinoline	ND		10	4.5	ug/L		01/16/23 09:16	01/18/23 20:03	1
2,4,5-Trichlorophenol	ND		10	3.7	ug/L		01/16/23 09:16	01/18/23 20:03	1
2,4,6-Trichlorophenol	ND		10	3.5	ug/L		01/16/23 09:16	01/18/23 20:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*100*		*46 - 124*	*01/16/23 09:16*	*01/18/23 20:03*	*1*
2-Fluorophenol	*35*		*13 - 113*	*01/16/23 09:16*	*01/18/23 20:03*	*1*
Nitrobenzene-d5	*91*		*36 - 126*	*01/16/23 09:16*	*01/18/23 20:03*	*1*
Phenol-d5	*70*		*17 - 127*	*01/16/23 09:16*	*01/18/23 20:03*	*1*
Terphenyl-d14	*115*		*44 - 149*	*01/16/23 09:16*	*01/18/23 20:03*	*1*
2,4,6-Tribromophenol	*77*		*26 - 150*	*01/16/23 09:16*	*01/18/23 20:03*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.029	0.016	ug/L		01/19/23 10:05	01/19/23 18:48	1
1,2-D bromoethane	ND		0.019	0.014	ug/L		01/19/23 10:05	01/19/23 18:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*121*	*p*	*51 - 149*	*01/19/23 10:05*	*01/19/23 18:48*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW4-ROX-010923
Date Collected: 01/09/23 09:25
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-4
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/13/23 14:26	1
Acrolein	ND		20	3.3	ug/L			01/13/23 14:26	1
Acrylonitrile	ND		10	2.8	ug/L			01/13/23 14:26	1
Benzene	ND		1.0	0.13	ug/L			01/13/23 14:26	1
Bromobenzene	ND		1.0	0.54	ug/L			01/13/23 14:26	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/13/23 14:26	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/13/23 14:26	1
Bromoform	ND		5.0	0.25	ug/L			01/13/23 14:26	1
Bromomethane	ND		1.0	0.98	ug/L			01/13/23 14:26	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/13/23 14:26	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/13/23 14:26	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/13/23 14:26	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/13/23 14:26	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/13/23 14:26	1
Chloroethane	ND		1.0	0.76	ug/L			01/13/23 14:26	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/13/23 14:26	1
Chloroform	ND		1.0	1.0	ug/L			01/13/23 14:26	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/13/23 14:26	1
Chloromethane	ND		1.0	0.32	ug/L			01/13/23 14:26	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/13/23 14:26	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/13/23 14:26	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/13/23 14:26	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/13/23 14:26	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/13/23 14:26	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/13/23 14:26	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/13/23 14:26	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/13/23 14:26	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 14:26	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 14:26	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 14:26	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 14:26	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/13/23 14:26	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/13/23 14:26	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/13/23 14:26	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/13/23 14:26	1
2-Hexanone	ND		25	1.4	ug/L			01/13/23 14:26	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/13/23 14:26	1
Methylene bromide	ND		5.0	0.22	ug/L			01/13/23 14:26	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/13/23 14:26	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/13/23 14:26	1
Methyl tert-butyl ether	**0.41**	**J**	1.0	0.22	ug/L			01/13/23 14:26	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/13/23 14:26	1
Naphthalene	ND		5.0	3.0	ug/L			01/13/23 14:26	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/13/23 14:26	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/13/23 14:26	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/13/23 14:26	1
o-Xylene	ND		5.0	0.60	ug/L			01/13/23 14:26	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/13/23 14:26	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/13/23 14:26	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW4-ROX-010923
Date Collected: 01/09/23 09:25
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-4
Matrix: Water

Method: SW846 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			01/13/23 14:26	1
Styrene	ND		1.0	1.0	ug/L			01/13/23 14:26	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/13/23 14:26	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/13/23 14:26	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/13/23 14:26	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/13/23 14:26	1
Toluene	ND		1.0	0.41	ug/L			01/13/23 14:26	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 14:26	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/13/23 14:26	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/13/23 14:26	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/13/23 14:26	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/13/23 14:26	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/13/23 14:26	1
Trichloroethene	ND		1.0	0.15	ug/L			01/13/23 14:26	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/13/23 14:26	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/13/23 14:26	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/13/23 14:26	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/13/23 14:26	1
Vinyl acetate	ND		25	0.93	ug/L			01/13/23 14:26	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/13/23 14:26	1
Xylenes, Total	ND		10	1.6	ug/L			01/13/23 14:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*72 - 119*		*01/13/23 14:26*	*1*
Dibromofluoromethane	*102*		*75 - 126*		*01/13/23 14:26*	*1*
Toluene-d8 (Surr)	*94*		*64 - 132*		*01/13/23 14:26*	*1*

Method: SW846 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	0.033	ug/L		01/16/23 09:16	01/18/23 16:20	1
Acenaphthylene	ND		0.20	0.046	ug/L		01/16/23 09:16	01/18/23 16:20	1
Anthracene	ND		0.20	0.033	ug/L		01/16/23 09:16	01/18/23 16:20	1
Benzo[a]anthracene	ND		0.20	0.047	ug/L		01/16/23 09:16	01/18/23 16:20	1
Benzo[a]pyrene	ND		0.20	0.043	ug/L		01/16/23 09:16	01/18/23 16:20	1
Benzo[b]fluoranthene	ND		0.20	0.035	ug/L		01/16/23 09:16	01/18/23 16:20	1
Benzo[g,h,i]perylene	ND		0.20	0.13	ug/L		01/16/23 09:16	01/18/23 16:20	1
Benzo[k]fluoranthene	ND		0.20	0.10	ug/L		01/16/23 09:16	01/18/23 16:20	1
Chrysene	ND		0.20	0.075	ug/L		01/16/23 09:16	01/18/23 16:20	1
Dibenz(a,h)anthracene	ND		0 20	0 051	ug/L		01/16/23 09 16	01/18/23 16 20	1
Fluoranthene	ND		0.20	0.069	ug/L		01/16/23 09:16	01/18/23 16:20	1
Fluorene	ND		0.20	0.11	ug/L		01/16/23 09:16	01/18/23 16:20	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.044	ug/L		01/16/23 09:16	01/18/23 16:20	1
1-Methylnaphthalene	ND		0.20	0.075	ug/L		01/16/23 09:16	01/18/23 16:20	1
2-Methylnaphthalene	ND		0.20	0.061	ug/L		01/16/23 09:16	01/18/23 16:20	1
Phenanthrene	ND		0.20	0.037	ug/L		01/16/23 09:16	01/18/23 16:20	1
Pyrene	ND		0.20	0.041	ug/L		01/16/23 09:16	01/27/23 20:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*99*		*15 - 122*	*01/16/23 09:16*	*01/18/23 16:20*	*1*
Nitrobenzene-d5	*67*		*19 - 130*	*01/16/23 09:16*	*01/18/23 16:20*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW4-ROX-010923
Date Collected: 01/09/23 09:25
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-4
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*72*		*33 - 138*	*01/16/23 09:16*	*01/18/23 16:20*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.9	ug/L		01/16/23 09:16	01/18/23 20:25	1
Benzenethiol	ND	*-	10	1.7	ug/L		01/16/23 09:16	01/18/23 20:25	1
Benzoic acid	ND		31	7.4	ug/L		01/16/23 09:16	01/18/23 20:25	1
Benzyl alcohol	ND		10	2.0	ug/L		01/16/23 09:16	01/18/23 20:25	1
Bis(2-chloroethoxy)methane	ND		10	0.16	ug/L		01/16/23 09:16	01/18/23 20:25	1
Bis(2-chloroethyl)ether	ND		10	2.8	ug/L		01/16/23 09:16	01/18/23 20:25	1
bis (2-chloroisopropyl) ether	ND		10	0.16	ug/L		01/16/23 09:16	01/18/23 20:25	1
Bis(2-ethylhexyl) phthalate	ND		10	5.1	ug/L		01/16/23 09:16	01/18/23 20:25	1
4-Bromophenyl phenyl ether	ND		10	0.20	ug/L		01/16/23 09:16	01/18/23 20:25	1
Butyl benzyl phthalate	ND		10	0.19	ug/L		01/16/23 09:16	01/18/23 20:25	1
4-Chloroaniline	ND		10	3.5	ug/L		01/16/23 09:16	01/18/23 20:25	1
4-Chloro-3-methylphenol	ND		10	3.9	ug/L		01/16/23 09:16	01/18/23 20:25	1
2-Chloronaphthalene	ND		10	0.14	ug/L		01/16/23 09:16	01/18/23 20:25	1
2-Chlorophenol	ND	*1	10	2.2	ug/L		01/16/23 09:16	01/18/23 20:25	1
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		01/16/23 09:16	01/18/23 20:25	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/16/23 09:16	01/18/23 20:25	1
Dibenzofuran	ND		10	0.17	ug/L		01/16/23 09:16	01/18/23 20:25	1
3,3'-Dichlorobenzidine	ND	*+	10	2.7	ug/L		01/16/23 09:16	01/18/23 20:25	1
2,4-Dichlorophenol	ND		10	3.1	ug/L		01/16/23 09:16	01/18/23 20:25	1
Diethyl phthalate	ND		10	0.24	ug/L		01/16/23 09:16	01/18/23 20:25	1
2,4-Dimethylphenol	ND		10	3.6	ug/L		01/16/23 09:16	01/18/23 20:25	1
Dimethyl phthalate	ND		10	0.17	ug/L		01/16/23 09:16	01/18/23 20:25	1
Di-n-butyl phthalate	ND		10	2.8	ug/L		01/16/23 09:16	01/18/23 20:25	1
4,6-Dinitro-ortho-cresol	ND		10	1.6	ug/L		01/16/23 09:16	01/18/23 20:25	1
2,4-Dinitrophenol	ND		31	3.5	ug/L		01/16/23 09:16	01/18/23 20:25	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		01/16/23 09:16	01/18/23 20:25	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		01/16/23 09:16	01/18/23 20:25	1
Di-n-octyl phthalate	ND		10	0.17	ug/L		01/16/23 09:16	01/18/23 20:25	1
1,4-Dioxane	ND		10	1.0	ug/L		01/16/23 09:16	01/18/23 20:25	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/16/23 09:16	01/18/23 20:25	1
Hexachlorobenzene	ND		10	0.17	ug/L		01/16/23 09:16	01/18/23 20:25	1
Hexachlorocyclopentadiene	ND		20	2.7	ug/L		01/16/23 09:16	01/18/23 20:25	1
Hexachloroethane	ND		10	4.3	ug/L		01/16/23 09:16	01/18/23 20:25	1
Indene	ND		10	1.0	ug/L		01/16/23 09:16	01/18/23 20:25	1
Isophorone	ND		10	0.14	ug/L		01/16/23 09:16	01/18/23 20:25	1
2-Methylphenol	ND		10	1.8	ug/L		01/16/23 09:16	01/18/23 20:25	1
3 & 4 Methylphenol	ND		20	0.40	ug/L		01/16/23 09:16	01/18/23 20:25	1
2-Nitroaniline	ND		10	2.2	ug/L		01/16/23 09:16	01/18/23 20:25	1
3-Nitroaniline	ND		10	1.8	ug/L		01/16/23 09:16	01/18/23 20:25	1
4-Nitroaniline	ND		10	1.5	ug/L		01/16/23 09:16	01/18/23 20:25	1
Nitrobenzene	ND		10	0.13	ug/L		01/16/23 09:16	01/18/23 20:25	1
2-Nitrophenol	ND		10	5.3	ug/L		01/16/23 09:16	01/18/23 20:25	1
4-Nitrophenol	ND		10	2.1	ug/L		01/16/23 09:16	01/18/23 20:25	1
N-Nitrosodimethylamine	ND		10	3.6	ug/L		01/16/23 09:16	01/18/23 20:25	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW4-ROX-010923
Date Collected: 01/09/23 09:25
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-4
Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		10	3.4	ug/L		01/16/23 09:16	01/18/23 20:25	1
N-Nitrosodiphenylamine	ND		10	0.18	ug/L		01/16/23 09:16	01/18/23 20:25	1
Pentachlorophenol	ND		20	1.4	ug/L		01/16/23 09:16	01/18/23 20:25	1
Phenol	ND		10	2.7	ug/L		01/16/23 09:16	01/18/23 20:25	1
Pyridine	ND		10	3.3	ug/L		01/16/23 09:16	01/18/23 20:25	1
Quinoline	ND		10	4.6	ug/L		01/16/23 09:16	01/18/23 20:25	1
2,4,5-Trichlorophenol	ND		10	3.8	ug/L		01/16/23 09:16	01/18/23 20:25	1
2,4,6-Trichlorophenol	ND		10	3.6	ug/L		01/16/23 09:16	01/18/23 20:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*86*		*46 - 124*	*01/16/23 09:16*	*01/18/23 20:25*	*1*
2-Fluorophenol	*36*		*13 - 113*	*01/16/23 09:16*	*01/18/23 20:25*	*1*
Nitrobenzene-d5	*81*		*36 - 126*	*01/16/23 09:16*	*01/18/23 20:25*	*1*
Phenol-d5	*67*		*17 - 127*	*01/16/23 09:16*	*01/18/23 20:25*	*1*
Terphenyl-d14	*63*		*44 - 149*	*01/16/23 09:16*	*01/18/23 20:25*	*1*
2,4,6-Tribromophenol	*80*		*26 - 150*	*01/16/23 09:16*	*01/18/23 20:25*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.029	0.017	ug/L		01/19/23 10:05	01/19/23 19:08	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/19/23 10:05	01/19/23 19:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*116*	*p*	*51 - 149*	*01/19/23 10:05*	*01/19/23 19:08*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW25-ROX-010923

Date Collected: 01/09/23 10:45
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-5

Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/13/23 14:51	1
Acrolein	ND		20	3.3	ug/L			01/13/23 14:51	1
Acrylonitrile	ND		10	2.8	ug/L			01/13/23 14:51	1
Benzene	**24**		1.0	0.13	ug/L			01/13/23 14:51	1
Bromobenzene	ND		1.0	0.54	ug/L			01/13/23 14:51	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/13/23 14:51	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/13/23 14:51	1
Bromoform	ND		5.0	0.25	ug/L			01/13/23 14:51	1
Bromomethane	ND		1.0	0.98	ug/L			01/13/23 14:51	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/13/23 14:51	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/13/23 14:51	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/13/23 14:51	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/13/23 14:51	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/13/23 14:51	1
Chloroethane	ND		1.0	0.76	ug/L			01/13/23 14:51	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/13/23 14:51	1
Chloroform	ND		1.0	1.0	ug/L			01/13/23 14:51	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/13/23 14:51	1
Chloromethane	ND		1.0	0.32	ug/L			01/13/23 14:51	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/13/23 14:51	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/13/23 14:51	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/13/23 14:51	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/13/23 14:51	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/13/23 14:51	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/13/23 14:51	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/13/23 14:51	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/13/23 14:51	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 14:51	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 14:51	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 14:51	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 14:51	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/13/23 14:51	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/13/23 14:51	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/13/23 14:51	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/13/23 14:51	1
2-Hexanone	ND		25	1.4	ug/L			01/13/23 14:51	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/13/23 14:51	1
Methylene bromide	ND		5.0	0.22	ug/L			01/13/23 14:51	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/13/23 14:51	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/13/23 14:51	1
Methyl tert-butyl ether	**0.71**	**J**	1.0	0.22	ug/L			01/13/23 14:51	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/13/23 14:51	1
Naphthalene	ND		5.0	3.0	ug/L			01/13/23 14:51	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/13/23 14:51	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/13/23 14:51	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/13/23 14:51	1
o-Xylene	ND		5.0	0.60	ug/L			01/13/23 14:51	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/13/23 14:51	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/13/23 14:51	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW25-ROX-010923
Date Collected: 01/09/23 10:45
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-5
Matrix: Water

Method: SW846 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			01/13/23 14:51	1
Styrene	ND		1.0	1.0	ug/L			01/13/23 14:51	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/13/23 14:51	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/13/23 14:51	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/13/23 14:51	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/13/23 14:51	1
Toluene	ND		1.0	0.41	ug/L			01/13/23 14:51	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 14:51	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/13/23 14:51	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/13/23 14:51	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/13/23 14:51	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/13/23 14:51	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/13/23 14:51	1
Trichloroethene	ND		1.0	0.15	ug/L			01/13/23 14:51	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/13/23 14:51	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/13/23 14:51	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/13/23 14:51	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/13/23 14:51	1
Vinyl acetate	ND		25	0.93	ug/L			01/13/23 14:51	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/13/23 14:51	1
Xylenes, Total	ND		10	1.6	ug/L			01/13/23 14:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*72 - 119*		*01/13/23 14:51*	*1*
Dibromofluoromethane	*102*		*75 - 126*		*01/13/23 14:51*	*1*
Toluene-d8 (Surr)	*97*		*64 - 132*		*01/13/23 14:51*	*1*

Method: SW846 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	0.033	ug/L		01/16/23 09:16	01/18/23 16:38	1
Acenaphthylene	ND		0.21	0.047	ug/L		01/16/23 09:16	01/18/23 16:38	1
Anthracene	ND		0.21	0.033	ug/L		01/16/23 09:16	01/18/23 16:38	1
Benzo[a]anthracene	ND		0.21	0.048	ug/L		01/16/23 09:16	01/18/23 16:38	1
Benzo[a]pyrene	ND		0.21	0.044	ug/L		01/16/23 09:16	01/18/23 16:38	1
Benzo[b]fluoranthene	ND		0.21	0.036	ug/L		01/16/23 09:16	01/18/23 16:38	1
Benzo[g,h,i]perylene	ND		0.21	0.14	ug/L		01/16/23 09:16	01/18/23 16:38	1
Benzo[k]fluoranthene	ND		0.21	0.10	ug/L		01/16/23 09:16	01/18/23 16:38	1
Chrysene	ND		0.21	0.077	ug/L		01/16/23 09:16	01/18/23 16:38	1
Dibenz(a,h)anthracene	ND		0 21	0 052	ug/L		01/16/23 09 16	01/18/23 16 38	1
Fluoranthene	ND		0.21	0.071	ug/L		01/16/23 09:16	01/18/23 16:38	1
Fluorene	ND		0.21	0.11	ug/L		01/16/23 09:16	01/18/23 16:38	1
Indeno[1,2,3-cd]pyrene	ND		0.21	0.045	ug/L		01/16/23 09:16	01/18/23 16:38	1
1-Methylnaphthalene	ND		0.21	0.077	ug/L		01/16/23 09:16	01/18/23 16:38	1
2-Methylnaphthalene	ND		0.21	0.063	ug/L		01/16/23 09:16	01/18/23 16:38	1
Phenanthrene	ND		0.21	0.038	ug/L		01/16/23 09:16	01/18/23 16:38	1
Pyrene	**0.11**	**J B**	0.21	0.042	ug/L		01/16/23 09:16	01/18/23 16:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*87*		*15 - 122*	*01/16/23 09:16*	*01/18/23 16:38*	*1*
Nitrobenzene-d5	*60*		*19 - 130*	*01/16/23 09:16*	*01/18/23 16:38*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW25-ROX-010923
Date Collected: 01/09/23 10:45
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-5
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*76*		*33 - 138*	*01/16/23 09:16*	*01/18/23 16:38*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	4.0	ug/L		01/16/23 09:16	01/18/23 20:47	1
Benzenethiol	ND	*-	10	1.8	ug/L		01/16/23 09:16	01/18/23 20:47	1
Benzoic acid	ND		31	7.6	ug/L		01/16/23 09:16	01/18/23 20:47	1
Benzyl alcohol	ND		10	2.1	ug/L		01/16/23 09:16	01/18/23 20:47	1
Bis(2-chloroethoxy)methane	ND		10	0.17	ug/L		01/16/23 09:16	01/18/23 20:47	1
Bis(2-chloroethyl)ether	ND		10	2.8	ug/L		01/16/23 09:16	01/18/23 20:47	1
bis (2-chloroisopropyl) ether	ND		10	0.17	ug/L		01/16/23 09:16	01/18/23 20:47	1
Bis(2-ethylhexyl) phthalate	ND		10	5.2	ug/L		01/16/23 09:16	01/18/23 20:47	1
4-Bromophenyl phenyl ether	ND		10	0.21	ug/L		01/16/23 09:16	01/18/23 20:47	1
Butyl benzyl phthalate	ND		10	0.20	ug/L		01/16/23 09:16	01/18/23 20:47	1
4-Chloroaniline	ND		10	3.6	ug/L		01/16/23 09:16	01/18/23 20:47	1
4-Chloro-3-methylphenol	ND		10	4.0	ug/L		01/16/23 09:16	01/18/23 20:47	1
2-Chloronaphthalene	ND		10	0.15	ug/L		01/16/23 09:16	01/18/23 20:47	1
2-Chlorophenol	ND	*1	10	2.3	ug/L		01/16/23 09:16	01/18/23 20:47	1
4-Chlorophenyl phenyl ether	ND		10	2.1	ug/L		01/16/23 09:16	01/18/23 20:47	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/16/23 09:16	01/18/23 20:47	1
Dibenzofuran	ND		10	0.18	ug/L		01/16/23 09:16	01/18/23 20:47	1
3,3'-Dichlorobenzidine	ND	*+	10	2.7	ug/L		01/16/23 09:16	01/18/23 20:47	1
2,4-Dichlorophenol	ND		10	3.1	ug/L		01/16/23 09:16	01/18/23 20:47	1
Diethyl phthalate	ND		10	0.25	ug/L		01/16/23 09:16	01/18/23 20:47	1
2,4-Dimethylphenol	ND		10	3.7	ug/L		01/16/23 09:16	01/18/23 20:47	1
Dimethyl phthalate	ND		10	0.18	ug/L		01/16/23 09:16	01/18/23 20:47	1
Di-n-butyl phthalate	ND		10	2.8	ug/L		01/16/23 09:16	01/18/23 20:47	1
4,6-Dinitro-ortho-cresol	ND		10	1.7	ug/L		01/16/23 09:16	01/18/23 20:47	1
2,4-Dinitrophenol	ND		31	3.6	ug/L		01/16/23 09:16	01/18/23 20:47	1
2,4-Dinitrotoluene	ND		10	2.0	ug/L		01/16/23 09:16	01/18/23 20:47	1
2,6-Dinitrotoluene	ND		10	2.0	ug/L		01/16/23 09:16	01/18/23 20:47	1
Di-n-octyl phthalate	ND		10	0.18	ug/L		01/16/23 09:16	01/18/23 20:47	1
1,4-Dioxane	ND		10	1.0	ug/L		01/16/23 09:16	01/18/23 20:47	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/16/23 09:16	01/18/23 20:47	1
Hexachlorobenzene	ND		10	0.18	ug/L		01/16/23 09:16	01/18/23 20:47	1
Hexachlorocyclopentadiene	ND		21	2.7	ug/L		01/16/23 09:16	01/18/23 20:47	1
Hexachloroethane	ND		10	4.4	ug/L		01/16/23 09:16	01/18/23 20:47	1
Indene	ND		10	1.0	ug/L		01/16/23 09:16	01/18/23 20:47	1
Isophorone	ND		10	0.15	ug/L		01/16/23 09:16	01/18/23 20:47	1
2-Methylphenol	ND		10	1.9	ug/L		01/16/23 09:16	01/18/23 20:47	1
3 & 4 Methylphenol	ND		21	0.41	ug/L		01/16/23 09:16	01/18/23 20:47	1
2-Nitroaniline	ND		10	2.3	ug/L		01/16/23 09:16	01/18/23 20:47	1
3-Nitroaniline	ND		10	1.9	ug/L		01/16/23 09:16	01/18/23 20:47	1
4-Nitroaniline	ND		10	1.6	ug/L		01/16/23 09:16	01/18/23 20:47	1
Nitrobenzene	ND		10	0.14	ug/L		01/16/23 09:16	01/18/23 20:47	1
2-Nitrophenol	ND		10	5.4	ug/L		01/16/23 09:16	01/18/23 20:47	1
4-Nitrophenol	ND		10	2.2	ug/L		01/16/23 09:16	01/18/23 20:47	1
N-Nitrosodimethylamine	ND		10	3.7	ug/L		01/16/23 09:16	01/18/23 20:47	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW25-ROX-010923
Date Collected: 01/09/23 10:45
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-5
Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		10	3.4	ug/L		01/16/23 09:16	01/18/23 20:47	1
N-Nitrosodiphenylamine	ND		10	0.19	ug/L		01/16/23 09:16	01/18/23 20:47	1
Pentachlorophenol	ND		21	1.5	ug/L		01/16/23 09:16	01/18/23 20:47	1
Phenol	ND		10	2.7	ug/L		01/16/23 09:16	01/18/23 20:47	1
Pyridine	ND		10	3.3	ug/L		01/16/23 09:16	01/18/23 20:47	1
Quinoline	ND		10	4.7	ug/L		01/16/23 09:16	01/18/23 20:47	1
2,4,5-Trichlorophenol	ND		10	3.9	ug/L		01/16/23 09:16	01/18/23 20:47	1
2,4,6-Trichlorophenol	ND		10	3.7	ug/L		01/16/23 09:16	01/18/23 20:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*88*		*46 - 124*	*01/16/23 09:16*	*01/18/23 20:47*	*1*
2-Fluorophenol	*42*		*13 - 113*	*01/16/23 09:16*	*01/18/23 20:47*	*1*
Nitrobenzene-d5	*79*		*36 - 126*	*01/16/23 09:16*	*01/18/23 20:47*	*1*
Phenol-d5	*71*		*17 - 127*	*01/16/23 09:16*	*01/18/23 20:47*	*1*
Terphenyl-d14	*74*		*44 - 149*	*01/16/23 09:16*	*01/18/23 20:47*	*1*
2,4,6-Tribromophenol	*91*		*26 - 150*	*01/16/23 09:16*	*01/18/23 20:47*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.030	0.017	ug/L		01/19/23 10:05	01/19/23 19:29	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/19/23 10:05	01/19/23 19:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*113*		*51 - 149*	*01/19/23 10:05*	*01/19/23 19:29*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW8-ROX-010923
Date Collected: 01/09/23 11:40
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-6
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25000	10000	ug/L			01/13/23 17:18	1000
Acrolein	ND		20000	3300	ug/L			01/13/23 17:18	1000
Acrylonitrile	ND		10000	2800	ug/L			01/13/23 17:18	1000
Bromobenzene	ND		1000	540	ug/L			01/13/23 17:18	1000
Bromochloromethane	ND		1000	210	ug/L			01/13/23 17:18	1000
Bromodichloromethane	ND		1000	500	ug/L			01/13/23 17:18	1000
Bromoform	ND		5000	250	ug/L			01/13/23 17:18	1000
Bromomethane	ND		1000	980	ug/L			01/13/23 17:18	1000
2-Butanone (MEK)	ND		25000	2600	ug/L			01/13/23 17:18	1000
Carbon disulfide	ND		1000	500	ug/L			01/13/23 17:18	1000
Carbon tetrachloride	ND		1000	190	ug/L			01/13/23 17:18	1000
Chlorobenzene	ND		1000	150	ug/L			01/13/23 17:18	1000
Dibromochloromethane	ND		1000	240	ug/L			01/13/23 17:18	1000
Chloroethane	ND		1000	760	ug/L			01/13/23 17:18	1000
2-Chloroethyl vinyl ether	ND		5000	2000	ug/L			01/13/23 17:18	1000
Chloroform	ND		1000	1000	ug/L			01/13/23 17:18	1000
1-Chlorohexane	ND		1000	320	ug/L			01/13/23 17:18	1000
Chloromethane	ND		1000	320	ug/L			01/13/23 17:18	1000
cis-1,2-Dichloroethene	ND		1000	200	ug/L			01/13/23 17:18	1000
cis-1,3-Dichloropropene	ND		5000	500	ug/L			01/13/23 17:18	1000
1,2-Dichlorobenzene	ND		1000	500	ug/L			01/13/23 17:18	1000
1,3-Dichlorobenzene	ND		1000	540	ug/L			01/13/23 17:18	1000
1,4-Dichlorobenzene	ND		1000	640	ug/L			01/13/23 17:18	1000
Dichlorodifluoromethane	ND		1000	850	ug/L			01/13/23 17:18	1000
1,1-Dichloroethane	ND		1000	500	ug/L			01/13/23 17:18	1000
1,2-Dichloroethane	ND		1000	190	ug/L			01/13/23 17:18	1000
1,1-Dichloroethene	ND		1000	500	ug/L			01/13/23 17:18	1000
1,2-Dichloropropane	ND		1000	500	ug/L			01/13/23 17:18	1000
1,3-Dichloropropane	ND		1000	500	ug/L			01/13/23 17:18	1000
2,2-Dichloropropane	ND		1000	500	ug/L			01/13/23 17:18	1000
1,1-Dichloropropene	ND		1000	500	ug/L			01/13/23 17:18	1000
Ethylbenzene	ND		1000	500	ug/L			01/13/23 17:18	1000
Ethyl methacrylate	ND		1000	600	ug/L			01/13/23 17:18	1000
Hexachlorobutadiene	ND		5000	900	ug/L			01/13/23 17:18	1000
2-Hexanone	ND		25000	1400	ug/L			01/13/23 17:18	1000
Isopropy benzene	ND		1000	530	ug/L			01/13/23 17:18	1000
Methylene bromide	ND		5000	220	ug/L			01/13/23 17:18	1000
Methylene Chloride	ND		5000	3000	ug/L			01/13/23 17:18	1000
4-Methyl-2-pentanone (MIBK)	ND		25000	1800	ug/L			01/13/23 17:18	1000
Methyl tert-butyl ether	ND		1000	220	ug/L			01/13/23 17:18	1000
m-Xylene & p-Xylene	ND		5000	630	ug/L			01/13/23 17:18	1000
Naphthalene	ND		5000	3000	ug/L			01/13/23 17:18	1000
n-Butylbenzene	ND		1000	760	ug/L			01/13/23 17:18	1000
N-Propylbenzene	ND		1000	690	ug/L			01/13/23 17:18	1000
o-Chlorotoluene	ND		1000	570	ug/L			01/13/23 17:18	1000
o-Xylene	ND		5000	600	ug/L			01/13/23 17:18	1000
p-Chlorotoluene	ND		1000	560	ug/L			01/13/23 17:18	1000
p-Isopropyltoluene	ND		1000	710	ug/L			01/13/23 17:18	1000
sec-Butylbenzene	ND		1000	700	ug/L			01/13/23 17:18	1000

Client Sample ID: MW8-ROX-010923
Date Collected: 01/09/23 11:40
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-6
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		1000	1000	ug/L			01/13/23 17:18	1000
tert-Butylbenzene	ND		1000	630	ug/L			01/13/23 17:18	1000
1,1,1,2-Tetrachloroethane	ND		1000	160	ug/L			01/13/23 17:18	1000
1,1,2,2-Tetrachloroethane	ND		1000	500	ug/L			01/13/23 17:18	1000
Tetrachloroethene	ND		1000	900	ug/L			01/13/23 17:18	1000
Toluene	ND		1000	410	ug/L			01/13/23 17:18	1000
trans-1,2-Dichloroethene	ND		1000	500	ug/L			01/13/23 17:18	1000
trans-1,3-Dichloropropene	ND		5000	200	ug/L			01/13/23 17:18	1000
1,2,3-Trichlorobenzene	ND		1000	900	ug/L			01/13/23 17:18	1000
1,2,4-Trichlorobenzene	ND		1000	820	ug/L			01/13/23 17:18	1000
1,1,1-Trichloroethane	ND		1000	180	ug/L			01/13/23 17:18	1000
1,1,2-Trichloroethane	ND		5000	210	ug/L			01/13/23 17:18	1000
Trichloroethene	ND		1000	150	ug/L			01/13/23 17:18	1000
Trichlorofluoromethane	ND		1000	520	ug/L			01/13/23 17:18	1000
1,2,3-Trichloropropane	ND		5000	840	ug/L			01/13/23 17:18	1000
1,2,4-Trimethy benzene	ND		1000	820	ug/L			01/13/23 17:18	1000
1,3,5-Trimethy benzene	ND		1000	560	ug/L			01/13/23 17:18	1000
Vinyl acetate	ND		25000	930	ug/L			01/13/23 17:18	1000
Vinyl chloride	ND		1000	500	ug/L			01/13/23 17:18	1000
Xylenes, Total	ND		10000	1600	ug/L			01/13/23 17:18	1000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*72 - 119*		*01/13/23 17:18*	*1000*
Dibromofluoromethane	*101*		*75 - 126*		*01/13/23 17:18*	*1000*
Toluene-d8 (Surr)	*95*		*64 - 132*		*01/13/23 17:18*	*1000*

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**390000**		2000	260	ug/L			01/14/23 11:37	2000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*72 - 119*		*01/14/23 11:37*	*2000*
Dibromofluoromethane	*104*		*75 - 126*		*01/14/23 11:37*	*2000*
Toluene-d8 (Surr)	*96*		*64 - 132*		*01/14/23 11:37*	*2000*

Method: SW846 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	0.031	ug/L		01/16/23 09:16	01/18/23 16:55	1
Acenaphthylene	ND		0.19	0.044	ug/L		01/16/23 09:16	01/18/23 16:55	1
Anthracene	ND		0.19	0.031	ug/L		01/16/23 09:16	01/18/23 16:55	1
Benzo[a]anthracene	ND		0.19	0.045	ug/L		01/16/23 09:16	01/18/23 16:55	1
Benzo[a]pyrene	ND		0.19	0.041	ug/L		01/16/23 09:16	01/18/23 16:55	1
Benzo[b]fluoranthene	ND		0.19	0.033	ug/L		01/16/23 09:16	01/18/23 16:55	1
Benzo[g,h,i]perylene	ND		0.19	0.13	ug/L		01/16/23 09:16	01/18/23 16:55	1
Benzo[k]fluoranthene	ND		0.19	0.097	ug/L		01/16/23 09:16	01/18/23 16:55	1
Chrysene	ND		0.19	0.072	ug/L		01/16/23 09:16	01/18/23 16:55	1
Dibenz(a,h)anthracene	ND		0.19	0.049	ug/L		01/16/23 09:16	01/18/23 16:55	1
Fluoranthene	ND		0.19	0.066	ug/L		01/16/23 09:16	01/18/23 16:55	1
Fluorene	ND		0.19	0.11	ug/L		01/16/23 09:16	01/18/23 16:55	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.042	ug/L		01/16/23 09:16	01/18/23 16:55	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW8-ROX-010923
Date Collected: 01/09/23 11:40
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-6
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	11		0.19	0.072	ug/L		01/16/23 09:16	01/18/23 16:55	1
2-Methylnaphthalene	4.2		0.19	0.058	ug/L		01/16/23 09:16	01/18/23 16:55	1
Phenanthrene	0.18	J	0.19	0.035	ug/L		01/16/23 09:16	01/18/23 16:55	1
Pyrene	ND		0.19	0.039	ug/L		01/16/23 09:16	01/18/23 16:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*99*		*15 - 122*	*01/16/23 09:16*	*01/18/23 16:55*	*1*
Nitrobenzene-d5	*69*		*19 - 130*	*01/16/23 09:16*	*01/18/23 16:55*	*1*
Terphenyl-d14	*58*		*33 - 138*	*01/16/23 09:16*	*01/18/23 16:55*	*1*

Method: SW846 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		01/16/23 09:16	01/18/23 21:09	1
Benzenethiol	ND	*-	9.7	1.7	ug/L		01/16/23 09:16	01/18/23 21:09	1
Benzoic acid	ND		29	7.1	ug/L		01/16/23 09:16	01/18/23 21:09	1
Benzyl alcohol	ND		9.7	1.9	ug/L		01/16/23 09:16	01/18/23 21:09	1
Bis(2-chloroethoxy)methane	ND		9.7	0.16	ug/L		01/16/23 09:16	01/18/23 21:09	1
Bis(2-chloroethyl)ether	ND		9.7	2.6	ug/L		01/16/23 09:16	01/18/23 21:09	1
bis (2-chloroisopropyl) ether	ND		9.7	0.16	ug/L		01/16/23 09:16	01/18/23 21:09	1
Bis(2-ethylhexyl) phthalate	ND		9.7	4.9	ug/L		01/16/23 09:16	01/18/23 21:09	1
4-Bromophenyl phenyl ether	ND		9.7	0.19	ug/L		01/16/23 09:16	01/18/23 21:09	1
Butyl benzyl phthalate	ND		9.7	0.18	ug/L		01/16/23 09:16	01/18/23 21:09	1
4-Chloroaniline	ND		9.7	3.3	ug/L		01/16/23 09:16	01/18/23 21:09	1
4-Chloro-3-methylphenol	ND		9.7	3.7	ug/L		01/16/23 09:16	01/18/23 21:09	1
2-Chloronaphthalene	ND		9.7	0.14	ug/L		01/16/23 09:16	01/18/23 21:09	1
2-Chlorophenol	ND	*1	9.7	2.1	ug/L		01/16/23 09:16	01/18/23 21:09	1
4-Chlorophenyl phenyl ether	ND		9.7	1.9	ug/L		01/16/23 09:16	01/18/23 21:09	1
Dibenz[a,h]acridine	ND		9.7	0.97	ug/L		01/16/23 09:16	01/18/23 21:09	1
Dibenzofuran	0.42	J	9.7	0.17	ug/L		01/16/23 09:16	01/18/23 21:09	1
3,3'-Dichlorobenzidine	ND	*+	9.7	2.5	ug/L		01/16/23 09:16	01/18/23 21:09	1
2,4-Dichlorophenol	ND		9.7	2.9	ug/L		01/16/23 09:16	01/18/23 21:09	1
Diethyl phthalate	ND		9.7	0.23	ug/L		01/16/23 09:16	01/18/23 21:09	1
2,4-Dimethylphenol	ND		9.7	3.4	ug/L		01/16/23 09:16	01/18/23 21:09	1
Dimethyl phthalate	ND		9.7	0.17	ug/L		01/16/23 09:16	01/18/23 21:09	1
Di-n-butyl phthalate	ND		9.7	2.6	ug/L		01/16/23 09:16	01/18/23 21:09	1
4,6-Dinitro-ortho-cresol	ND		9.7	1.6	ug/L		01/16/23 09:16	01/18/23 21:09	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		01/16/23 09:16	01/18/23 21:09	1
2,4-Dinitrotoluene	ND		9.7	1.8	ug/L		01/16/23 09:16	01/18/23 21:09	1
2,6-Dinitrotoluene	ND		9.7	1.8	ug/L		01/16/23 09:16	01/18/23 21:09	1
Di-n-octyl phthalate	ND		9.7	0.17	ug/L		01/16/23 09:16	01/18/23 21:09	1
1,4-Dioxane	ND		9.7	0.97	ug/L		01/16/23 09:16	01/18/23 21:09	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.7	0.97	ug/L		01/16/23 09:16	01/18/23 21:09	1
Hexachlorobenzene	ND		9.7	0.17	ug/L		01/16/23 09:16	01/18/23 21:09	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		01/16/23 09:16	01/18/23 21:09	1
Hexachloroethane	ND		9.7	4.1	ug/L		01/16/23 09:16	01/18/23 21:09	1
Indene	ND		9.7	0.97	ug/L		01/16/23 09:16	01/18/23 21:09	1
Isophorone	ND		9.7	0.14	ug/L		01/16/23 09:16	01/18/23 21:09	1
2-Methylphenol	ND		9.7	1.8	ug/L		01/16/23 09:16	01/18/23 21:09	1
3 & 4 Methylphenol	ND		19	0.38	ug/L		01/16/23 09:16	01/18/23 21:09	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW8-ROX-010923

Date Collected: 01/09/23 11:40
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-6

Matrix: Water

Method: SW846 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		01/16/23 09:16	01/18/23 21:09	1
3-Nitroaniline	ND		9.7	1.8	ug/L		01/16/23 09:16	01/18/23 21:09	1
4-Nitroaniline	ND		9.7	1.5	ug/L		01/16/23 09:16	01/18/23 21:09	1
Nitrobenzene	ND		9.7	0.13	ug/L		01/16/23 09:16	01/18/23 21:09	1
2-Nitrophenol	ND		9.7	5.1	ug/L		01/16/23 09:16	01/18/23 21:09	1
4-Nitrophenol	ND		9.7	2.0	ug/L		01/16/23 09:16	01/18/23 21:09	1
N-Nitrosodimethylamine	ND		9.7	3.4	ug/L		01/16/23 09:16	01/18/23 21:09	1
N-Nitrosodi-n-propylamine	ND		9.7	3.2	ug/L		01/16/23 09:16	01/18/23 21:09	1
N-Nitrosodiphenylamine	ND		9.7	0.18	ug/L		01/16/23 09:16	01/18/23 21:09	1
Pentachlorophenol	ND		19	1.4	ug/L		01/16/23 09:16	01/18/23 21:09	1
Pyridine	ND		9.7	3.1	ug/L		01/16/23 09:16	01/18/23 21:09	1
Quinoline	ND		9.7	4.4	ug/L		01/16/23 09:16	01/18/23 21:09	1
2,4,5-Trichlorophenol	ND		9.7	3.6	ug/L		01/16/23 09:16	01/18/23 21:09	1
2,4,6-Trichlorophenol	ND		9.7	3.4	ug/L		01/16/23 09:16	01/18/23 21:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*108*		*46 - 124*	*01/16/23 09:16*	*01/18/23 21:09*	*1*
2-Fluorophenol	*37*		*13 - 113*	*01/16/23 09:16*	*01/18/23 21:09*	*1*
Nitrobenzene-d5	*107*		*36 - 126*	*01/16/23 09:16*	*01/18/23 21:09*	*1*
Phenol-d5	*82*		*17 - 127*	*01/16/23 09:16*	*01/18/23 21:09*	*1*
Terphenyl-d14	*61*		*44 - 149*	*01/16/23 09:16*	*01/18/23 21:09*	*1*
2,4,6-Tribromophenol	*116*		*26 - 150*	*01/16/23 09:16*	*01/18/23 21:09*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	**270**		49	13	ug/L		01/16/23 09:16	01/19/23 21:47	5

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	**0.028**	**J *+**	0.029	0.017	ug/L		01/19/23 10:05	01/19/23 19:49	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/19/23 10:05	01/19/23 19:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*113*		*51 - 149*	*01/19/23 10:05*	*01/19/23 19:49*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW8-ROX-010923-DUP
Date Collected: 01/09/23 11:40
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-7
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25000	10000	ug/L			01/13/23 17:42	1000
Acrolein	ND		20000	3300	ug/L			01/13/23 17:42	1000
Acrylonitrile	ND		10000	2800	ug/L			01/13/23 17:42	1000
Bromobenzene	ND		1000	540	ug/L			01/13/23 17:42	1000
Bromochloromethane	ND		1000	210	ug/L			01/13/23 17:42	1000
Bromodichloromethane	ND		1000	500	ug/L			01/13/23 17:42	1000
Bromoform	ND		5000	250	ug/L			01/13/23 17:42	1000
Bromomethane	ND		1000	980	ug/L			01/13/23 17:42	1000
2-Butanone (MEK)	ND		25000	2600	ug/L			01/13/23 17:42	1000
Carbon disulfide	ND		1000	500	ug/L			01/13/23 17:42	1000
Carbon tetrachloride	ND		1000	190	ug/L			01/13/23 17:42	1000
Chlorobenzene	ND		1000	150	ug/L			01/13/23 17:42	1000
Dibromochloromethane	ND		1000	240	ug/L			01/13/23 17:42	1000
Chloroethane	ND		1000	760	ug/L			01/13/23 17:42	1000
2-Chloroethyl vinyl ether	ND		5000	2000	ug/L			01/13/23 17:42	1000
Chloroform	ND		1000	1000	ug/L			01/13/23 17:42	1000
1-Chlorohexane	ND		1000	320	ug/L			01/13/23 17:42	1000
Chloromethane	ND		1000	320	ug/L			01/13/23 17:42	1000
cis-1,2-Dichloroethene	ND		1000	200	ug/L			01/13/23 17:42	1000
cis-1,3-Dichloropropene	ND		5000	500	ug/L			01/13/23 17:42	1000
1,2-Dichlorobenzene	ND		1000	500	ug/L			01/13/23 17:42	1000
1,3-Dichlorobenzene	ND		1000	540	ug/L			01/13/23 17:42	1000
1,4-Dichlorobenzene	ND		1000	640	ug/L			01/13/23 17:42	1000
Dichlorodifluoromethane	ND		1000	850	ug/L			01/13/23 17:42	1000
1,1-Dichloroethane	ND		1000	500	ug/L			01/13/23 17:42	1000
1,2-Dichloroethane	ND		1000	190	ug/L			01/13/23 17:42	1000
1,1-Dichloroethene	ND		1000	500	ug/L			01/13/23 17:42	1000
1,2-Dichloropropane	ND		1000	500	ug/L			01/13/23 17:42	1000
1,3-Dichloropropane	ND		1000	500	ug/L			01/13/23 17:42	1000
2,2-Dichloropropane	ND		1000	500	ug/L			01/13/23 17:42	1000
1,1-Dichloropropene	ND		1000	500	ug/L			01/13/23 17:42	1000
Ethylbenzene	ND		1000	500	ug/L			01/13/23 17:42	1000
Ethyl methacrylate	ND		1000	600	ug/L			01/13/23 17:42	1000
Hexachlorobutadiene	ND		5000	900	ug/L			01/13/23 17:42	1000
2-Hexanone	ND		25000	1400	ug/L			01/13/23 17:42	1000
Isopropy benzene	ND		1000	530	ug/L			01/13/23 17:42	1000
Methylene bromide	ND		5000	220	ug/L			01/13/23 17:42	1000
Methylene Chloride	ND		5000	3000	ug/L			01/13/23 17:42	1000
4-Methyl-2-pentanone (MIBK)	ND		25000	1800	ug/L			01/13/23 17:42	1000
Methyl tert-butyl ether	ND		1000	220	ug/L			01/13/23 17:42	1000
m-Xylene & p-Xylene	ND		5000	630	ug/L			01/13/23 17:42	1000
Naphthalene	ND		5000	3000	ug/L			01/13/23 17:42	1000
n-Butylbenzene	ND		1000	760	ug/L			01/13/23 17:42	1000
N-Propylbenzene	ND		1000	690	ug/L			01/13/23 17:42	1000
o-Chlorotoluene	ND		1000	570	ug/L			01/13/23 17:42	1000
o-Xylene	ND		5000	600	ug/L			01/13/23 17:42	1000
p-Chlorotoluene	ND		1000	560	ug/L			01/13/23 17:42	1000
p-Isopropyltoluene	ND		1000	710	ug/L			01/13/23 17:42	1000
sec-Butylbenzene	ND		1000	700	ug/L			01/13/23 17:42	1000

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW8-ROX-010923-DUP
Date Collected: 01/09/23 11:40
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-7
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		1000	1000	ug/L			01/13/23 17:42	1000
tert-Butylbenzene	ND		1000	630	ug/L			01/13/23 17:42	1000
1,1,1,2-Tetrachloroethane	ND		1000	160	ug/L			01/13/23 17:42	1000
1,1,2,2-Tetrachloroethane	ND		1000	500	ug/L			01/13/23 17:42	1000
Tetrachloroethene	ND		1000	900	ug/L			01/13/23 17:42	1000
Toluene	ND		1000	410	ug/L			01/13/23 17:42	1000
trans-1,2-Dichloroethene	ND		1000	500	ug/L			01/13/23 17:42	1000
trans-1,3-Dichloropropene	ND		5000	200	ug/L			01/13/23 17:42	1000
1,2,3-Trichlorobenzene	ND		1000	900	ug/L			01/13/23 17:42	1000
1,2,4-Trichlorobenzene	ND		1000	820	ug/L			01/13/23 17:42	1000
1,1,1-Trichloroethane	ND		1000	180	ug/L			01/13/23 17:42	1000
1,1,2-Trichloroethane	ND		5000	210	ug/L			01/13/23 17:42	1000
Trichloroethene	ND		1000	150	ug/L			01/13/23 17:42	1000
Trichlorofluoromethane	ND		1000	520	ug/L			01/13/23 17:42	1000
1,2,3-Trichloropropane	ND		5000	840	ug/L			01/13/23 17:42	1000
1,2,4-Trimethy benzene	ND		1000	820	ug/L			01/13/23 17:42	1000
1,3,5-Trimethy benzene	ND		1000	560	ug/L			01/13/23 17:42	1000
Vinyl acetate	ND		25000	930	ug/L			01/13/23 17:42	1000
Vinyl chloride	ND		1000	500	ug/L			01/13/23 17:42	1000
Xylenes, Total	ND		10000	1600	ug/L			01/13/23 17:42	1000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*		*72 - 119*		*01/13/23 17:42*	*1000*
Dibromofluoromethane	*99*		*75 - 126*		*01/13/23 17:42*	*1000*
Toluene-d8 (Surr)	*94*		*64 - 132*		*01/13/23 17:42*	*1000*

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**380000**		2000	260	ug/L			01/14/23 11:59	2000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*72 - 119*		*01/14/23 11:59*	*2000*
Dibromofluoromethane	*103*		*75 - 126*		*01/14/23 11:59*	*2000*
Toluene-d8 (Surr)	*95*		*64 - 132*		*01/14/23 11:59*	*2000*

Method: SW846 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	0.033	ug/L		01/16/23 09:16	01/18/23 17:12	1
Acenaphthylene	ND		0.20	0.046	ug/L		01/16/23 09:16	01/18/23 17:12	1
Anthracene	ND		0.20	0.033	ug/L		01/16/23 09:16	01/18/23 17:12	1
Benzo[a]anthracene	ND		0.20	0.047	ug/L		01/16/23 09:16	01/18/23 17:12	1
Benzo[a]pyrene	ND		0.20	0.043	ug/L		01/16/23 09:16	01/18/23 17:12	1
Benzo[b]fluoranthene	ND		0.20	0.035	ug/L		01/16/23 09:16	01/18/23 17:12	1
Benzo[g,h,i]perylene	ND		0.20	0.13	ug/L		01/16/23 09:16	01/18/23 17:12	1
Benzo[k]fluoranthene	ND		0.20	0.10	ug/L		01/16/23 09:16	01/18/23 17:12	1
Chrysene	ND		0.20	0.075	ug/L		01/16/23 09:16	01/18/23 17:12	1
Dibenz(a,h)anthracene	ND		0.20	0.051	ug/L		01/16/23 09:16	01/18/23 17:12	1
Fluoranthene	ND		0.20	0.069	ug/L		01/16/23 09:16	01/18/23 17:12	1
Fluorene	ND		0.20	0.11	ug/L		01/16/23 09:16	01/18/23 17:12	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.044	ug/L		01/16/23 09:16	01/18/23 17:12	1

Client Sample ID: MW8-ROX-010923-DUP

Lab Sample ID: 400-231505-7

Date Collected: 01/09/23 11:40

Matrix: Water

Date Received: 01/10/23 09:43

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	**9.6**		0.20	0.075	ug/L		01/16/23 09:16	01/18/23 17:12	1
2-Methylnaphthalene	**3.7**		0.20	0.061	ug/L		01/16/23 09:16	01/18/23 17:12	1
Phenanthrene	**0.24**		0.20	0.037	ug/L		01/16/23 09:16	01/18/23 17:12	1
Pyrene	ND		0.20	0.041	ug/L		01/16/23 09:16	01/18/23 17:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*93*		*15 - 122*	*01/16/23 09:16*	*01/18/23 17:12*	*1*
Nitrobenzene-d5	*62*		*19 - 130*	*01/16/23 09:16*	*01/18/23 17:12*	*1*
Terphenyl-d14	*57*		*33 - 138*	*01/16/23 09:16*	*01/18/23 17:12*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.9	ug/L		01/16/23 09:16	01/18/23 21:31	1
Benzenethiol	ND	*-	10	1.7	ug/L		01/16/23 09:16	01/18/23 21:31	1
Benzoic acid	ND		30	7.4	ug/L		01/16/23 09:16	01/18/23 21:31	1
Benzyl alcohol	ND		10	2.0	ug/L		01/16/23 09:16	01/18/23 21:31	1
Bis(2-chloroethoxy)methane	ND		10	0.16	ug/L		01/16/23 09:16	01/18/23 21:31	1
Bis(2-chloroethyl)ether	ND		10	2.7	ug/L		01/16/23 09:16	01/18/23 21:31	1
bis (2-chloroisopropyl) ether	ND		10	0.16	ug/L		01/16/23 09:16	01/18/23 21:31	1
Bis(2-ethylhexyl) phthalate	ND		10	5.1	ug/L		01/16/23 09:16	01/18/23 21:31	1
4-Bromophenyl phenyl ether	ND		10	0.20	ug/L		01/16/23 09:16	01/18/23 21:31	1
Butyl benzyl phthalate	ND		10	0.19	ug/L		01/16/23 09:16	01/18/23 21:31	1
4-Chloroaniline	ND		10	3.5	ug/L		01/16/23 09:16	01/18/23 21:31	1
4-Chloro-3-methylphenol	ND		10	3.9	ug/L		01/16/23 09:16	01/18/23 21:31	1
2-Chloronaphthalene	ND		10	0.14	ug/L		01/16/23 09:16	01/18/23 21:31	1
2-Chlorophenol	ND	*1	10	2.2	ug/L		01/16/23 09:16	01/18/23 21:31	1
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		01/16/23 09:16	01/18/23 21:31	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/16/23 09:16	01/18/23 21:31	1
Dibenzofuran	ND		10	0.17	ug/L		01/16/23 09:16	01/18/23 21:31	1
3,3'-Dichlorobenzidine	ND	*+	10	2.6	ug/L		01/16/23 09:16	01/18/23 21:31	1
2,4-Dichlorophenol	ND		10	3.0	ug/L		01/16/23 09:16	01/18/23 21:31	1
Diethyl phthalate	ND		10	0.24	ug/L		01/16/23 09:16	01/18/23 21:31	1
2,4-Dimethylphenol	ND		10	3.6	ug/L		01/16/23 09:16	01/18/23 21:31	1
Dimethyl phthalate	ND		10	0.17	ug/L		01/16/23 09:16	01/18/23 21:31	1
Di-n-butyl phthalate	ND		10	2.7	ug/L		01/16/23 09:16	01/18/23 21:31	1
4,6-Dinitro-ortho-cresol	ND		10	1.6	ug/L		01/16/23 09:16	01/18/23 21:31	1
2,4-Dinitrophenol	ND		30	3.5	ug/L		01/16/23 09:16	01/18/23 21:31	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		01/16/23 09:16	01/18/23 21:31	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		01/16/23 09:16	01/18/23 21:31	1
Di-n-octyl phthalate	ND		10	0.17	ug/L		01/16/23 09:16	01/18/23 21:31	1
1,4-Dioxane	ND		10	1.0	ug/L		01/16/23 09:16	01/18/23 21:31	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/16/23 09:16	01/18/23 21:31	1
Hexachlorobenzene	ND		10	0.17	ug/L		01/16/23 09:16	01/18/23 21:31	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		01/16/23 09:16	01/18/23 21:31	1
Hexachloroethane	ND		10	4.3	ug/L		01/16/23 09:16	01/18/23 21:31	1
Indene	**1.1**	**J**	10	1.0	ug/L		01/16/23 09:16	01/18/23 21:31	1
Isophorone	ND		10	0.14	ug/L		01/16/23 09:16	01/18/23 21:31	1
2-Methylphenol	ND		10	1.8	ug/L		01/16/23 09:16	01/18/23 21:31	1
3 & 4 Methylphenol	ND		20	0.40	ug/L		01/16/23 09:16	01/18/23 21:31	1

Client Sample ID: MW8-ROX-010923-DUP
Date Collected: 01/09/23 11:40
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-7
Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	ND		10	2.2	ug/L		01/16/23 09:16	01/18/23 21:31	1
3-Nitroaniline	ND		10	1.8	ug/L		01/16/23 09:16	01/18/23 21:31	1
4-Nitroaniline	ND		10	1.5	ug/L		01/16/23 09:16	01/18/23 21:31	1
Nitrobenzene	ND		10	0.13	ug/L		01/16/23 09:16	01/18/23 21:31	1
2-Nitrophenol	ND		10	5.3	ug/L		01/16/23 09:16	01/18/23 21:31	1
4-Nitrophenol	ND		10	2.1	ug/L		01/16/23 09:16	01/18/23 21:31	1
N-Nitrosodimethylamine	ND		10	3.6	ug/L		01/16/23 09:16	01/18/23 21:31	1
N-Nitrosodi-n-propylamine	ND		10	3.4	ug/L		01/16/23 09:16	01/18/23 21:31	1
N-Nitrosodiphenylamine	ND		10	0.18	ug/L		01/16/23 09:16	01/18/23 21:31	1
Pentachlorophenol	ND		20	1.4	ug/L		01/16/23 09:16	01/18/23 21:31	1
Pyridine	ND		10	3.3	ug/L		01/16/23 09:16	01/18/23 21:31	1
Quinoline	ND		10	4.6	ug/L		01/16/23 09:16	01/18/23 21:31	1
2,4,5-Trichlorophenol	ND		10	3.8	ug/L		01/16/23 09:16	01/18/23 21:31	1
2,4,6-Trichlorophenol	ND		10	3.6	ug/L		01/16/23 09:16	01/18/23 21:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*93*		*46 - 124*	*01/16/23 09:16*	*01/18/23 21:31*	*1*
2-Fluorophenol	*47*		*13 - 113*	*01/16/23 09:16*	*01/18/23 21:31*	*1*
Nitrobenzene-d5	*92*		*36 - 126*	*01/16/23 09:16*	*01/18/23 21:31*	*1*
Phenol-d5	*83*		*17 - 127*	*01/16/23 09:16*	*01/18/23 21:31*	*1*
Terphenyl-d14	*59*		*44 - 149*	*01/16/23 09:16*	*01/18/23 21:31*	*1*
2,4,6-Tribromophenol	*101*		*26 - 150*	*01/16/23 09:16*	*01/18/23 21:31*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	**230**		51	13	ug/L		01/16/23 09:16	01/19/23 22:12	5

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	**0.028**	**J *+**	0.030	0.017	ug/L		01/19/23 10:05	01/19/23 20:09	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/19/23 10:05	01/19/23 20:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*108*	*p*	*51 - 149*	*01/19/23 10:05*	*01/19/23 20:09*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW7-ROX-010923
Date Collected: 01/09/23 13:00
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-8
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		50000	20000	ug/L			01/13/23 18:07	2000
Acrolein	ND		40000	6600	ug/L			01/13/23 18:07	2000
Acrylonitrile	ND		20000	5600	ug/L			01/13/23 18:07	2000
Benzene	**420000**		2000	260	ug/L			01/13/23 18:07	2000
Bromobenzene	ND		2000	1100	ug/L			01/13/23 18:07	2000
Bromochloromethane	ND		2000	420	ug/L			01/13/23 18:07	2000
Bromodichloromethane	ND		2000	1000	ug/L			01/13/23 18:07	2000
Bromoform	ND		10000	500	ug/L			01/13/23 18:07	2000
Bromomethane	ND		2000	2000	ug/L			01/13/23 18:07	2000
2-Butanone (MEK)	ND		50000	5200	ug/L			01/13/23 18:07	2000
Carbon disulfide	ND		2000	1000	ug/L			01/13/23 18:07	2000
Carbon tetrachloride	ND		2000	380	ug/L			01/13/23 18:07	2000
Chlorobenzene	ND		2000	300	ug/L			01/13/23 18:07	2000
Dibromochloromethane	ND		2000	480	ug/L			01/13/23 18:07	2000
Chloroethane	ND		2000	1500	ug/L			01/13/23 18:07	2000
2-Chloroethyl vinyl ether	ND		10000	4000	ug/L			01/13/23 18:07	2000
Chloroform	ND		2000	2000	ug/L			01/13/23 18:07	2000
1-Chlorohexane	ND		2000	640	ug/L			01/13/23 18:07	2000
Chloromethane	ND		2000	640	ug/L			01/13/23 18:07	2000
cis-1,2-Dichloroethene	ND		2000	400	ug/L			01/13/23 18:07	2000
cis-1,3-Dichloropropene	ND		10000	1000	ug/L			01/13/23 18:07	2000
1,2-Dichlorobenzene	ND		2000	1000	ug/L			01/13/23 18:07	2000
1,3-Dichlorobenzene	ND		2000	1100	ug/L			01/13/23 18:07	2000
1,4-Dichlorobenzene	ND		2000	1300	ug/L			01/13/23 18:07	2000
Dichlorodifluoromethane	ND		2000	1700	ug/L			01/13/23 18:07	2000
1,1-Dichloroethane	ND		2000	1000	ug/L			01/13/23 18:07	2000
1,2-Dichloroethane	ND		2000	380	ug/L			01/13/23 18:07	2000
1,1-Dichloroethene	ND		2000	1000	ug/L			01/13/23 18:07	2000
1,2-Dichloropropane	ND		2000	1000	ug/L			01/13/23 18:07	2000
1,3-Dichloropropane	ND		2000	1000	ug/L			01/13/23 18:07	2000
2,2-Dichloropropane	ND		2000	1000	ug/L			01/13/23 18:07	2000
1,1-Dichloropropene	ND		2000	1000	ug/L			01/13/23 18:07	2000
Ethylbenzene	ND		2000	1000	ug/L			01/13/23 18:07	2000
Ethyl methacrylate	ND		2000	1200	ug/L			01/13/23 18:07	2000
Hexachlorobutadiene	ND		10000	1800	ug/L			01/13/23 18:07	2000
2-Hexanone	ND		50000	2800	ug/L			01/13/23 18:07	2000
Isopropy benzene	ND		2000	1100	ug/L			01/13/23 18:07	2000
Methylene bromide	ND		10000	440	ug/L			01/13/23 18:07	2000
Methylene Chloride	ND		10000	6000	ug/L			01/13/23 18:07	2000
4-Methyl-2-pentanone (MIBK)	ND		50000	3600	ug/L			01/13/23 18:07	2000
Methyl tert-butyl ether	ND		2000	440	ug/L			01/13/23 18:07	2000
m-Xylene & p-Xylene	ND		10000	1300	ug/L			01/13/23 18:07	2000
Naphthalene	ND		10000	6000	ug/L			01/13/23 18:07	2000
n-Butylbenzene	ND		2000	1500	ug/L			01/13/23 18:07	2000
N-Propylbenzene	ND		2000	1400	ug/L			01/13/23 18:07	2000
o-Chlorotoluene	ND		2000	1100	ug/L			01/13/23 18:07	2000
o-Xylene	ND		10000	1200	ug/L			01/13/23 18:07	2000
p-Chlorotoluene	ND		2000	1100	ug/L			01/13/23 18:07	2000
p-Isopropyltoluene	ND		2000	1400	ug/L			01/13/23 18:07	2000

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW7-ROX-010923

Date Collected: 01/09/23 13:00
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-8

Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		2000	1400	ug/L			01/13/23 18:07	2000
Styrene	ND		2000	2000	ug/L			01/13/23 18:07	2000
tert-Butylbenzene	ND		2000	1300	ug/L			01/13/23 18:07	2000
1,1,1,2-Tetrachloroethane	ND		2000	320	ug/L			01/13/23 18:07	2000
1,1,2,2-Tetrachloroethane	ND		2000	1000	ug/L			01/13/23 18:07	2000
Tetrachloroethene	ND		2000	1800	ug/L			01/13/23 18:07	2000
Toluene	ND		2000	820	ug/L			01/13/23 18:07	2000
trans-1,2-Dichloroethene	ND		2000	1000	ug/L			01/13/23 18:07	2000
trans-1,3-Dichloropropene	ND		10000	400	ug/L			01/13/23 18:07	2000
1,2,3-Trichlorobenzene	ND		2000	1800	ug/L			01/13/23 18:07	2000
1,2,4-Trichlorobenzene	ND		2000	1600	ug/L			01/13/23 18:07	2000
1,1,1-Trichloroethane	ND		2000	360	ug/L			01/13/23 18:07	2000
1,1,2-Trichloroethane	ND		10000	420	ug/L			01/13/23 18:07	2000
Trichloroethene	ND		2000	300	ug/L			01/13/23 18:07	2000
Trichlorofluoromethane	ND		2000	1000	ug/L			01/13/23 18:07	2000
1,2,3-Trichloropropane	ND		10000	1700	ug/L			01/13/23 18:07	2000
1,2,4-Trimethy benzene	ND		2000	1600	ug/L			01/13/23 18:07	2000
1,3,5-Trimethy benzene	ND		2000	1100	ug/L			01/13/23 18:07	2000
Vinyl acetate	ND		50000	1900	ug/L			01/13/23 18:07	2000
Vinyl chloride	ND		2000	1000	ug/L			01/13/23 18:07	2000
Xylenes, Total	ND		20000	3200	ug/L			01/13/23 18:07	2000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*72 - 119*		*01/13/23 18:07*	*2000*
Dibromofluoromethane	*100*		*75 - 126*		*01/13/23 18:07*	*2000*
Toluene-d8 (Surr)	*95*		*64 - 132*		*01/13/23 18:07*	*2000*

Method: SW846 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	0.032	ug/L		01/16/23 09:16	01/18/23 17:29	1
Acenaphthylene	ND		0.20	0.046	ug/L		01/16/23 09:16	01/18/23 17:29	1
Anthracene	ND		0.20	0.032	ug/L		01/16/23 09:16	01/18/23 17:29	1
Benzo[a]anthracene	ND		0.20	0.047	ug/L		01/16/23 09:16	01/18/23 17:29	1
Benzo[a]pyrene	ND		0.20	0.043	ug/L		01/16/23 09:16	01/18/23 17:29	1
Benzo[b]fluoranthene	ND		0.20	0.035	ug/L		01/16/23 09:16	01/18/23 17:29	1
Benzo[g,h,i]perylene	ND		0.20	0.13	ug/L		01/16/23 09:16	01/18/23 17:29	1
Benzo[k]fluoranthene	ND		0.20	0.10	ug/L		01/16/23 09:16	01/18/23 17:29	1
Chrysene	ND		0.20	0.075	ug/L		01/16/23 09:16	01/18/23 17:29	1
Dibenz(a,h)anthracene	ND		0 20	0 051	ug/L		01/16/23 09 16	01/18/23 17 29	1
Fluoranthene	**0.18**	**J**	0.20	0.069	ug/L		01/16/23 09:16	01/18/23 17:29	1
Fluorene	ND		0.20	0.11	ug/L		01/16/23 09:16	01/18/23 17:29	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.044	ug/L		01/16/23 09:16	01/18/23 17:29	1
1-Methylnaphthalene	**1.1**		0.20	0.075	ug/L		01/16/23 09:16	01/18/23 17:29	1
2-Methylnaphthalene	**1.5**		0.20	0.061	ug/L		01/16/23 09:16	01/18/23 17:29	1
Phenanthrene	**0.12**	**J**	0.20	0.037	ug/L		01/16/23 09:16	01/18/23 17:29	1
Pyrene	**0.15**	**J B**	0.20	0.041	ug/L		01/16/23 09:16	01/18/23 17:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*94*		*15 - 122*	*01/16/23 09:16*	*01/18/23 17:29*	*1*
Nitrobenzene-d5	*64*		*19 - 130*	*01/16/23 09:16*	*01/18/23 17:29*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW7-ROX-010923
Date Collected: 01/09/23 13:00
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-8
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*105*		*33 - 138*	*01/16/23 09:16*	*01/18/23 17:29*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.9	ug/L		01/16/23 09:16	01/18/23 21:53	1
Benzenethiol	ND	*-	10	1.7	ug/L		01/16/23 09:16	01/18/23 21:53	1
Benzoic acid	ND		30	7.4	ug/L		01/16/23 09:16	01/18/23 21:53	1
Benzyl alcohol	ND		10	2.0	ug/L		01/16/23 09:16	01/18/23 21:53	1
Bis(2-chloroethoxy)methane	ND		10	0.16	ug/L		01/16/23 09:16	01/18/23 21:53	1
Bis(2-chloroethyl)ether	ND		10	2.7	ug/L		01/16/23 09:16	01/18/23 21:53	1
bis (2-chloroisopropyl) ether	ND		10	0.16	ug/L		01/16/23 09:16	01/18/23 21:53	1
Bis(2-ethylhexyl) phthalate	ND		10	5.1	ug/L		01/16/23 09:16	01/18/23 21:53	1
4-Bromophenyl phenyl ether	ND		10	0.20	ug/L		01/16/23 09:16	01/18/23 21:53	1
Butyl benzyl phthalate	ND		10	0.19	ug/L		01/16/23 09:16	01/18/23 21:53	1
4-Chloroaniline	ND		10	3.5	ug/L		01/16/23 09:16	01/18/23 21:53	1
4-Chloro-3-methylphenol	ND		10	3.9	ug/L		01/16/23 09:16	01/18/23 21:53	1
2-Chloronaphthalene	ND		10	0.14	ug/L		01/16/23 09:16	01/18/23 21:53	1
2-Chlorophenol	ND	*1	10	2.2	ug/L		01/16/23 09:16	01/18/23 21:53	1
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		01/16/23 09:16	01/18/23 21:53	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/16/23 09:16	01/18/23 21:53	1
Dibenzofuran	ND		10	0.17	ug/L		01/16/23 09:16	01/18/23 21:53	1
3,3'-Dichlorobenzidine	ND	*+	10	2.6	ug/L		01/16/23 09:16	01/18/23 21:53	1
2,4-Dichlorophenol	ND		10	3.0	ug/L		01/16/23 09:16	01/18/23 21:53	1
Diethyl phthalate	ND		10	0.24	ug/L		01/16/23 09:16	01/18/23 21:53	1
2,4-Dimethylphenol	ND		10	3.6	ug/L		01/16/23 09:16	01/18/23 21:53	1
Dimethyl phthalate	ND		10	0.17	ug/L		01/16/23 09:16	01/18/23 21:53	1
Di-n-butyl phthalate	ND		10	2.7	ug/L		01/16/23 09:16	01/18/23 21:53	1
4,6-Dinitro-ortho-cresol	ND		10	1.6	ug/L		01/16/23 09:16	01/18/23 21:53	1
2,4-Dinitrophenol	ND		30	3.5	ug/L		01/16/23 09:16	01/18/23 21:53	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		01/16/23 09:16	01/18/23 21:53	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		01/16/23 09:16	01/18/23 21:53	1
Di-n-octyl phthalate	ND		10	0.17	ug/L		01/16/23 09:16	01/18/23 21:53	1
1,4-Dioxane	ND		10	1.0	ug/L		01/16/23 09:16	01/18/23 21:53	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/16/23 09:16	01/18/23 21:53	1
Hexachlorobenzene	ND		10	0.17	ug/L		01/16/23 09:16	01/18/23 21:53	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		01/16/23 09:16	01/18/23 21:53	1
Hexachloroethane	ND		10	4.3	ug/L		01/16/23 09:16	01/18/23 21:53	1
Indene	ND		10	1.0	ug/L		01/16/23 09:16	01/18/23 21:53	1
Isophorone	ND		10	0.14	ug/L		01/16/23 09:16	01/18/23 21:53	1
2-Methylphenol	ND		10	1.8	ug/L		01/16/23 09:16	01/18/23 21:53	1
3 & 4 Methylphenol	ND		20	0.40	ug/L		01/16/23 09:16	01/18/23 21:53	1
2-Nitroaniline	ND		10	2.2	ug/L		01/16/23 09:16	01/18/23 21:53	1
3-Nitroaniline	ND		10	1.8	ug/L		01/16/23 09:16	01/18/23 21:53	1
4-Nitroaniline	ND		10	1.5	ug/L		01/16/23 09:16	01/18/23 21:53	1
Nitrobenzene	ND		10	0.13	ug/L		01/16/23 09:16	01/18/23 21:53	1
2-Nitrophenol	ND		10	5.3	ug/L		01/16/23 09:16	01/18/23 21:53	1
4-Nitrophenol	ND		10	2.1	ug/L		01/16/23 09:16	01/18/23 21:53	1
N-Nitrosodimethylamine	ND		10	3.6	ug/L		01/16/23 09:16	01/18/23 21:53	1

Client Sample ID: MW7-ROX-010923
Date Collected: 01/09/23 13:00
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-8
Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		10	3.4	ug/L		01/16/23 09:16	01/18/23 21:53	1
N-Nitrosodiphenylamine	ND		10	0.18	ug/L		01/16/23 09:16	01/18/23 21:53	1
Pentachlorophenol	ND		20	1.4	ug/L		01/16/23 09:16	01/18/23 21:53	1
Phenol	**34**		10	2.6	ug/L		01/16/23 09:16	01/18/23 21:53	1
Pyridine	ND		10	3.2	ug/L		01/16/23 09:16	01/18/23 21:53	1
Quinoline	ND		10	4.6	ug/L		01/16/23 09:16	01/18/23 21:53	1
2,4,5-Trichlorophenol	ND		10	3.8	ug/L		01/16/23 09:16	01/18/23 21:53	1
2,4,6-Trichlorophenol	ND		10	3.6	ug/L		01/16/23 09:16	01/18/23 21:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*88*		*46 - 124*	*01/16/23 09:16*	*01/18/23 21:53*	*1*
2-Fluorophenol	*3*	*S1-*	*13 - 113*	*01/16/23 09:16*	*01/18/23 21:53*	*1*
Nitrobenzene-d5	*82*		*36 - 126*	*01/16/23 09:16*	*01/18/23 21:53*	*1*
Phenol-d5	*19*		*17 - 127*	*01/16/23 09:16*	*01/18/23 21:53*	*1*
Terphenyl-d14	*99*		*44 - 149*	*01/16/23 09:16*	*01/18/23 21:53*	*1*
2,4,6-Tribromophenol	*70*		*26 - 150*	*01/16/23 09:16*	*01/18/23 21:53*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	**0.020**	**J *+**	0.032	0.018	ug/L		01/19/23 10:05	01/19/23 20:30	1
1,2-D bromoethane	ND		0.021	0.016	ug/L		01/19/23 10:05	01/19/23 20:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*114*		*51 - 149*	*01/19/23 10:05*	*01/19/23 20:30*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: TB-ROX-010923-8260-B
Date Collected: 01/09/23 12:00
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-9
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/13/23 13:37	1
Acrolein	ND		20	3.3	ug/L			01/13/23 13:37	1
Acrylonitrile	ND		10	2.8	ug/L			01/13/23 13:37	1
Benzene	ND		1.0	0.13	ug/L			01/13/23 13:37	1
Bromobenzene	ND		1.0	0.54	ug/L			01/13/23 13:37	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/13/23 13:37	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/13/23 13:37	1
Bromoform	ND		5.0	0.25	ug/L			01/13/23 13:37	1
Bromomethane	ND		1.0	0.98	ug/L			01/13/23 13:37	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/13/23 13:37	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/13/23 13:37	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/13/23 13:37	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/13/23 13:37	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/13/23 13:37	1
Chloroethane	ND		1.0	0.76	ug/L			01/13/23 13:37	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/13/23 13:37	1
Chloroform	ND		1.0	1.0	ug/L			01/13/23 13:37	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/13/23 13:37	1
Chloromethane	ND		1.0	0.32	ug/L			01/13/23 13:37	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/13/23 13:37	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/13/23 13:37	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/13/23 13:37	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/13/23 13:37	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/13/23 13:37	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/13/23 13:37	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/13/23 13:37	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/13/23 13:37	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 13:37	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 13:37	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 13:37	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 13:37	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/13/23 13:37	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/13/23 13:37	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/13/23 13:37	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/13/23 13:37	1
2-Hexanone	ND		25	1.4	ug/L			01/13/23 13:37	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/13/23 13:37	1
Methylene bromide	ND		5.0	0.22	ug/L			01/13/23 13:37	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/13/23 13:37	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/13/23 13:37	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/13/23 13:37	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/13/23 13:37	1
Naphthalene	ND		5.0	3.0	ug/L			01/13/23 13:37	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/13/23 13:37	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/13/23 13:37	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/13/23 13:37	1
o-Xylene	ND		5.0	0.60	ug/L			01/13/23 13:37	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/13/23 13:37	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/13/23 13:37	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: TB-ROX-010923-8260-B
Date Collected: 01/09/23 12:00
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-9
Matrix: Water

Method: SW846 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			01/13/23 13:37	1
Styrene	ND		1.0	1.0	ug/L			01/13/23 13:37	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/13/23 13:37	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/13/23 13:37	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/13/23 13:37	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/13/23 13:37	1
Toluene	ND		1.0	0.41	ug/L			01/13/23 13:37	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 13:37	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/13/23 13:37	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/13/23 13:37	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/13/23 13:37	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/13/23 13:37	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/13/23 13:37	1
Trichloroethene	ND		1.0	0.15	ug/L			01/13/23 13:37	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/13/23 13:37	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/13/23 13:37	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/13/23 13:37	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/13/23 13:37	1
Vinyl acetate	ND		25	0.93	ug/L			01/13/23 13:37	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/13/23 13:37	1
Xylenes, Total	ND		10	1.6	ug/L			01/13/23 13:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*72 - 119*		*01/13/23 13:37*	*1*
Dibromofluoromethane	*103*		*75 - 126*		*01/13/23 13:37*	*1*
Toluene-d8 (Surr)	*94*		*64 - 132*		*01/13/23 13:37*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: TB-ROX-010923-8011-B
Date Collected: 01/09/23 12:00
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-10
Matrix: Water

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.030	0.017	ug/L		01/17/23 10:00	01/17/23 19:24	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/17/23 10:00	01/17/23 19:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*119*	*p*	*51 - 149*	*01/17/23 10:00*	*01/17/23 19:24*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW13-ROX-010923-EB
Date Collected: 01/09/23 08:50
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-11
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/13/23 14:02	1
Acrolein	ND		20	3.3	ug/L			01/13/23 14:02	1
Acrylonitrile	ND		10	2.8	ug/L			01/13/23 14:02	1
Benzene	ND		1.0	0.13	ug/L			01/13/23 14:02	1
Bromobenzene	ND		1.0	0.54	ug/L			01/13/23 14:02	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/13/23 14:02	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/13/23 14:02	1
Bromoform	ND		5.0	0.25	ug/L			01/13/23 14:02	1
Bromomethane	ND		1.0	0.98	ug/L			01/13/23 14:02	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/13/23 14:02	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/13/23 14:02	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/13/23 14:02	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/13/23 14:02	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/13/23 14:02	1
Chloroethane	ND		1.0	0.76	ug/L			01/13/23 14:02	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/13/23 14:02	1
Chloroform	ND		1.0	1.0	ug/L			01/13/23 14:02	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/13/23 14:02	1
Chloromethane	ND		1.0	0.32	ug/L			01/13/23 14:02	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/13/23 14:02	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/13/23 14:02	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/13/23 14:02	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/13/23 14:02	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/13/23 14:02	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/13/23 14:02	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/13/23 14:02	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/13/23 14:02	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 14:02	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 14:02	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 14:02	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 14:02	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/13/23 14:02	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/13/23 14:02	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/13/23 14:02	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/13/23 14:02	1
2-Hexanone	ND		25	1.4	ug/L			01/13/23 14:02	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/13/23 14:02	1
Methylene bromide	ND		5.0	0.22	ug/L			01/13/23 14:02	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/13/23 14:02	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/13/23 14:02	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/13/23 14:02	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/13/23 14:02	1
Naphthalene	ND		5.0	3.0	ug/L			01/13/23 14:02	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/13/23 14:02	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/13/23 14:02	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/13/23 14:02	1
o-Xylene	ND		5.0	0.60	ug/L			01/13/23 14:02	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/13/23 14:02	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/13/23 14:02	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW13-ROX-010923-EB

Date Collected: 01/09/23 08:50
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-11

Matrix: Water

Method: SW846 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			01/13/23 14:02	1
Styrene	ND		1.0	1.0	ug/L			01/13/23 14:02	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/13/23 14:02	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/13/23 14:02	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/13/23 14:02	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/13/23 14:02	1
Toluene	ND		1.0	0.41	ug/L			01/13/23 14:02	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 14:02	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/13/23 14:02	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/13/23 14:02	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/13/23 14:02	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/13/23 14:02	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/13/23 14:02	1
Trichloroethene	ND		1.0	0.15	ug/L			01/13/23 14:02	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/13/23 14:02	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/13/23 14:02	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/13/23 14:02	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/13/23 14:02	1
Vinyl acetate	ND		25	0.93	ug/L			01/13/23 14:02	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/13/23 14:02	1
Xylenes, Total	ND		10	1.6	ug/L			01/13/23 14:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*72 - 119*		*01/13/23 14:02*	*1*
Dibromofluoromethane	*102*		*75 - 126*		*01/13/23 14:02*	*1*
Toluene-d8 (Surr)	*95*		*64 - 132*		*01/13/23 14:02*	*1*

Method: SW846 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	0.030	ug/L		01/16/23 09:16	01/18/23 17:47	1
Acenaphthylene	ND		0.19	0.043	ug/L		01/16/23 09:16	01/18/23 17:47	1
Anthracene	ND		0.19	0.030	ug/L		01/16/23 09:16	01/18/23 17:47	1
Benzo[a]anthracene	ND		0.19	0.043	ug/L		01/16/23 09:16	01/18/23 17:47	1
Benzo[a]pyrene	ND		0.19	0.040	ug/L		01/16/23 09:16	01/18/23 17:47	1
Benzo[b]fluoranthene	ND		0.19	0.032	ug/L		01/16/23 09:16	01/18/23 17:47	1
Benzo[g,h,i]perylene	ND		0.19	0.12	ug/L		01/16/23 09:16	01/18/23 17:47	1
Benzo[k]fluoranthene	ND		0.19	0.094	ug/L		01/16/23 09:16	01/18/23 17:47	1
Chrysene	ND		0.19	0.070	ug/L		01/16/23 09:16	01/18/23 17:47	1
Dibenz(a,h)anthracene	ND		0 19	0 047	ug/L		01/16/23 09 16	01/18/23 17 47	1
Fluoranthene	ND		0.19	0.064	ug/L		01/16/23 09:16	01/18/23 17:47	1
Fluorene	ND		0.19	0.10	ug/L		01/16/23 09:16	01/18/23 17:47	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.041	ug/L		01/16/23 09:16	01/18/23 17:47	1
1-Methylnaphthalene	ND		0.19	0.070	ug/L		01/16/23 09:16	01/18/23 17:47	1
2-Methylnaphthalene	ND		0.19	0.057	ug/L		01/16/23 09:16	01/18/23 17:47	1
Phenanthrene	ND		0.19	0.034	ug/L		01/16/23 09:16	01/18/23 17:47	1
Pyrene	ND		0.19	0.038	ug/L		01/16/23 09:16	01/18/23 17:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*108*		*15 - 122*	*01/16/23 09:16*	*01/18/23 17:47*	*1*
Nitrobenzene-d5	*72*		*19 - 130*	*01/16/23 09:16*	*01/18/23 17:47*	*1*

Client Sample ID: MW13-ROX-010923-EB
Date Collected: 01/09/23 08:50
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-11
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*123*		*33 - 138*	*01/16/23 09:16*	*01/18/23 17:47*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.4	3.6	ug/L		01/16/23 09:16	01/18/23 22:15	1
Benzenethiol	ND	*-	9.4	1.6	ug/L		01/16/23 09:16	01/18/23 22:15	1
Benzoic acid	ND		28	6.9	ug/L		01/16/23 09:16	01/18/23 22:15	1
Benzyl alcohol	ND		9.4	1.9	ug/L		01/16/23 09:16	01/18/23 22:15	1
Bis(2-chloroethoxy)methane	ND		9.4	0.15	ug/L		01/16/23 09:16	01/18/23 22:15	1
Bis(2-chloroethyl)ether	ND		9.4	2.6	ug/L		01/16/23 09:16	01/18/23 22:15	1
bis (2-chloroisopropyl) ether	ND		9.4	0.15	ug/L		01/16/23 09:16	01/18/23 22:15	1
Bis(2-ethylhexyl) phthalate	ND		9.4	4.7	ug/L		01/16/23 09:16	01/18/23 22:15	1
4-Bromophenyl phenyl ether	ND		9.4	0.19	ug/L		01/16/23 09:16	01/18/23 22:15	1
Butyl benzyl phthalate	ND		9.4	0.18	ug/L		01/16/23 09:16	01/18/23 22:15	1
4-Chloroaniline	ND		9.4	3.2	ug/L		01/16/23 09:16	01/18/23 22:15	1
4-Chloro-3-methylphenol	ND		9.4	3.6	ug/L		01/16/23 09:16	01/18/23 22:15	1
2-Chloronaphthalene	ND		9.4	0.13	ug/L		01/16/23 09:16	01/18/23 22:15	1
2-Chlorophenol	ND	*1	9.4	2.1	ug/L		01/16/23 09:16	01/18/23 22:15	1
4-Chlorophenyl phenyl ether	ND		9.4	1.9	ug/L		01/16/23 09:16	01/18/23 22:15	1
Dibenz[a,h]acridine	ND		9.4	0.94	ug/L		01/16/23 09:16	01/18/23 22:15	1
Dibenzofuran	ND		9.4	0.16	ug/L		01/16/23 09:16	01/18/23 22:15	1
3,3'-Dichlorobenzidine	ND	*+	9.4	2.5	ug/L		01/16/23 09:16	01/18/23 22:15	1
2,4-Dichlorophenol	ND		9.4	2.8	ug/L		01/16/23 09:16	01/18/23 22:15	1
Diethyl phthalate	ND		9.4	0.23	ug/L		01/16/23 09:16	01/18/23 22:15	1
2,4-Dimethylphenol	ND		9.4	3.3	ug/L		01/16/23 09:16	01/18/23 22:15	1
Dimethyl phthalate	ND		9.4	0.16	ug/L		01/16/23 09:16	01/18/23 22:15	1
Di-n-butyl phthalate	ND		9.4	2.6	ug/L		01/16/23 09:16	01/18/23 22:15	1
4,6-Dinitro-ortho-cresol	ND		9.4	1.5	ug/L		01/16/23 09:16	01/18/23 22:15	1
2,4-Dinitrophenol	ND		28	3.2	ug/L		01/16/23 09:16	01/18/23 22:15	1
2,4-Dinitrotoluene	ND		9.4	1.8	ug/L		01/16/23 09:16	01/18/23 22:15	1
2,6-Dinitrotoluene	ND		9.4	1.8	ug/L		01/16/23 09:16	01/18/23 22:15	1
Di-n-octyl phthalate	ND		9.4	0.16	ug/L		01/16/23 09:16	01/18/23 22:15	1
1,4-Dioxane	ND		9.4	0.94	ug/L		01/16/23 09:16	01/18/23 22:15	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.4	0.94	ug/L		01/16/23 09:16	01/18/23 22:15	1
Hexachlorobenzene	ND		9.4	0.16	ug/L		01/16/23 09:16	01/18/23 22:15	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		01/16/23 09:16	01/18/23 22:15	1
Hexachloroethane	ND		9.4	4.0	ug/L		01/16/23 09:16	01/18/23 22:15	1
Indene	ND		9.4	0.94	ug/L		01/16/23 09:16	01/18/23 22:15	1
Isophorone	ND		9.4	0.13	ug/L		01/16/23 09:16	01/18/23 22:15	1
2-Methylphenol	ND		9.4	1.7	ug/L		01/16/23 09:16	01/18/23 22:15	1
3 & 4 Methylphenol	ND		19	0.37	ug/L		01/16/23 09:16	01/18/23 22:15	1
2-Nitroaniline	ND		9.4	2.1	ug/L		01/16/23 09:16	01/18/23 22:15	1
3-Nitroaniline	ND		9.4	1.7	ug/L		01/16/23 09:16	01/18/23 22:15	1
4-Nitroaniline	ND		9.4	1.4	ug/L		01/16/23 09:16	01/18/23 22:15	1
Nitrobenzene	ND		9.4	0.12	ug/L		01/16/23 09:16	01/18/23 22:15	1
2-Nitrophenol	ND		9.4	4.9	ug/L		01/16/23 09:16	01/18/23 22:15	1
4-Nitrophenol	ND		9.4	2.0	ug/L		01/16/23 09:16	01/18/23 22:15	1
N-Nitrosodimethylamine	ND		9.4	3.3	ug/L		01/16/23 09:16	01/18/23 22:15	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW13-ROX-010923-EB
Date Collected: 01/09/23 08:50
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-11
Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.4	3.1	ug/L		01/16/23 09:16	01/18/23 22:15	1
N-Nitrosodiphenylamine	ND		9.4	0.17	ug/L		01/16/23 09:16	01/18/23 22:15	1
Pentachlorophenol	ND		19	1.3	ug/L		01/16/23 09:16	01/18/23 22:15	1
Phenol	ND		9.4	2.5	ug/L		01/16/23 09:16	01/18/23 22:15	1
Pyridine	ND		9.4	3.0	ug/L		01/16/23 09:16	01/18/23 22:15	1
Quinoline	ND		9.4	4.3	ug/L		01/16/23 09:16	01/18/23 22:15	1
2,4,5-Trichlorophenol	ND		9.4	3.5	ug/L		01/16/23 09:16	01/18/23 22:15	1
2,4,6-Trichlorophenol	ND		9.4	3.3	ug/L		01/16/23 09:16	01/18/23 22:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*104*		*46 - 124*	*01/16/23 09:16*	*01/18/23 22:15*	*1*
2-Fluorophenol	*55*		*13 - 113*	*01/16/23 09:16*	*01/18/23 22:15*	*1*
Nitrobenzene-d5	*99*		*36 - 126*	*01/16/23 09:16*	*01/18/23 22:15*	*1*
Phenol-d5	*89*		*17 - 127*	*01/16/23 09:16*	*01/18/23 22:15*	*1*
Terphenyl-d14	*120*		*44 - 149*	*01/16/23 09:16*	*01/18/23 22:15*	*1*
2,4,6-Tribromophenol	*84*		*26 - 150*	*01/16/23 09:16*	*01/18/23 22:15*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.029	0.017	ug/L		01/17/23 10:00	01/17/23 19:45	1
1,2-D bromoethane	ND		0.019	0.015	ug/L		01/17/23 10:00	01/17/23 19:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*119*	*p*	*51 - 149*	*01/17/23 10:00*	*01/17/23 19:45*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW13-ROX-010923
Date Collected: 01/09/23 09:50
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-12
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/14/23 11:16	1
Acrolein	ND		20	3.3	ug/L			01/14/23 11:16	1
Acrylonitrile	ND		10	2.8	ug/L			01/14/23 11:16	1
Benzene	ND		1.0	0.13	ug/L			01/14/23 11:16	1
Bromobenzene	ND		1.0	0.54	ug/L			01/14/23 11:16	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/14/23 11:16	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/14/23 11:16	1
Bromoform	ND		5.0	0.25	ug/L			01/14/23 11:16	1
Bromomethane	ND		1.0	0.98	ug/L			01/14/23 11:16	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/14/23 11:16	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/14/23 11:16	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/14/23 11:16	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/14/23 11:16	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/14/23 11:16	1
Chloroethane	ND		1.0	0.76	ug/L			01/14/23 11:16	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/14/23 11:16	1
Chloroform	ND		1.0	1.0	ug/L			01/14/23 11:16	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/14/23 11:16	1
Chloromethane	ND		1.0	0.32	ug/L			01/14/23 11:16	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/14/23 11:16	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/14/23 11:16	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/14/23 11:16	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/14/23 11:16	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/14/23 11:16	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/14/23 11:16	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/14/23 11:16	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/14/23 11:16	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/14/23 11:16	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/14/23 11:16	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/14/23 11:16	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/14/23 11:16	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/14/23 11:16	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/14/23 11:16	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/14/23 11:16	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/14/23 11:16	1
2-Hexanone	ND		25	1.4	ug/L			01/14/23 11:16	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/14/23 11:16	1
Methylene bromide	ND		5.0	0.22	ug/L			01/14/23 11:16	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/14/23 11:16	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/14/23 11:16	1
Methyl tert-butyl ether	**0.74**	**J**	1.0	0.22	ug/L			01/14/23 11:16	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/14/23 11:16	1
Naphthalene	ND		5.0	3.0	ug/L			01/14/23 11:16	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/14/23 11:16	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/14/23 11:16	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/14/23 11:16	1
o-Xylene	ND		5.0	0.60	ug/L			01/14/23 11:16	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/14/23 11:16	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/14/23 11:16	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW13-ROX-010923
Date Collected: 01/09/23 09:50
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-12
Matrix: Water

Method: SW846 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			01/14/23 11:16	1
Styrene	ND		1.0	1.0	ug/L			01/14/23 11:16	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/14/23 11:16	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/14/23 11:16	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/14/23 11:16	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/14/23 11:16	1
Toluene	ND		1.0	0.41	ug/L			01/14/23 11:16	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/14/23 11:16	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/14/23 11:16	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/14/23 11:16	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/14/23 11:16	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/14/23 11:16	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/14/23 11:16	1
Trichloroethene	ND		1.0	0.15	ug/L			01/14/23 11:16	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/14/23 11:16	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/14/23 11:16	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/14/23 11:16	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/14/23 11:16	1
Vinyl acetate	ND		25	0.93	ug/L			01/14/23 11:16	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/14/23 11:16	1
Xylenes, Total	ND		10	1.6	ug/L			01/14/23 11:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*72 - 119*		*01/14/23 11:16*	*1*
Dibromofluoromethane	*100*		*75 - 126*		*01/14/23 11:16*	*1*
Toluene-d8 (Surr)	*94*		*64 - 132*		*01/14/23 11:16*	*1*

Method: SW846 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	0.031	ug/L		01/16/23 09:16	01/18/23 18:04	1
Acenaphthylene	ND		0.19	0.043	ug/L		01/16/23 09:16	01/18/23 18:04	1
Anthracene	ND		0.19	0.031	ug/L		01/16/23 09:16	01/18/23 18:04	1
Benzo[a]anthracene	ND		0.19	0.044	ug/L		01/16/23 09:16	01/18/23 18:04	1
Benzo[a]pyrene	ND		0.19	0.040	ug/L		01/16/23 09:16	01/18/23 18:04	1
Benzo[b]fluoranthene	ND		0.19	0.033	ug/L		01/16/23 09:16	01/18/23 18:04	1
Benzo[g,h,i]perylene	ND		0.19	0.13	ug/L		01/16/23 09:16	01/18/23 18:04	1
Benzo[k]fluoranthene	ND		0.19	0.096	ug/L		01/16/23 09:16	01/18/23 18:04	1
Chrysene	ND		0.19	0.071	ug/L		01/16/23 09:16	01/18/23 18:04	1
Dibenz(a,h)anthracene	ND		0 19	0 048	ug/L		01/16/23 09 16	01/18/23 18 04	1
Fluoranthene	ND		0.19	0.065	ug/L		01/16/23 09:16	01/18/23 18:04	1
Fluorene	ND		0.19	0.11	ug/L		01/16/23 09:16	01/18/23 18:04	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.041	ug/L		01/16/23 09:16	01/18/23 18:04	1
1-Methylnaphthalene	ND		0.19	0.071	ug/L		01/16/23 09:16	01/18/23 18:04	1
2-Methylnaphthalene	ND		0.19	0.058	ug/L		01/16/23 09:16	01/18/23 18:04	1
Phenanthrene	ND		0.19	0.035	ug/L		01/16/23 09:16	01/18/23 18:04	1
Pyrene	ND		0.19	0.038	ug/L		01/16/23 09:16	01/18/23 18:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*106*		*15 - 122*	*01/16/23 09:16*	*01/18/23 18:04*	*1*
Nitrobenzene-d5	*73*		*19 - 130*	*01/16/23 09:16*	*01/18/23 18:04*	*1*

Client Sample ID: MW13-ROX-010923
Date Collected: 01/09/23 09:50
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-12
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*92*		*33 - 138*	*01/16/23 09:16*	*01/18/23 18:04*	*1*

Method: SW846 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		01/16/23 09:16	01/18/23 22:37	1
Benzenethiol	ND	*-	9.6	1.6	ug/L		01/16/23 09:16	01/18/23 22:37	1
Benzoic acid	ND		29	7.0	ug/L		01/16/23 09:16	01/18/23 22:37	1
Benzyl alcohol	ND		9.6	1.9	ug/L		01/16/23 09:16	01/18/23 22:37	1
Bis(2-chloroethoxy)methane	ND		9.6	0.15	ug/L		01/16/23 09:16	01/18/23 22:37	1
Bis(2-chloroethyl)ether	ND		9.6	2.6	ug/L		01/16/23 09:16	01/18/23 22:37	1
bis (2-chloroisopropyl) ether	ND		9.6	0.15	ug/L		01/16/23 09:16	01/18/23 22:37	1
Bis(2-ethylhexyl) phthalate	ND		9.6	4.8	ug/L		01/16/23 09:16	01/18/23 22:37	1
4-Bromophenyl phenyl ether	ND		9.6	0.19	ug/L		01/16/23 09:16	01/18/23 22:37	1
Butyl benzyl phthalate	ND		9.6	0.18	ug/L		01/16/23 09:16	01/18/23 22:37	1
4-Chloroaniline	ND		9.6	3.3	ug/L		01/16/23 09:16	01/18/23 22:37	1
4-Chloro-3-methylphenol	ND		9.6	3.7	ug/L		01/16/23 09:16	01/18/23 22:37	1
2-Chloronaphthalene	ND		9.6	0.13	ug/L		01/16/23 09:16	01/18/23 22:37	1
2-Chlorophenol	ND	*1	9.6	2.1	ug/L		01/16/23 09:16	01/18/23 22:37	1
4-Chlorophenyl phenyl ether	ND		9.6	1.9	ug/L		01/16/23 09:16	01/18/23 22:37	1
Dibenz[a,h]acridine	ND		9.6	0.96	ug/L		01/16/23 09:16	01/18/23 22:37	1
Dibenzofuran	ND		9.6	0.16	ug/L		01/16/23 09:16	01/18/23 22:37	1
3,3'-Dichlorobenzidine	ND	*+	9.6	2.5	ug/L		01/16/23 09:16	01/18/23 22:37	1
2,4-Dichlorophenol	ND		9.6	2.9	ug/L		01/16/23 09:16	01/18/23 22:37	1
Diethyl phthalate	ND		9.6	0.23	ug/L		01/16/23 09:16	01/18/23 22:37	1
2,4-Dimethylphenol	ND		9.6	3.4	ug/L		01/16/23 09:16	01/18/23 22:37	1
Dimethyl phthalate	ND		9.6	0.16	ug/L		01/16/23 09:16	01/18/23 22:37	1
Di-n-butyl phthalate	ND		9.6	2.6	ug/L		01/16/23 09:16	01/18/23 22:37	1
4,6-Dinitro-ortho-cresol	ND		9.6	1.5	ug/L		01/16/23 09:16	01/18/23 22:37	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		01/16/23 09:16	01/18/23 22:37	1
2,4-Dinitrotoluene	ND		9.6	1.8	ug/L		01/16/23 09:16	01/18/23 22:37	1
2,6-Dinitrotoluene	ND		9.6	1.8	ug/L		01/16/23 09:16	01/18/23 22:37	1
Di-n-octyl phthalate	ND		9.6	0.16	ug/L		01/16/23 09:16	01/18/23 22:37	1
1,4-Dioxane	ND		9.6	0.96	ug/L		01/16/23 09:16	01/18/23 22:37	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.6	0.96	ug/L		01/16/23 09:16	01/18/23 22:37	1
Hexachlorobenzene	ND		9.6	0.16	ug/L		01/16/23 09:16	01/18/23 22:37	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		01/16/23 09:16	01/18/23 22:37	1
Hexachloroethane	ND		9.6	4.0	ug/L		01/16/23 09:16	01/18/23 22:37	1
Indene	ND		9.6	0.96	ug/L		01/16/23 09:16	01/18/23 22:37	1
Isophorone	ND		9.6	0.13	ug/L		01/16/23 09:16	01/18/23 22:37	1
2-Methylphenol	ND		9.6	1.7	ug/L		01/16/23 09:16	01/18/23 22:37	1
3 & 4 Methylphenol	ND		19	0.38	ug/L		01/16/23 09:16	01/18/23 22:37	1
2-Nitroaniline	ND		9.6	2.1	ug/L		01/16/23 09:16	01/18/23 22:37	1
3-Nitroaniline	ND		9.6	1.7	ug/L		01/16/23 09:16	01/18/23 22:37	1
4-Nitroaniline	ND		9.6	1.4	ug/L		01/16/23 09:16	01/18/23 22:37	1
Nitrobenzene	ND		9.6	0.13	ug/L		01/16/23 09:16	01/18/23 22:37	1
2-Nitrophenol	ND		9.6	5.0	ug/L		01/16/23 09:16	01/18/23 22:37	1
4-Nitrophenol	ND		9.6	2.0	ug/L		01/16/23 09:16	01/18/23 22:37	1
N-Nitrosodimethylamine	ND		9.6	3.4	ug/L		01/16/23 09:16	01/18/23 22:37	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW13-ROX-010923
Date Collected: 01/09/23 09:50
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-12
Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.6	3.2	ug/L		01/16/23 09:16	01/18/23 22:37	1
N-Nitrosodiphenylamine	ND		9.6	0.17	ug/L		01/16/23 09:16	01/18/23 22:37	1
Pentachlorophenol	ND		19	1.3	ug/L		01/16/23 09:16	01/18/23 22:37	1
Phenol	ND		9.6	2.5	ug/L		01/16/23 09:16	01/18/23 22:37	1
Pyridine	ND		9.6	3.1	ug/L		01/16/23 09:16	01/18/23 22:37	1
Quinoline	ND		9.6	4.3	ug/L		01/16/23 09:16	01/18/23 22:37	1
2,4,5-Trichlorophenol	ND		9.6	3.6	ug/L		01/16/23 09:16	01/18/23 22:37	1
2,4,6-Trichlorophenol	ND		9.6	3.4	ug/L		01/16/23 09:16	01/18/23 22:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*97*		*46 - 124*	*01/16/23 09:16*	*01/18/23 22:37*	*1*
2-Fluorophenol	*9*	*S1-*	*13 - 113*	*01/16/23 09:16*	*01/18/23 22:37*	*1*
Nitrobenzene-d5	*90*		*36 - 126*	*01/16/23 09:16*	*01/18/23 22:37*	*1*
Phenol-d5	*36*		*17 - 127*	*01/16/23 09:16*	*01/18/23 22:37*	*1*
Terphenyl-d14	*82*		*44 - 149*	*01/16/23 09:16*	*01/18/23 22:37*	*1*
2,4,6-Tribromophenol	*83*		*26 - 150*	*01/16/23 09:16*	*01/18/23 22:37*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.029	0.016	ug/L		01/17/23 10:00	01/17/23 20:26	1
1,2-D bromoethane	ND		0.019	0.015	ug/L		01/17/23 10:00	01/17/23 20:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*119*	*p*	*51 - 149*	*01/17/23 10:00*	*01/17/23 20:26*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW14-ROX-010923
Date Collected: 01/09/23 11:45
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-13
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/13/23 15:15	1
Acrolein	ND		20	3.3	ug/L			01/13/23 15:15	1
Acrylonitrile	ND		10	2.8	ug/L			01/13/23 15:15	1
Benzene	ND		1.0	0.13	ug/L			01/13/23 15:15	1
Bromobenzene	ND		1.0	0.54	ug/L			01/13/23 15:15	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/13/23 15:15	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/13/23 15:15	1
Bromoform	ND		5.0	0.25	ug/L			01/13/23 15:15	1
Bromomethane	ND		1.0	0.98	ug/L			01/13/23 15:15	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/13/23 15:15	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/13/23 15:15	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/13/23 15:15	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/13/23 15:15	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/13/23 15:15	1
Chloroethane	ND		1.0	0.76	ug/L			01/13/23 15:15	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/13/23 15:15	1
Chloroform	ND		1.0	1.0	ug/L			01/13/23 15:15	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/13/23 15:15	1
Chloromethane	ND		1.0	0.32	ug/L			01/13/23 15:15	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/13/23 15:15	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/13/23 15:15	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/13/23 15:15	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/13/23 15:15	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/13/23 15:15	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/13/23 15:15	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/13/23 15:15	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/13/23 15:15	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 15:15	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 15:15	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 15:15	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 15:15	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/13/23 15:15	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/13/23 15:15	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/13/23 15:15	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/13/23 15:15	1
2-Hexanone	ND		25	1.4	ug/L			01/13/23 15:15	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/13/23 15:15	1
Methylene bromide	ND		5.0	0.22	ug/L			01/13/23 15:15	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/13/23 15:15	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/13/23 15:15	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/13/23 15:15	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/13/23 15:15	1
Naphthalene	ND		5.0	3.0	ug/L			01/13/23 15:15	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/13/23 15:15	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/13/23 15:15	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/13/23 15:15	1
o-Xylene	ND		5.0	0.60	ug/L			01/13/23 15:15	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/13/23 15:15	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/13/23 15:15	1

Client Sample ID: MW14-ROX-010923
Date Collected: 01/09/23 11:45
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-13
Matrix: Water

Method: SW846 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			01/13/23 15:15	1
Styrene	ND		1.0	1.0	ug/L			01/13/23 15:15	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/13/23 15:15	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/13/23 15:15	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/13/23 15:15	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/13/23 15:15	1
Toluene	ND		1.0	0.41	ug/L			01/13/23 15:15	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 15:15	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/13/23 15:15	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/13/23 15:15	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/13/23 15:15	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/13/23 15:15	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/13/23 15:15	1
Trichloroethene	ND		1.0	0.15	ug/L			01/13/23 15:15	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/13/23 15:15	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/13/23 15:15	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/13/23 15:15	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/13/23 15:15	1
Vinyl acetate	ND		25	0.93	ug/L			01/13/23 15:15	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/13/23 15:15	1
Xylenes, Total	ND		10	1.6	ug/L			01/13/23 15:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*72 - 119*		*01/13/23 15:15*	*1*
Dibromofluoromethane	*102*		*75 - 126*		*01/13/23 15:15*	*1*
Toluene-d8 (Surr)	*94*		*64 - 132*		*01/13/23 15:15*	*1*

Method: SW846 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	0.030	ug/L		01/16/23 09:16	01/18/23 18:21	1
Acenaphthylene	ND		0.19	0.043	ug/L		01/16/23 09:16	01/18/23 18:21	1
Anthracene	ND		0.19	0.030	ug/L		01/16/23 09:16	01/18/23 18:21	1
Benzo[a]anthracene	ND		0.19	0.044	ug/L		01/16/23 09:16	01/18/23 18:21	1
Benzo[a]pyrene	ND		0.19	0.040	ug/L		01/16/23 09:16	01/18/23 18:21	1
Benzo[b]fluoranthene	ND		0.19	0.032	ug/L		01/16/23 09:16	01/18/23 18:21	1
Benzo[g,h,i]perylene	ND		0.19	0.12	ug/L		01/16/23 09:16	01/18/23 18:21	1
Benzo[k]fluoranthene	ND		0.19	0.095	ug/L		01/16/23 09:16	01/18/23 18:21	1
Chrysene	ND		0.19	0.070	ug/L		01/16/23 09:16	01/18/23 18:21	1
Dibenz(a,h)anthracene	ND		0 19	0 047	ug/L		01/16/23 09 16	01/18/23 18 21	1
Fluoranthene	ND		0.19	0.065	ug/L		01/16/23 09:16	01/18/23 18:21	1
Fluorene	ND		0.19	0.10	ug/L		01/16/23 09:16	01/18/23 18:21	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.041	ug/L		01/16/23 09:16	01/18/23 18:21	1
1-Methylnaphthalene	ND		0.19	0.070	ug/L		01/16/23 09:16	01/18/23 18:21	1
2-Methylnaphthalene	ND		0.19	0.057	ug/L		01/16/23 09:16	01/18/23 18:21	1
Phenanthrene	ND		0.19	0.034	ug/L		01/16/23 09:16	01/18/23 18:21	1
Pyrene	ND		0.19	0.038	ug/L		01/16/23 09:16	01/18/23 18:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*104*		*15 - 122*	*01/16/23 09:16*	*01/18/23 18:21*	*1*
Nitrobenzene-d5	*67*		*19 - 130*	*01/16/23 09:16*	*01/18/23 18:21*	*1*

Client Sample ID: MW14-ROX-010923
Date Collected: 01/09/23 11:45
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-13
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*119*		*33 - 138*	*01/16/23 09:16*	*01/18/23 18:21*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.5	3.6	ug/L		01/16/23 09:16	01/18/23 23:00	1
Benzenethiol	ND	*-	9.5	1.6	ug/L		01/16/23 09:16	01/18/23 23:00	1
Benzoic acid	ND		28	6.9	ug/L		01/16/23 09:16	01/18/23 23:00	1
Benzyl alcohol	ND		9.5	1.9	ug/L		01/16/23 09:16	01/18/23 23:00	1
Bis(2-chloroethoxy)methane	ND		9.5	0.15	ug/L		01/16/23 09:16	01/18/23 23:00	1
Bis(2-chloroethyl)ether	ND		9.5	2.6	ug/L		01/16/23 09:16	01/18/23 23:00	1
bis (2-chloroisopropyl) ether	ND		9.5	0.15	ug/L		01/16/23 09:16	01/18/23 23:00	1
Bis(2-ethylhexyl) phthalate	ND		9.5	4.7	ug/L		01/16/23 09:16	01/18/23 23:00	1
4-Bromophenyl phenyl ether	ND		9.5	0.19	ug/L		01/16/23 09:16	01/18/23 23:00	1
Butyl benzyl phthalate	ND		9.5	0.18	ug/L		01/16/23 09:16	01/18/23 23:00	1
4-Chloroaniline	ND		9.5	3.2	ug/L		01/16/23 09:16	01/18/23 23:00	1
4-Chloro-3-methylphenol	ND		9.5	3.6	ug/L		01/16/23 09:16	01/18/23 23:00	1
2-Chloronaphthalene	ND		9.5	0.13	ug/L		01/16/23 09:16	01/18/23 23:00	1
2-Chlorophenol	ND	*1	9.5	2.1	ug/L		01/16/23 09:16	01/18/23 23:00	1
4-Chlorophenyl phenyl ether	ND		9.5	1.9	ug/L		01/16/23 09:16	01/18/23 23:00	1
Dibenz[a,h]acridine	ND		9.5	0.95	ug/L		01/16/23 09:16	01/18/23 23:00	1
Dibenzofuran	ND		9.5	0.16	ug/L		01/16/23 09:16	01/18/23 23:00	1
3,3'-Dichlorobenzidine	ND	*+	9.5	2.5	ug/L		01/16/23 09:16	01/18/23 23:00	1
2,4-Dichlorophenol	ND		9.5	2.8	ug/L		01/16/23 09:16	01/18/23 23:00	1
Diethyl phthalate	ND		9.5	0.23	ug/L		01/16/23 09:16	01/18/23 23:00	1
2,4-Dimethylphenol	ND		9.5	3.3	ug/L		01/16/23 09:16	01/18/23 23:00	1
Dimethyl phthalate	ND		9.5	0.16	ug/L		01/16/23 09:16	01/18/23 23:00	1
Di-n-butyl phthalate	ND		9.5	2.6	ug/L		01/16/23 09:16	01/18/23 23:00	1
4,6-Dinitro-ortho-cresol	ND		9.5	1.5	ug/L		01/16/23 09:16	01/18/23 23:00	1
2,4-Dinitrophenol	ND		28	3.2	ug/L		01/16/23 09:16	01/18/23 23:00	1
2,4-Dinitrotoluene	ND		9.5	1.8	ug/L		01/16/23 09:16	01/18/23 23:00	1
2,6-Dinitrotoluene	ND		9.5	1.8	ug/L		01/16/23 09:16	01/18/23 23:00	1
Di-n-octyl phthalate	ND		9.5	0.16	ug/L		01/16/23 09:16	01/18/23 23:00	1
1,4-Dioxane	ND		9.5	0.95	ug/L		01/16/23 09:16	01/18/23 23:00	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.5	0.95	ug/L		01/16/23 09:16	01/18/23 23:00	1
Hexachlorobenzene	ND		9.5	0.16	ug/L		01/16/23 09:16	01/18/23 23:00	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		01/16/23 09:16	01/18/23 23:00	1
Hexachloroethane	ND		9.5	4.0	ug/L		01/16/23 09:16	01/18/23 23:00	1
Indene	ND		9.5	0.95	ug/L		01/16/23 09:16	01/18/23 23:00	1
Isophorone	ND		9.5	0.13	ug/L		01/16/23 09:16	01/18/23 23:00	1
2-Methylphenol	ND		9.5	1.7	ug/L		01/16/23 09:16	01/18/23 23:00	1
3 & 4 Methylphenol	ND		19	0.37	ug/L		01/16/23 09:16	01/18/23 23:00	1
2-Nitroaniline	ND		9.5	2.1	ug/L		01/16/23 09:16	01/18/23 23:00	1
3-Nitroaniline	ND		9.5	1.7	ug/L		01/16/23 09:16	01/18/23 23:00	1
4-Nitroaniline	ND		9.5	1.4	ug/L		01/16/23 09:16	01/18/23 23:00	1
Nitrobenzene	ND		9.5	0.12	ug/L		01/16/23 09:16	01/18/23 23:00	1
2-Nitrophenol	ND		9.5	4.9	ug/L		01/16/23 09:16	01/18/23 23:00	1
4-Nitrophenol	ND		9.5	2.0	ug/L		01/16/23 09:16	01/18/23 23:00	1
N-Nitrosodimethylamine	ND		9.5	3.3	ug/L		01/16/23 09:16	01/18/23 23:00	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW14-ROX-010923

Lab Sample ID: 400-231505-13

Date Collected: 01/09/23 11:45

Matrix: Water

Date Received: 01/10/23 09:43

Method: SW846 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	3.1	ug/L		01/16/23 09:16	01/18/23 23:00	1
N-Nitrosodiphenylamine	ND		9.5	0.17	ug/L		01/16/23 09:16	01/18/23 23:00	1
Pentachlorophenol	ND		19	1.3	ug/L		01/16/23 09:16	01/18/23 23:00	1
Phenol	ND		9.5	2.5	ug/L		01/16/23 09:16	01/18/23 23:00	1
Pyridine	ND		9.5	3.0	ug/L		01/16/23 09:16	01/18/23 23:00	1
Quinoline	ND		9.5	4.3	ug/L		01/16/23 09:16	01/18/23 23:00	1
2,4,5-Trichlorophenol	ND		9.5	3.5	ug/L		01/16/23 09:16	01/18/23 23:00	1
2,4,6-Trichlorophenol	ND		9.5	3.3	ug/L		01/16/23 09:16	01/18/23 23:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*96*		*46 - 124*	*01/16/23 09:16*	*01/18/23 23:00*	*1*
2-Fluorophenol	*9*	*S1-*	*13 - 113*	*01/16/23 09:16*	*01/18/23 23:00*	*1*
Nitrobenzene-d5	*88*		*36 - 126*	*01/16/23 09:16*	*01/18/23 23:00*	*1*
Phenol-d5	*25*		*17 - 127*	*01/16/23 09:16*	*01/18/23 23:00*	*1*
Terphenyl-d14	*111*		*44 - 149*	*01/16/23 09:16*	*01/18/23 23:00*	*1*
2,4,6-Tribromophenol	*58*		*26 - 150*	*01/16/23 09:16*	*01/18/23 23:00*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.029	0.016	ug/L		01/17/23 10:00	01/17/23 20:46	1
1,2-D bromoethane	ND		0.019	0.014	ug/L		01/17/23 10:00	01/17/23 20:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*121*	*p*	*51 - 149*	*01/17/23 10:00*	*01/17/23 20:46*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW14-ROX-010923-DUP
Date Collected: 01/09/23 11:45
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-14
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/13/23 15:40	1
Acrolein	ND		20	3.3	ug/L			01/13/23 15:40	1
Acrylonitrile	ND		10	2.8	ug/L			01/13/23 15:40	1
Benzene	ND		1.0	0.13	ug/L			01/13/23 15:40	1
Bromobenzene	ND		1.0	0.54	ug/L			01/13/23 15:40	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/13/23 15:40	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/13/23 15:40	1
Bromoform	ND		5.0	0.25	ug/L			01/13/23 15:40	1
Bromomethane	ND		1.0	0.98	ug/L			01/13/23 15:40	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/13/23 15:40	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/13/23 15:40	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/13/23 15:40	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/13/23 15:40	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/13/23 15:40	1
Chloroethane	ND		1.0	0.76	ug/L			01/13/23 15:40	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/13/23 15:40	1
Chloroform	ND		1.0	1.0	ug/L			01/13/23 15:40	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/13/23 15:40	1
Chloromethane	ND		1.0	0.32	ug/L			01/13/23 15:40	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/13/23 15:40	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/13/23 15:40	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/13/23 15:40	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/13/23 15:40	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/13/23 15:40	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/13/23 15:40	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/13/23 15:40	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/13/23 15:40	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 15:40	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 15:40	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 15:40	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 15:40	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/13/23 15:40	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/13/23 15:40	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/13/23 15:40	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/13/23 15:40	1
2-Hexanone	ND		25	1.4	ug/L			01/13/23 15:40	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/13/23 15:40	1
Methylene bromide	ND		5.0	0.22	ug/L			01/13/23 15:40	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/13/23 15:40	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/13/23 15:40	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/13/23 15:40	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/13/23 15:40	1
Naphthalene	ND		5.0	3.0	ug/L			01/13/23 15:40	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/13/23 15:40	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/13/23 15:40	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/13/23 15:40	1
o-Xylene	ND		5.0	0.60	ug/L			01/13/23 15:40	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/13/23 15:40	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/13/23 15:40	1

Client Sample ID: MW14-ROX-010923-DUP
Date Collected: 01/09/23 11:45
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-14
Matrix: Water

Method: SW846 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			01/13/23 15:40	1
Styrene	ND		1.0	1.0	ug/L			01/13/23 15:40	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/13/23 15:40	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/13/23 15:40	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/13/23 15:40	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/13/23 15:40	1
Toluene	ND		1.0	0.41	ug/L			01/13/23 15:40	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 15:40	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/13/23 15:40	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/13/23 15:40	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/13/23 15:40	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/13/23 15:40	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/13/23 15:40	1
Trichloroethene	ND		1.0	0.15	ug/L			01/13/23 15:40	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/13/23 15:40	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/13/23 15:40	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/13/23 15:40	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/13/23 15:40	1
Vinyl acetate	ND		25	0.93	ug/L			01/13/23 15:40	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/13/23 15:40	1
Xylenes, Total	ND		10	1.6	ug/L			01/13/23 15:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*103*		*72 - 119*		*01/13/23 15:40*	*1*
Dibromofluoromethane	*105*		*75 - 126*		*01/13/23 15:40*	*1*
Toluene-d8 (Surr)	*94*		*64 - 132*		*01/13/23 15:40*	*1*

Method: SW846 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	0.031	ug/L		01/16/23 09:16	01/18/23 18:38	1
Acenaphthylene	ND		0.19	0.044	ug/L		01/16/23 09:16	01/18/23 18:38	1
Anthracene	ND		0.19	0.031	ug/L		01/16/23 09:16	01/18/23 18:38	1
Benzo[a]anthracene	ND		0.19	0.045	ug/L		01/16/23 09:16	01/18/23 18:38	1
Benzo[a]pyrene	ND		0.19	0.041	ug/L		01/16/23 09:16	01/18/23 18:38	1
Benzo[b]fluoranthene	ND		0.19	0.033	ug/L		01/16/23 09:16	01/18/23 18:38	1
Benzo[g,h,i]perylene	ND		0.19	0.13	ug/L		01/16/23 09:16	01/18/23 18:38	1
Benzo[k]fluoranthene	ND		0.19	0.097	ug/L		01/16/23 09:16	01/18/23 18:38	1
Chrysene	**0.23**		0.19	0.072	ug/L		01/16/23 09:16	01/18/23 18:38	1
Dibenz(a,h)anthracene	ND		0.19	0.048	ug/L		01/16/23 09:16	01/18/23 18:38	1
Fluoranthene	**0.32**		0.19	0.066	ug/L		01/16/23 09:16	01/18/23 18:38	1
Fluorene	ND		0.19	0.11	ug/L		01/16/23 09:16	01/18/23 18:38	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.042	ug/L		01/16/23 09:16	01/18/23 18:38	1
1-Methylnaphthalene	ND		0.19	0.072	ug/L		01/16/23 09:16	01/18/23 18:38	1
2-Methylnaphthalene	ND		0.19	0.058	ug/L		01/16/23 09:16	01/18/23 18:38	1
Phenanthrene	ND		0.19	0.035	ug/L		01/16/23 09:16	01/18/23 18:38	1
Pyrene	**0.33**	**B**	0.19	0.039	ug/L		01/16/23 09:16	01/18/23 18:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*108*		*15 - 122*	*01/16/23 09:16*	*01/18/23 18:38*	*1*
Nitrobenzene-d5	*75*		*19 - 130*	*01/16/23 09:16*	*01/18/23 18:38*	*1*

Client Sample ID: MW14-ROX-010923-DUP
Date Collected: 01/09/23 11:45
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-14
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*123*		*33 - 138*	*01/16/23 09:16*	*01/18/23 18:38*	*1*

Method: SW846 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		01/16/23 09:16	01/18/23 23:22	1
Benzenethiol	ND	*-	9.7	1.6	ug/L		01/16/23 09:16	01/18/23 23:22	1
Benzoic acid	ND		29	7.1	ug/L		01/16/23 09:16	01/18/23 23:22	1
Benzyl alcohol	ND		9.7	1.9	ug/L		01/16/23 09:16	01/18/23 23:22	1
Bis(2-chloroethoxy)methane	ND		9.7	0.15	ug/L		01/16/23 09:16	01/18/23 23:22	1
Bis(2-chloroethyl)ether	ND		9.7	2.6	ug/L		01/16/23 09:16	01/18/23 23:22	1
bis (2-chloroisopropyl) ether	ND		9.7	0.15	ug/L		01/16/23 09:16	01/18/23 23:22	1
Bis(2-ethylhexyl) phthalate	ND		9.7	4.8	ug/L		01/16/23 09:16	01/18/23 23:22	1
4-Bromophenyl phenyl ether	ND		9.7	0.19	ug/L		01/16/23 09:16	01/18/23 23:22	1
Butyl benzyl phthalate	ND		9.7	0.18	ug/L		01/16/23 09:16	01/18/23 23:22	1
4-Chloroaniline	ND		9.7	3.3	ug/L		01/16/23 09:16	01/18/23 23:22	1
4-Chloro-3-methylphenol	ND		9.7	3.7	ug/L		01/16/23 09:16	01/18/23 23:22	1
2-Chloronaphthalene	ND		9.7	0.14	ug/L		01/16/23 09:16	01/18/23 23:22	1
2-Chlorophenol	ND	*1	9.7	2.1	ug/L		01/16/23 09:16	01/18/23 23:22	1
4-Chlorophenyl phenyl ether	ND		9.7	1.9	ug/L		01/16/23 09:16	01/18/23 23:22	1
Dibenz[a,h]acridine	ND		9.7	0.97	ug/L		01/16/23 09:16	01/18/23 23:22	1
Dibenzofuran	ND		9.7	0.16	ug/L		01/16/23 09:16	01/18/23 23:22	1
3,3'-Dichlorobenzidine	ND	*+	9.7	2.5	ug/L		01/16/23 09:16	01/18/23 23:22	1
2,4-Dichlorophenol	ND		9.7	2.9	ug/L		01/16/23 09:16	01/18/23 23:22	1
Diethyl phthalate	ND		9.7	0.23	ug/L		01/16/23 09:16	01/18/23 23:22	1
2,4-Dimethylphenol	ND		9.7	3.4	ug/L		01/16/23 09:16	01/18/23 23:22	1
Dimethyl phthalate	ND		9.7	0.16	ug/L		01/16/23 09:16	01/18/23 23:22	1
Di-n-butyl phthalate	ND		9.7	2.6	ug/L		01/16/23 09:16	01/18/23 23:22	1
4,6-Dinitro-ortho-cresol	ND		9.7	1.5	ug/L		01/16/23 09:16	01/18/23 23:22	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		01/16/23 09:16	01/18/23 23:22	1
2,4-Dinitrotoluene	ND		9.7	1.8	ug/L		01/16/23 09:16	01/18/23 23:22	1
2,6-Dinitrotoluene	ND		9.7	1.8	ug/L		01/16/23 09:16	01/18/23 23:22	1
Di-n-octyl phthalate	ND		9.7	0.16	ug/L		01/16/23 09:16	01/18/23 23:22	1
1,4-Dioxane	ND		9.7	0.97	ug/L		01/16/23 09:16	01/18/23 23:22	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.7	0.97	ug/L		01/16/23 09:16	01/18/23 23:22	1
Hexachlorobenzene	ND		9.7	0.16	ug/L		01/16/23 09:16	01/18/23 23:22	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		01/16/23 09:16	01/18/23 23:22	1
Hexachloroethane	ND		9.7	4.1	ug/L		01/16/23 09:16	01/18/23 23:22	1
Indene	ND		9.7	0.97	ug/L		01/16/23 09:16	01/18/23 23:22	1
Isophorone	ND		9.7	0.14	ug/L		01/16/23 09:16	01/18/23 23:22	1
2-Methylphenol	ND		9.7	1.7	ug/L		01/16/23 09:16	01/18/23 23:22	1
3 & 4 Methylphenol	ND		19	0.38	ug/L		01/16/23 09:16	01/18/23 23:22	1
2-Nitroaniline	ND		9.7	2.1	ug/L		01/16/23 09:16	01/18/23 23:22	1
3-Nitroaniline	ND		9.7	1.7	ug/L		01/16/23 09:16	01/18/23 23:22	1
4-Nitroaniline	ND		9.7	1.5	ug/L		01/16/23 09:16	01/18/23 23:22	1
Nitrobenzene	ND		9.7	0.13	ug/L		01/16/23 09:16	01/18/23 23:22	1
2-Nitrophenol	ND		9.7	5.0	ug/L		01/16/23 09:16	01/18/23 23:22	1
4-Nitrophenol	ND		9.7	2.0	ug/L		01/16/23 09:16	01/18/23 23:22	1
N-Nitrosodimethylamine	ND		9.7	3.4	ug/L		01/16/23 09:16	01/18/23 23:22	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW14-ROX-010923-DUP

Lab Sample ID: 400-231505-14

Date Collected: 01/09/23 11:45

Matrix: Water

Date Received: 01/10/23 09:43

Method: SW846 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		01/16/23 09:16	01/18/23 23:22	1
N-Nitrosodiphenylamine	ND		9.7	0.17	ug/L		01/16/23 09:16	01/18/23 23:22	1
Pentachlorophenol	ND		19	1.4	ug/L		01/16/23 09:16	01/18/23 23:22	1
Phenol	ND		9.7	2.5	ug/L		01/16/23 09:16	01/18/23 23:22	1
Pyridine	ND		9.7	3.1	ug/L		01/16/23 09:16	01/18/23 23:22	1
Quinoline	ND		9.7	4.4	ug/L		01/16/23 09:16	01/18/23 23:22	1
2,4,5-Trichlorophenol	ND		9.7	3.6	ug/L		01/16/23 09:16	01/18/23 23:22	1
2,4,6-Trichlorophenol	ND		9.7	3.4	ug/L		01/16/23 09:16	01/18/23 23:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*96*		*46 - 124*	*01/16/23 09:16*	*01/18/23 23:22*	*1*
2-Fluorophenol	*17*		*13 - 113*	*01/16/23 09:16*	*01/18/23 23:22*	*1*
Nitrobenzene-d5	*89*		*36 - 126*	*01/16/23 09:16*	*01/18/23 23:22*	*1*
Phenol-d5	*51*		*17 - 127*	*01/16/23 09:16*	*01/18/23 23:22*	*1*
Terphenyl-d14	*109*		*44 - 149*	*01/16/23 09:16*	*01/18/23 23:22*	*1*
2,4,6-Tribromophenol	*74*		*26 - 150*	*01/16/23 09:16*	*01/18/23 23:22*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.030	0.017	ug/L		01/17/23 10:00	01/17/23 21:06	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/17/23 10:00	01/17/23 21:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*118*	*p*	*51 - 149*	*01/17/23 10:00*	*01/17/23 21:06*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: P56-ROX-010923
Date Collected: 01/09/23 13:35
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-15
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/13/23 16:04	1
Acrolein	ND		20	3.3	ug/L			01/13/23 16:04	1
Acrylonitrile	ND		10	2.8	ug/L			01/13/23 16:04	1
Benzene	ND		1.0	0.13	ug/L			01/13/23 16:04	1
Bromobenzene	ND		1.0	0.54	ug/L			01/13/23 16:04	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/13/23 16:04	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/13/23 16:04	1
Bromoform	ND		5.0	0.25	ug/L			01/13/23 16:04	1
Bromomethane	ND		1.0	0.98	ug/L			01/13/23 16:04	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/13/23 16:04	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/13/23 16:04	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/13/23 16:04	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/13/23 16:04	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/13/23 16:04	1
Chloroethane	ND		1.0	0.76	ug/L			01/13/23 16:04	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/13/23 16:04	1
Chloroform	ND		1.0	1.0	ug/L			01/13/23 16:04	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/13/23 16:04	1
Chloromethane	ND		1.0	0.32	ug/L			01/13/23 16:04	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/13/23 16:04	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/13/23 16:04	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/13/23 16:04	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/13/23 16:04	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/13/23 16:04	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/13/23 16:04	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/13/23 16:04	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/13/23 16:04	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 16:04	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 16:04	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 16:04	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 16:04	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/13/23 16:04	1
Ethylbenzene	**1.2**		1.0	0.50	ug/L			01/13/23 16:04	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/13/23 16:04	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/13/23 16:04	1
2-Hexanone	ND		25	1.4	ug/L			01/13/23 16:04	1
Isopropylbenzene	**12**		1.0	0.53	ug/L			01/13/23 16:04	1
Methylene bromide	ND		5.0	0.22	ug/L			01/13/23 16:04	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/13/23 16:04	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/13/23 16:04	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/13/23 16:04	1
m-Xylene & p-Xylene	**15**		5.0	0.63	ug/L			01/13/23 16:04	1
Naphthalene	ND		5.0	3.0	ug/L			01/13/23 16:04	1
n-Butylbenzene	**0.89**	**J**	1.0	0.76	ug/L			01/13/23 16:04	1
N-Propylbenzene	**14**		1.0	0.69	ug/L			01/13/23 16:04	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/13/23 16:04	1
o-Xylene	ND		5.0	0.60	ug/L			01/13/23 16:04	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/13/23 16:04	1
p-Isopropyltoluene	**0.87**	**J**	1.0	0.71	ug/L			01/13/23 16:04	1

Client Sample ID: P56-ROX-010923

Date Collected: 01/09/23 13:35
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-15

Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	**1.6**		1.0	0.70	ug/L			01/13/23 16:04	1
Styrene	ND		1.0	1.0	ug/L			01/13/23 16:04	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/13/23 16:04	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/13/23 16:04	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/13/23 16:04	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/13/23 16:04	1
Toluene	**0.54**	**J**	1.0	0.41	ug/L			01/13/23 16:04	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 16:04	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/13/23 16:04	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/13/23 16:04	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/13/23 16:04	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/13/23 16:04	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/13/23 16:04	1
Trichloroethene	ND		1.0	0.15	ug/L			01/13/23 16:04	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/13/23 16:04	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/13/23 16:04	1
1,2,4-Trimethylbenzene	**7.0**		1.0	0.82	ug/L			01/13/23 16:04	1
1,3,5-Trimethylbenzene	**2.8**		1.0	0.56	ug/L			01/13/23 16:04	1
Vinyl acetate	ND		25	0.93	ug/L			01/13/23 16:04	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/13/23 16:04	1
Xylenes, Total	**15**		10	1.6	ug/L			01/13/23 16:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*72 - 119*		*01/13/23 16:04*	*1*
Dibromofluoromethane	*106*		*75 - 126*		*01/13/23 16:04*	*1*
Toluene-d8 (Surr)	*96*		*64 - 132*		*01/13/23 16:04*	*1*

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**0.84**		0.19	0.031	ug/L		01/16/23 09:16	01/18/23 18:56	1
Acenaphthylene	ND		0.19	0.043	ug/L		01/16/23 09:16	01/18/23 18:56	1
Anthracene	ND		0.19	0.031	ug/L		01/16/23 09:16	01/27/23 21:45	1
Benzo[a]anthracene	ND		0.19	0.044	ug/L		01/16/23 09:16	01/18/23 18:56	1
Benzo[a]pyrene	ND		0.19	0.041	ug/L		01/16/23 09:16	01/18/23 18:56	1
Benzo[b]fluoranthene	ND		0.19	0.033	ug/L		01/16/23 09:16	01/18/23 18:56	1
Benzo[g,h,i]perylene	ND		0.19	0.13	ug/L		01/16/23 09:16	01/18/23 18:56	1
Benzo[k]fluoranthene	ND		0.19	0.097	ug/L		01/16/23 09:16	01/18/23 18:56	1
Chrysene	ND		0.19	0.071	ug/L		01/16/23 09:16	01/18/23 18:56	1
Dibenz(a,h)anthracene	ND		0.19	0.048	ug/L		01/16/23 09:16	01/18/23 18:56	1
Fluoranthene	ND		0.19	0.066	ug/L		01/16/23 09:16	01/27/23 21:45	1
Fluorene	**0.39**		0.19	0.11	ug/L		01/16/23 09:16	01/18/23 18:56	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.042	ug/L		01/16/23 09:16	01/18/23 18:56	1
1-Methylnaphthalene	**12**		0.19	0.071	ug/L		01/16/23 09:16	01/18/23 18:56	1
2-Methylnaphthalene	**12**		0.19	0.058	ug/L		01/16/23 09:16	01/18/23 18:56	1
Phenanthrene	**1.1**		0.19	0.035	ug/L		01/16/23 09:16	01/18/23 18:56	1
Pyrene	**0.087**	**J B**	0.19	0.039	ug/L		01/16/23 09:16	01/18/23 18:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*105*		*15 - 122*	*01/16/23 09:16*	*01/18/23 18:56*	*1*
Nitrobenzene-d5	*71*		*19 - 130*	*01/16/23 09:16*	*01/18/23 18:56*	*1*

Client Sample ID: P56-ROX-010923
Date Collected: 01/09/23 13:35
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-15
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*117*		*33 - 138*	*01/16/23 09:16*	*01/18/23 18:56*	*1*

Method: SW846 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		01/16/23 09:16	01/18/23 23:44	1
Benzenethiol	ND	*-	9.7	1.6	ug/L		01/16/23 09:16	01/18/23 23:44	1
Benzoic acid	ND		29	7.0	ug/L		01/16/23 09:16	01/18/23 23:44	1
Benzyl alcohol	ND		9.7	1.9	ug/L		01/16/23 09:16	01/18/23 23:44	1
Bis(2-chloroethoxy)methane	ND		9.7	0.15	ug/L		01/16/23 09:16	01/18/23 23:44	1
Bis(2-chloroethyl)ether	ND		9.7	2.6	ug/L		01/16/23 09:16	01/18/23 23:44	1
bis (2-chloroisopropyl) ether	ND		9.7	0.15	ug/L		01/16/23 09:16	01/18/23 23:44	1
Bis(2-ethylhexyl) phthalate	ND		9.7	4.8	ug/L		01/16/23 09:16	01/18/23 23:44	1
4-Bromophenyl phenyl ether	ND		9.7	0.19	ug/L		01/16/23 09:16	01/18/23 23:44	1
Butyl benzyl phthalate	ND		9.7	0.18	ug/L		01/16/23 09:16	01/18/23 23:44	1
4-Chloroaniline	ND		9.7	3.3	ug/L		01/16/23 09:16	01/18/23 23:44	1
4-Chloro-3-methylphenol	ND		9.7	3.7	ug/L		01/16/23 09:16	01/18/23 23:44	1
2-Chloronaphthalene	ND		9.7	0.14	ug/L		01/16/23 09:16	01/18/23 23:44	1
2-Chlorophenol	ND	*1	9.7	2.1	ug/L		01/16/23 09:16	01/18/23 23:44	1
4-Chlorophenyl phenyl ether	ND		9.7	1.9	ug/L		01/16/23 09:16	01/18/23 23:44	1
Dibenz[a,h]acridine	ND		9.7	0.97	ug/L		01/16/23 09:16	01/18/23 23:44	1
Dibenzofuran	**0.66**	**J**	9.7	0.16	ug/L		01/16/23 09:16	01/18/23 23:44	1
3,3'-Dichlorobenzidine	ND	*+	9.7	2.5	ug/L		01/16/23 09:16	01/18/23 23:44	1
2,4-Dichlorophenol	ND		9.7	2.9	ug/L		01/16/23 09:16	01/18/23 23:44	1
Diethyl phthalate	ND		9.7	0.23	ug/L		01/16/23 09:16	01/18/23 23:44	1
2,4-Dimethylphenol	ND		9.7	3.4	ug/L		01/16/23 09:16	01/18/23 23:44	1
Dimethyl phthalate	ND		9.7	0.16	ug/L		01/16/23 09:16	01/18/23 23:44	1
Di-n-butyl phthalate	ND		9.7	2.6	ug/L		01/16/23 09:16	01/18/23 23:44	1
4,6-Dinitro-ortho-cresol	ND		9.7	1.5	ug/L		01/16/23 09:16	01/18/23 23:44	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		01/16/23 09:16	01/18/23 23:44	1
2,4-Dinitrotoluene	ND		9.7	1.8	ug/L		01/16/23 09:16	01/18/23 23:44	1
2,6-Dinitrotoluene	ND		9.7	1.8	ug/L		01/16/23 09:16	01/18/23 23:44	1
Di-n-octyl phthalate	ND		9.7	0.16	ug/L		01/16/23 09:16	01/18/23 23:44	1
1,4-Dioxane	ND		9.7	0.97	ug/L		01/16/23 09:16	01/18/23 23:44	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.7	0.97	ug/L		01/16/23 09:16	01/18/23 23:44	1
Hexachlorobenzene	ND		9.7	0.16	ug/L		01/16/23 09:16	01/18/23 23:44	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		01/16/23 09:16	01/18/23 23:44	1
Hexachloroethane	ND		9.7	4.1	ug/L		01/16/23 09:16	01/18/23 23:44	1
Indene	ND		9.7	0.97	ug/L		01/16/23 09:16	01/18/23 23:44	1
Isophorone	ND		9.7	0.14	ug/L		01/16/23 09:16	01/18/23 23:44	1
2-Methylphenol	ND		9.7	1.7	ug/L		01/16/23 09:16	01/18/23 23:44	1
3 & 4 Methylphenol	ND		19	0.38	ug/L		01/16/23 09:16	01/18/23 23:44	1
2-Nitroaniline	ND		9.7	2.1	ug/L		01/16/23 09:16	01/18/23 23:44	1
3-Nitroaniline	ND		9.7	1.7	ug/L		01/16/23 09:16	01/18/23 23:44	1
4-Nitroaniline	ND		9.7	1.4	ug/L		01/16/23 09:16	01/18/23 23:44	1
Nitrobenzene	ND		9.7	0.13	ug/L		01/16/23 09:16	01/18/23 23:44	1
2-Nitrophenol	ND		9.7	5.0	ug/L		01/16/23 09:16	01/18/23 23:44	1
4-Nitrophenol	ND		9.7	2.0	ug/L		01/16/23 09:16	01/18/23 23:44	1
N-Nitrosodimethylamine	ND		9.7	3.4	ug/L		01/16/23 09:16	01/18/23 23:44	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: P56-ROX-010923
Date Collected: 01/09/23 13:35
Date Received: 01/10/23 09:43

Lab Sample ID: 400-231505-15
Matrix: Water

Method: SW846 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		01/16/23 09:16	01/18/23 23:44	1
N-Nitrosodiphenylamine	ND		9.7	0.17	ug/L		01/16/23 09:16	01/18/23 23:44	1
Pentachlorophenol	ND		19	1.4	ug/L		01/16/23 09:16	01/18/23 23:44	1
Phenol	ND		9.7	2.5	ug/L		01/16/23 09:16	01/18/23 23:44	1
Pyridine	ND		9.7	3.1	ug/L		01/16/23 09:16	01/18/23 23:44	1
Quinoline	ND		9.7	4.3	ug/L		01/16/23 09:16	01/18/23 23:44	1
2,4,5-Trichlorophenol	ND		9.7	3.6	ug/L		01/16/23 09:16	01/18/23 23:44	1
2,4,6-Trichlorophenol	ND		9.7	3.4	ug/L		01/16/23 09:16	01/18/23 23:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*99*		*46 - 124*	*01/16/23 09:16*	*01/18/23 23:44*	*1*
2-Fluorophenol	*11*	*S1-*	*13 - 113*	*01/16/23 09:16*	*01/18/23 23:44*	*1*
Nitrobenzene-d5	*91*		*36 - 126*	*01/16/23 09:16*	*01/18/23 23:44*	*1*
Phenol-d5	*50*		*17 - 127*	*01/16/23 09:16*	*01/18/23 23:44*	*1*
Terphenyl-d14	*106*		*44 - 149*	*01/16/23 09:16*	*01/18/23 23:44*	*1*
2,4,6-Tribromophenol	*83*		*26 - 150*	*01/16/23 09:16*	*01/18/23 23:44*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.029	0.017	ug/L		01/17/23 10:00	01/17/23 21:27	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/17/23 10:00	01/17/23 21:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*122*	*p*	*51 - 149*	*01/17/23 10:00*	*01/17/23 21:27*	*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
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
B	Compound was found in the blank and sample.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

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	(72-119)	(75-126)	(64-132)
400-231505-1	TB-ROX-010923-8260-A	102	103	95
400-231505-3	MW4-ROX-010923-EB	100	100	95
400-231505-4	MW4-ROX-010923	99	102	94
400-231505-5	MW25-ROX-010923	101	102	97
400-231505-6	MW8-ROX-010923	100	101	95
400-231505-6 - DL	MW8-ROX-010923	100	104	96
400-231505-7	MW8-ROX-010923-DUP	102	99	94
400-231505-7 - DL	MW8-ROX-010923-DUP	100	103	95
400-231505-8	MW7-ROX-010923	100	100	95
400-231505-9	TB-ROX-010923-8260-B	101	103	94
400-231505-11	MW13-ROX-010923-EB	100	102	95
400-231505-12	MW13-ROX-010923	101	100	94
400-231505-13	MW14-ROX-010923	101	102	94
400-231505-14	MW14-ROX-010923-DUP	103	105	94
400-231505-15	P56-ROX-010923	99	106	96
LCS 400-608288/1003	Lab Control Sample	98	100	95
LCS 400-608467/1002	Lab Control Sample	98	101	95
MB 400-608288/5	Method Blank	102	104	95
MB 400-608467/4	Method Blank	101	104	94

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	(46-124)	(13-113)	(36-126)	(17-127)	(44-149)	(26-150)
400-231505-3	MW4-ROX-010923-EB	100	35	91	70	115	77
400-231505-4	MW4-ROX-010923	86	36	81	67	63	80
400-231505-5	MW25-ROX-010923	88	42	79	71	74	91
400-231505-6	MW8-ROX-010923	108	37	107	82	61	116
400-231505-7	MW8-ROX-010923-DUP	93	47	92	83	59	101
400-231505-8	MW7-ROX-010923	88	3 S1-	82	19	99	70
400-231505-11	MW13-ROX-010923-EB	104	55	99	89	120	84
400-231505-12	MW13-ROX-010923	97	9 S1-	90	36	82	83
400-231505-13	MW14-ROX-010923	96	9 S1-	88	25	111	58
400-231505-14	MW14-ROX-010923-DUP	96	17	89	51	109	74
400-231505-15	P56-ROX-010923	99	11 S1-	91	50	106	83
LCS 400-608610/2-A	Lab Control Sample	100	64	106	95	111	104
LCS 400-608610/4-A	Lab Control Sample	100	42	93	77	119	41
LCSD 400-608610/3-A	Lab Control Sample Dup	100	28	105	78	108	103
LCSD 400-608610/5-A	Lab Control Sample Dup	109	46	101	84	124	35
MB 400-608610/1-A	Method Blank	102	14	95	63	124	80

Surrogate Legend

FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol

Client: AECOM Technical Services Inc.
Job ID: 400-231505-1
Project/Site: ROXANA QUARTERLY GW

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)		
Lab Sample ID	Client Sample ID	FBP (15-122)	NBZ (19-130)	TPHL (33-138)
400-231505-3	MW4-ROX-010923-EB	118	78	132
400-231505-3 - RE	MW4-ROX-010923-EB	98	97	120
400-231505-4	MW4-ROX-010923	99	67	72
400-231505-5	MW25-ROX-010923	87	60	76
400-231505-6	MW8-ROX-010923	99	69	58
400-231505-7	MW8-ROX-010923-DUP	93	62	57
400-231505-8	MW7-ROX-010923	94	64	105
400-231505-11	MW13-ROX-010923-EB	108	72	123
400-231505-12	MW13-ROX-010923	106	73	92
400-231505-13	MW14-ROX-010923	104	67	119
400-231505-14	MW14-ROX-010923-DUP	108	75	123
400-231505-15	P56-ROX-010923	105	71	117
LCS 400-608610/2-A	Lab Control Sample	96	61	91
LCS 400-611779/2-A - RE	Lab Control Sample	93	118	104
LCSD 400-608610/3-A	Lab Control Sample Dup	100	54	102
LCSD 400-611779/3-A - RE	Lab Control Sample Dup	90	115	100
MB 400-608610/1-A	Method Blank	109	74	130
MB 400-611779/1-A - RE	Method Blank	91	98	106

Surrogate Legend

FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14

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)
400-231505-2	TB-ROX-010923-8011-A	120 p
400-231505-3	MW4-ROX-010923-EB	121 p
400-231505-4	MW4-ROX-010923	116 p
400-231505-5	MW25-ROX-010923	113
400-231505-6	MW8-ROX-010923	113
400-231505-7	MW8-ROX-010923-DUP	108 p
400-231505-8	MW7-ROX-010923	114
400-231505-10	TB-ROX-010923-8011-B	119 p
400-231505-11	MW13-ROX-010923-EB	119 p
400-231505-12	MW13-ROX-010923	119 p
400-231505-13	MW14-ROX-010923	121 p
400-231505-14	MW14-ROX-010923-DUP	118 p
400-231505-15	P56-ROX-010923	122 p
LCS 400-608768/2-A	Lab Control Sample	114
LCS 400-609095/2-A	Lab Control Sample	131
LCSD 400-608768/3-A	Lab Control Sample Dup	110

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Method: 8011 - EDB and DBCP in Water by Microextraction (Continued)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	**Client Sample ID**	**BFB2 (51-149)**
LCSD 400-609095/3-A	Lab Control Sample Dup	131
MB 400-608768/1-A	Method Blank	105
MB 400-609095/1-A	Method Blank	118

Surrogate Legend

BFB = 4-Bromofluorobenzene

Method Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	EET PEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	EET PEN
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	EET PEN
8011	EDB and DBCP in Water by Microextraction	EPA	EET PEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	EET PEN
5030B	Purge and Trap	SW846	EET PEN
8011	Microextraction	SW846	EET 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:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: TB-ROX-010923-8260-A
Lab Sample ID: 400-231505-1
Date Collected: 01/09/23 12:00
Matrix: Water
Date Received: 01/10/23 09:43

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	608288	01/13/23 12:48	WPD	EET PEN

Client Sample ID: TB-ROX-010923-8011-A
Lab Sample ID: 400-231505-2
Date Collected: 01/09/23 12:00
Matrix: Water
Date Received: 01/10/23 09:43

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35.7 mL	35 mL	608768	01/17/23 10:00	DS	EET PEN
Total/NA	Analysis	8011		1			608815	01/17/23 21:47	DS	EET PEN

Client Sample ID: MW4-ROX-010923-EB
Lab Sample ID: 400-231505-3
Date Collected: 01/09/23 08:20
Matrix: Water
Date Received: 01/10/23 09:43

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	608288	01/13/23 13:13	WPD	EET PEN
Total/NA	Prep	3520C			247.4 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608937	01/18/23 20:03	S1B	EET PEN
Total/NA	Prep	3520C			247.4 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608984	01/18/23 16:03	PP1	EET PEN
Total/NA	Prep	3520C	RE		250 mL	1 mL	611779	02/09/23 13:26	KWS	EET PEN
Total/NA	Analysis	8270D LL	RE	1	0.4 mL	0.4 mL	614365	02/28/23 17:13	PP1	EET PEN
Total/NA	Prep	8011			36.3 mL	35 mL	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/19/23 18:48	DS	EET PEN

Client Sample ID: MW4-ROX-010923
Lab Sample ID: 400-231505-4
Date Collected: 01/09/23 09:25
Matrix: Water
Date Received: 01/10/23 09:43

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	608288	01/13/23 14:26	WPD	EET PEN
Total/NA	Prep	3520C			245.2 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608937	01/18/23 20:25	S1B	EET PEN
Total/NA	Prep	3520C			245.2 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608984	01/18/23 16:20	PP1	EET PEN
Total/NA	Prep	3520C			245.2 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	610183	01/27/23 20:02	PP1	EET PEN
Total/NA	Prep	8011			35.6 mL	35 mL	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/19/23 19:08	DS	EET PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231505-1

Client Sample ID: MW25-ROX-010923

Lab Sample ID: 400-231505-5

Date Collected: 01/09/23 10:45

Matrix: Water

Date Received: 01/10/23 09:43

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	608288	01/13/23 14:51	WPD	EET PEN
Total/NA	Prep	3520C			239.4 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608937	01/18/23 20:47	S1B	EET PEN
Total/NA	Prep	3520C			239.4 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608984	01/18/23 16:38	PP1	EET PEN
Total/NA	Prep	8011			35.1 mL	35 mL	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/19/23 19:29	DS	EET PEN

Client Sample ID: MW8-ROX-010923

Lab Sample ID: 400-231505-6

Date Collected: 01/09/23 11:40

Matrix: Water

Date Received: 01/10/23 09:43

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	608288	01/13/23 17:18	WPD	EET PEN
Total/NA	Analysis	8260B	DL	2000	5 mL	5 mL	608467	01/14/23 11:37	WPD	EET PEN
Total/NA	Prep	3520C	DL		257 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D	DL	5	0.4 mL	0.4 mL	609110	01/19/23 21:47	S1B	EET PEN
Total/NA	Prep	3520C			257 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608937	01/18/23 21:09	S1B	EET PEN
Total/NA	Prep	3520C			257 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608984	01/18/23 16:55	PP1	EET PEN
Total/NA	Prep	8011			35.6 mL	35 mL	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/19/23 19:49	DS	EET PEN

Client Sample ID: MW8-ROX-010923-DUP

Lab Sample ID: 400-231505-7

Date Collected: 01/09/23 11:40

Matrix: Water

Date Received: 01/10/23 09:43

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	608288	01/13/23 17:42	WPD	EET PEN
Total/NA	Analysis	8260B	DL	2000	5 mL	5 mL	608467	01/14/23 11:59	WPD	EET PEN
Total/NA	Prep	3520C	DL		246 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D	DL	5	0.4 mL	0.4 mL	609110	01/19/23 22:12	S1B	EET PEN
Total/NA	Prep	3520C			246 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608937	01/18/23 21:31	S1B	EET PEN
Total/NA	Prep	3520C			246 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608984	01/18/23 17:12	PP1	EET PEN
Total/NA	Prep	8011			34.6 mL	35 mL	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/19/23 20:09	DS	EET PEN

Client Sample ID: MW7-ROX-010923

Lab Sample ID: 400-231505-8

Date Collected: 01/09/23 13:00

Matrix: Water

Date Received: 01/10/23 09:43

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	608288	01/13/23 18:07	WPD	EET PEN
Total/NA	Prep	3520C			246.2 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608937	01/18/23 21:53	S1B	EET PEN
Total/NA	Prep	3520C			246.2 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608984	01/18/23 17:29	PP1	EET PEN
Total/NA	Prep	8011			33.3 mL	35 mL	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/19/23 20:30	DS	EET PEN

Client Sample ID: TB-ROX-010923-8260-B

Lab Sample ID: 400-231505-9

Date Collected: 01/09/23 12:00

Matrix: Water

Date Received: 01/10/23 09:43

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	608288	01/13/23 13:37	WPD	EET PEN

Client Sample ID: TB-ROX-010923-8011-B

Lab Sample ID: 400-231505-10

Date Collected: 01/09/23 12:00

Matrix: Water

Date Received: 01/10/23 09:43

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35.4 mL	35 mL	608768	01/17/23 10:00	DS	EET PEN
Total/NA	Analysis	8011		1			608815	01/17/23 19:24	DS	EET PEN

Client Sample ID: MW13-ROX-010923-EB

Lab Sample ID: 400-231505-11

Date Collected: 01/09/23 08:50

Matrix: Water

Date Received: 01/10/23 09:43

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	608288	01/13/23 14:02	WPD	EET PEN
Total/NA	Prep	3520C			264.6 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608937	01/18/23 22:15	S1B	EET PEN
Total/NA	Prep	3520C			264.6 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608984	01/18/23 17:47	PP1	EET PEN
Total/NA	Prep	8011			35.9 mL	35 mL	608768	01/17/23 10:00	DS	EET PEN
Total/NA	Analysis	8011		1			608815	01/17/23 19:45	DS	EET PEN

Client Sample ID: MW13-ROX-010923

Lab Sample ID: 400-231505-12

Date Collected: 01/09/23 09:50

Matrix: Water

Date Received: 01/10/23 09:43

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	608467	01/14/23 11:16	WPD	EET PEN
Total/NA	Prep	3520C			259.8 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608937	01/18/23 22:37	S1B	EET PEN

Client Sample ID: MW13-ROX-010923

Lab Sample ID: 400-231505-12

Date Collected: 01/09/23 09:50

Matrix: Water

Date Received: 01/10/23 09:43

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			259.8 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608984	01/18/23 18:04	PP1	EET PEN
Total/NA	Prep	8011			36.1 mL	35 mL	608768	01/17/23 10:00	DS	EET PEN
Total/NA	Analysis	8011		1			608815	01/17/23 20:26	DS	EET PEN

Client Sample ID: MW14-ROX-010923

Lab Sample ID: 400-231505-13

Date Collected: 01/09/23 11:45

Matrix: Water

Date Received: 01/10/23 09:43

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	608288	01/13/23 15:15	WPD	EET PEN
Total/NA	Prep	3520C			263.4 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608937	01/18/23 23:00	S1B	EET PEN
Total/NA	Prep	3520C			263.4 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608984	01/18/23 18:21	PP1	EET PEN
Total/NA	Prep	8011			36.4 mL	35 mL	608768	01/17/23 10:00	DS	EET PEN
Total/NA	Analysis	8011		1			608815	01/17/23 20:46	DS	EET PEN

Client Sample ID: MW14-ROX-010923-DUP

Lab Sample ID: 400-231505-14

Date Collected: 01/09/23 11:45

Matrix: Water

Date Received: 01/10/23 09:43

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	608288	01/13/23 15:40	WPD	EET PEN
Total/NA	Prep	3520C			258.4 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608937	01/18/23 23:22	S1B	EET PEN
Total/NA	Prep	3520C			258.4 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608984	01/18/23 18:38	PP1	EET PEN
Total/NA	Prep	8011			35.4 mL	35 mL	608768	01/17/23 10:00	DS	EET PEN
Total/NA	Analysis	8011		1			608815	01/17/23 21:06	DS	EET PEN

Client Sample ID: P56-ROX-010923

Lab Sample ID: 400-231505-15

Date Collected: 01/09/23 13:35

Matrix: Water

Date Received: 01/10/23 09:43

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	608288	01/13/23 16:04	WPD	EET PEN
Total/NA	Prep	3520C			259 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608937	01/18/23 23:44	S1B	EET PEN
Total/NA	Prep	3520C			259 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608984	01/18/23 18:56	PP1	EET PEN
Total/NA	Prep	3520C			259 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	610183	01/27/23 21:45	PP1	EET PEN
Total/NA	Prep	8011			35.8 mL	35 mL	608768	01/17/23 10:00	DS	EET PEN
Total/NA	Analysis	8011		1			608815	01/17/23 21:27	DS	EET PEN

Client Sample ID: Method Blank
Lab Sample ID: MB 400-608288/5
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	608288	01/13/23 09:33	WPD	EET PEN

Client Sample ID: Method Blank
Lab Sample ID: MB 400-608467/4
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	608467	01/14/23 08:11	WPD	EET PEN

Client Sample ID: Method Blank
Lab Sample ID: MB 400-608610/1-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			250 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608937	01/18/23 18:12	S1B	EET PEN
Total/NA	Prep	3520C			250 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608984	01/18/23 15:11	PP1	EET PEN

Client Sample ID: Method Blank
Lab Sample ID: MB 400-608768/1-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	608768	01/17/23 10:00	DS	EET PEN
Total/NA	Analysis	8011		1			608815	01/17/23 13:00	DS	EET PEN

Client Sample ID: Method Blank
Lab Sample ID: MB 400-609095/1-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	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/19/23 16:05	DS	EET PEN

Client Sample ID: Method Blank
Lab Sample ID: MB 400-611779/1-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	RE		250 mL	1 mL	611779	02/09/23 13:26	KWS	EET PEN
Total/NA	Analysis	8270D LL	RE	1	0.4 mL	0.4 mL	614365	02/28/23 16:56	PP1	EET PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-608288/1003
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	608288	01/13/23 08:33	WPD	EET PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-608467/1002
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	608467	01/14/23 07:25	WPD	EET PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-608610/2-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			250 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608937	01/18/23 18:34	S1B	EET PEN
Total/NA	Prep	3520C			250 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D LL		5	0.4 mL	0.4 mL	608984	01/18/23 15:28	PP1	EET PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-608610/4-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			250 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608937	01/18/23 19:19	S1B	EET PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-608768/2-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	608768	01/17/23 10:00	DS	EET PEN
Total/NA	Analysis	8011		1			608815	01/17/23 13:21	DS	EET PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-609095/2-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	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/19/23 16:25	DS	EET PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-611779/2-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	RE		250 mL	1 mL	611779	02/09/23 13:26	KWS	EET PEN
Total/NA	Analysis	8270D LL	RE	5	0.4 mL	0.4 mL	611978	02/10/23 17:23	PP1	EET PEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-608610/3-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			250 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608937	01/18/23 18:57	S1B	EET PEN
Total/NA	Prep	3520C			250 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D LL		5	0.4 mL	0.4 mL	608984	01/18/23 15:46	PP1	EET PEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-608610/5-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			250 mL	1 mL	608610	01/16/23 09:16	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608937	01/18/23 19:41	S1B	EET PEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-608768/3-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	608768	01/17/23 10:00	DS	EET PEN
Total/NA	Analysis	8011		1			608815	01/17/23 13:41	DS	EET PEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-609095/3-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	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/19/23 16:45	DS	EET PEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-611779/3-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	RE		250 mL	1 mL	611779	02/09/23 13:26	KWS	EET PEN
Total/NA	Analysis	8270D LL	RE	5	0.4 mL	0.4 mL	611978	02/10/23 17:40	PP1	EET PEN

Laboratory References:
EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

GC/MS VOA

Analysis Batch: 608288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231505-1	TB-ROX-010923-8260-A	Total/NA	Water	8260B	
400-231505-3	MW4-ROX-010923-EB	Total/NA	Water	8260B	
400-231505-4	MW4-ROX-010923	Total/NA	Water	8260B	
400-231505-5	MW25-ROX-010923	Total/NA	Water	8260B	
400-231505-6	MW8-ROX-010923	Total/NA	Water	8260B	
400-231505-7	MW8-ROX-010923-DUP	Total/NA	Water	8260B	
400-231505-8	MW7-ROX-010923	Total/NA	Water	8260B	
400-231505-9	TB-ROX-010923-8260-B	Total/NA	Water	8260B	
400-231505-11	MW13-ROX-010923-EB	Total/NA	Water	8260B	
400-231505-13	MW14-ROX-010923	Total/NA	Water	8260B	
400-231505-14	MW14-ROX-010923-DUP	Total/NA	Water	8260B	
400-231505-15	P56-ROX-010923	Total/NA	Water	8260B	
MB 400-608288/5	Method Blank	Total/NA	Water	8260B	
LCS 400-608288/1003	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 608467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231505-6 - DL	MW8-ROX-010923	Total/NA	Water	8260B	
400-231505-7 - DL	MW8-ROX-010923-DUP	Total/NA	Water	8260B	
400-231505-12	MW13-ROX-010923	Total/NA	Water	8260B	
MB 400-608467/4	Method Blank	Total/NA	Water	8260B	
LCS 400-608467/1002	Lab Control Sample	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 608610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231505-3	MW4-ROX-010923-EB	Total/NA	Water	3520C	
400-231505-4	MW4-ROX-010923	Total/NA	Water	3520C	
400-231505-5	MW25-ROX-010923	Total/NA	Water	3520C	
400-231505-6	MW8-ROX-010923	Total/NA	Water	3520C	
400-231505-6 - DL	MW8-ROX-010923	Total/NA	Water	3520C	
400-231505-7	MW8-ROX-010923-DUP	Total/NA	Water	3520C	
400-231505-7 - DL	MW8-ROX-010923-DUP	Total/NA	Water	3520C	
400-231505-8	MW7-ROX-010923	Total/NA	Water	3520C	
400-231505-11	MW13-ROX-010923-EB	Total/NA	Water	3520C	
400-231505-12	MW13-ROX-010923	Total/NA	Water	3520C	
400-231505-13	MW14-ROX-010923	Total/NA	Water	3520C	
400-231505-14	MW14-ROX-010923-DUP	Total/NA	Water	3520C	
400-231505-15	P56-ROX-010923	Total/NA	Water	3520C	
MB 400-608610/1-A	Method Blank	Total/NA	Water	3520C	
LCS 400-608610/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 400-608610/4-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-608610/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
LCSD 400-608610/5-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 608937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231505-3	MW4-ROX-010923-EB	Total/NA	Water	8270D	608610
400-231505-4	MW4-ROX-010923	Total/NA	Water	8270D	608610
400-231505-5	MW25-ROX-010923	Total/NA	Water	8270D	608610

GC/MS Semi VOA (Continued)

Analysis Batch: 608937 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231505-6	MW8-ROX-010923	Total/NA	Water	8270D	608610
400-231505-7	MW8-ROX-010923-DUP	Total/NA	Water	8270D	608610
400-231505-8	MW7-ROX-010923	Total/NA	Water	8270D	608610
400-231505-11	MW13-ROX-010923-EB	Total/NA	Water	8270D	608610
400-231505-12	MW13-ROX-010923	Total/NA	Water	8270D	608610
400-231505-13	MW14-ROX-010923	Total/NA	Water	8270D	608610
400-231505-14	MW14-ROX-010923-DUP	Total/NA	Water	8270D	608610
400-231505-15	P56-ROX-010923	Total/NA	Water	8270D	608610
MB 400-608610/1-A	Method Blank	Total/NA	Water	8270D	608610
LCS 400-608610/2-A	Lab Control Sample	Total/NA	Water	8270D	608610
LCS 400-608610/4-A	Lab Control Sample	Total/NA	Water	8270D	608610
LCSD 400-608610/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	608610
LCSD 400-608610/5-A	Lab Control Sample Dup	Total/NA	Water	8270D	608610

Analysis Batch: 608984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231505-3	MW4-ROX-010923-EB	Total/NA	Water	8270D LL	608610
400-231505-4	MW4-ROX-010923	Total/NA	Water	8270D LL	608610
400-231505-5	MW25-ROX-010923	Total/NA	Water	8270D LL	608610
400-231505-6	MW8-ROX-010923	Total/NA	Water	8270D LL	608610
400-231505-7	MW8-ROX-010923-DUP	Total/NA	Water	8270D LL	608610
400-231505-8	MW7-ROX-010923	Total/NA	Water	8270D LL	608610
400-231505-11	MW13-ROX-010923-EB	Total/NA	Water	8270D LL	608610
400-231505-12	MW13-ROX-010923	Total/NA	Water	8270D LL	608610
400-231505-13	MW14-ROX-010923	Total/NA	Water	8270D LL	608610
400-231505-14	MW14-ROX-010923-DUP	Total/NA	Water	8270D LL	608610
400-231505-15	P56-ROX-010923	Total/NA	Water	8270D LL	608610
MB 400-608610/1-A	Method Blank	Total/NA	Water	8270D LL	608610
LCS 400-608610/2-A	Lab Control Sample	Total/NA	Water	8270D LL	608610
LCSD 400-608610/3-A	Lab Control Sample Dup	Total/NA	Water	8270D LL	608610

Analysis Batch: 609110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231505-6 - DL	MW8-ROX-010923	Total/NA	Water	8270D	608610
400-231505-7 - DL	MW8-ROX-010923-DUP	Total/NA	Water	8270D	608610

Analysis Batch: 610183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231505-4	MW4-ROX-010923	Total/NA	Water	8270D LL	608610
400-231505-15	P56-ROX-010923	Total/NA	Water	8270D LL	608610

Prep Batch: 611779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231505-3 - RE	MW4-ROX-010923-EB	Total/NA	Water	3520C	
MB 400-611779/1-A - RE	Method Blank	Total/NA	Water	3520C	
LCS 400-611779/2-A - RE	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-611779/3-A - RE	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 611978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-611779/2-A - RE	Lab Control Sample	Total/NA	Water	8270D LL	611779

GC/MS Semi VOA (Continued)

Analysis Batch: 611978 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 400-611779/3-A - RE	Lab Control Sample Dup	Total/NA	Water	8270D LL	611779

Analysis Batch: 614365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231505-3 - RE	MW4-ROX-010923-EB	Total/NA	Water	8270D LL	611779
MB 400-611779/1-A - RE	Method Blank	Total/NA	Water	8270D LL	611779

GC Semi VOA

Prep Batch: 608768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231505-2	TB-ROX-010923-8011-A	Total/NA	Water	8011	
400-231505-10	TB-ROX-010923-8011-B	Total/NA	Water	8011	
400-231505-11	MW13-ROX-010923-EB	Total/NA	Water	8011	
400-231505-12	MW13-ROX-010923	Total/NA	Water	8011	
400-231505-13	MW14-ROX-010923	Total/NA	Water	8011	
400-231505-14	MW14-ROX-010923-DUP	Total/NA	Water	8011	
400-231505-15	P56-ROX-010923	Total/NA	Water	8011	
MB 400-608768/1-A	Method Blank	Total/NA	Water	8011	
LCS 400-608768/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 400-608768/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 608815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231505-2	TB-ROX-010923-8011-A	Total/NA	Water	8011	608768
400-231505-10	TB-ROX-010923-8011-B	Total/NA	Water	8011	608768
400-231505-11	MW13-ROX-010923-EB	Total/NA	Water	8011	608768
400-231505-12	MW13-ROX-010923	Total/NA	Water	8011	608768
400-231505-13	MW14-ROX-010923	Total/NA	Water	8011	608768
400-231505-14	MW14-ROX-010923-DUP	Total/NA	Water	8011	608768
400-231505-15	P56-ROX-010923	Total/NA	Water	8011	608768
MB 400-608768/1-A	Method Blank	Total/NA	Water	8011	608768
LCS 400-608768/2-A	Lab Control Sample	Total/NA	Water	8011	608768
LCSD 400-608768/3-A	Lab Control Sample Dup	Total/NA	Water	8011	608768

Prep Batch: 609095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231505-3	MW4-ROX-010923-EB	Total/NA	Water	8011	
400-231505-4	MW4-ROX-010923	Total/NA	Water	8011	
400-231505-5	MW25-ROX-010923	Total/NA	Water	8011	
400-231505-6	MW8-ROX-010923	Total/NA	Water	8011	
400-231505-7	MW8-ROX-010923-DUP	Total/NA	Water	8011	
400-231505-8	MW7-ROX-010923	Total/NA	Water	8011	
MB 400-609095/1-A	Method Blank	Total/NA	Water	8011	
LCS 400-609095/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 400-609095/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 609205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231505-3	MW4-ROX-010923-EB	Total/NA	Water	8011	609095
400-231505-4	MW4-ROX-010923	Total/NA	Water	8011	609095

GC Semi VOA (Continued)

Analysis Batch: 609205 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231505-5	MW25-ROX-010923	Total/NA	Water	8011	609095
400-231505-6	MW8-ROX-010923	Total/NA	Water	8011	609095
400-231505-7	MW8-ROX-010923-DUP	Total/NA	Water	8011	609095
400-231505-8	MW7-ROX-010923	Total/NA	Water	8011	609095
MB 400-609095/1-A	Method Blank	Total/NA	Water	8011	609095
LCS 400-609095/2-A	Lab Control Sample	Total/NA	Water	8011	609095
LCSD 400-609095/3-A	Lab Control Sample Dup	Total/NA	Water	8011	609095

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-608288/5
Matrix: Water
Analysis Batch: 608288

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			01/13/23 09:33	1
Acrolein	ND		20	3.3	ug/L			01/13/23 09:33	1
Acrylonitrile	ND		10	2.8	ug/L			01/13/23 09:33	1
Benzene	ND		1.0	0.13	ug/L			01/13/23 09:33	1
Bromobenzene	ND		1.0	0.54	ug/L			01/13/23 09:33	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/13/23 09:33	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/13/23 09:33	1
Bromoform	ND		5.0	0.25	ug/L			01/13/23 09:33	1
Bromomethane	ND		1.0	0.98	ug/L			01/13/23 09:33	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/13/23 09:33	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/13/23 09:33	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/13/23 09:33	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/13/23 09:33	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/13/23 09:33	1
Chloroethane	ND		1.0	0.76	ug/L			01/13/23 09:33	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/13/23 09:33	1
Chloroform	ND		1.0	1.0	ug/L			01/13/23 09:33	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/13/23 09:33	1
Chloromethane	ND		1.0	0.32	ug/L			01/13/23 09:33	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/13/23 09:33	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/13/23 09:33	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/13/23 09:33	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/13/23 09:33	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/13/23 09:33	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/13/23 09:33	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/13/23 09:33	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/13/23 09:33	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 09:33	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 09:33	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 09:33	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/13/23 09:33	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/13/23 09:33	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/13/23 09:33	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/13/23 09:33	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/13/23 09:33	1
2-Hexanone	ND		25	1.4	ug/L			01/13/23 09:33	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/13/23 09:33	1
Methylene bromide	ND		5.0	0.22	ug/L			01/13/23 09:33	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/13/23 09:33	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/13/23 09:33	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/13/23 09:33	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/13/23 09:33	1
Naphthalene	ND		5.0	3.0	ug/L			01/13/23 09:33	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/13/23 09:33	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/13/23 09:33	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/13/23 09:33	1
o-Xylene	ND		5.0	0.60	ug/L			01/13/23 09:33	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/13/23 09:33	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-608288/5
Matrix: Water
Analysis Batch: 608288

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			01/13/23 09:33	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			01/13/23 09:33	1
Styrene	ND		1.0	1.0	ug/L			01/13/23 09:33	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/13/23 09:33	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/13/23 09:33	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/13/23 09:33	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/13/23 09:33	1
Toluene	ND		1.0	0.41	ug/L			01/13/23 09:33	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/13/23 09:33	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/13/23 09:33	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/13/23 09:33	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/13/23 09:33	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/13/23 09:33	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/13/23 09:33	1
Trichloroethene	ND		1.0	0.15	ug/L			01/13/23 09:33	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/13/23 09:33	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/13/23 09:33	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/13/23 09:33	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/13/23 09:33	1
Vinyl acetate	ND		25	0.93	ug/L			01/13/23 09:33	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/13/23 09:33	1
Xylenes, Total	ND		10	1.6	ug/L			01/13/23 09:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*		*72 - 119*		*01/13/23 09:33*	*1*
Dibromofluoromethane	*104*		*75 - 126*		*01/13/23 09:33*	*1*
Toluene-d8 (Surr)	*95*		*64 - 132*		*01/13/23 09:33*	*1*

Lab Sample ID: LCS 400-608288/1003
Matrix: Water
Analysis Batch: 608288

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	200	183		ug/L		91	43 - 160
Acrolein	500	458		ug/L		92	38 - 160
Acrylonitrile	500	437		ug/L		87	64 - 142
Benzene	50.0	46.8		ug/L		94	70 - 130
Bromobenzene	50.0	46.2		ug/L		92	70 - 132
Bromochloromethane	50.0	47.5		ug/L		95	70 - 130
Bromodichloromethane	50.0	47.2		ug/L		94	67 - 133
Bromoform	50.0	46.2		ug/L		92	57 - 140
Bromomethane	50.0	41.0		ug/L		82	10 - 160
2-Butanone (MEK)	200	174		ug/L		87	61 - 145
Carbon disulfide	50.0	43.2		ug/L		86	61 - 137
Carbon tetrachloride	50.0	44.4		ug/L		89	61 - 137
Chlorobenzene	50.0	46.0		ug/L		92	70 - 130
Dibromochloromethane	50.0	45.2		ug/L		90	67 - 135
Chloroethane	50.0	40.5		ug/L		81	55 - 141

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-608288/1003
Matrix: Water
Analysis Batch: 608288

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	54.9		ug/L		110	10 - 160
Chloroform	50.0	45.0		ug/L		90	69 - 130
1-Chlorohexane	50.0	44.7		ug/L		89	69 - 130
Chloromethane	50.0	35.0		ug/L		70	58 - 137
cis-1,2-Dichloroethene	50.0	43.5		ug/L		87	68 - 130
cis-1,3-Dichloropropene	50.0	49.1		ug/L		98	69 - 132
1,2-Dichlorobenzene	50.0	48.3		ug/L		97	67 - 130
1,3-Dichlorobenzene	50.0	49.1		ug/L		98	70 - 130
1,4-Dichlorobenzene	50.0	48.0		ug/L		96	70 - 130
Dichlorodifluoromethane	50.0	30.8		ug/L		62	41 - 146
1,1-Dichloroethane	50.0	44.8		ug/L		90	70 - 130
1,2-Dichloroethane	50.0	44.5		ug/L		89	69 - 130
1,1-Dichloroethene	50.0	45.4		ug/L		91	63 - 134
1,2-Dichloropropane	50.0	47.1		ug/L		94	70 - 130
1,3-Dichloropropane	50.0	46.6		ug/L		93	70 - 130
2,2-Dichloropropane	50.0	49.4		ug/L		99	52 - 135
1,1-Dichloropropene	50.0	46.8		ug/L		94	70 - 130
Ethylbenzene	50.0	44.4		ug/L		89	70 - 130
Ethyl methacrylate	50.0	45.2		ug/L		90	68 - 130
Hexachlorobutadiene	50.0	52.2		ug/L		104	53 - 140
2-Hexanone	200	175		ug/L		87	65 - 137
Isopropy benzene	50.0	44.9		ug/L		90	70 - 130
Methylene bromide	50.0	47.5		ug/L		95	70 - 130
Methylene Chloride	50.0	47.4		ug/L		95	66 - 135
4-Methyl-2-pentanone (MIBK)	200	191		ug/L		96	69 - 138
Methyl tert-butyl ether	50.0	47.9		ug/L		96	66 - 130
m-Xylene & p-Xylene	50.0	45.0		ug/L		90	70 - 130
Naphthalene	50.0	55.2		ug/L		110	47 - 149
n-Butylbenzene	50.0	46.0		ug/L		92	67 - 130
N-Propylbenzene	50.0	46.8		ug/L		94	70 - 130
o-Chlorotoluene	50.0	45.5		ug/L		91	70 - 130
o-Xylene	50.0	45.1		ug/L		90	70 - 130
p-Chlorotoluene	50.0	45.8		ug/L		92	70 - 130
p-Isopropyltoluene	50.0	45.5		ug/L		91	65 - 130
sec-Butylbenzene	50.0	46.1		ug/L		92	66 - 130
Styrene	50.0	45.3		ug/L		91	70 - 130
tert-Butylbenzene	50.0	51.0		ug/L		102	64 - 139
1,1,1,2-Tetrachloroethane	50.0	45.6		ug/L		91	67 - 131
1,1,2,2-Tetrachloroethane	50.0	45.0		ug/L		90	70 - 131
Tetrachloroethene	50.0	47.8		ug/L		96	65 - 130
Toluene	50.0	44.1		ug/L		88	70 - 130
trans-1,2-Dichloroethene	50.0	44.4		ug/L		89	70 - 130
trans-1,3-Dichloropropene	50.0	46.2		ug/L		92	63 - 130
1,2,3-Trichlorobenzene	50.0	53.5		ug/L		107	60 - 138
1,2,4-Trichlorobenzene	50.0	51.6		ug/L		103	60 - 140
1,1,1-Trichloroethane	50.0	44.6		ug/L		89	68 - 130
1,1,2-Trichloroethane	50.0	44.8		ug/L		90	70 - 130
Trichloroethene	50.0	48.3		ug/L		97	70 - 130
Trichlorofluoromethane	50.0	44.9		ug/L		90	65 - 138

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-608288/1003
Matrix: Water
Analysis Batch: 608288

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	50.0	43.7		ug/L		87	70 - 130
1,2,4-Trimethy benzene	50.0	44.1		ug/L		88	70 - 130
1,3,5-Trimethy benzene	50.0	44.4		ug/L		89	69 - 130
Vinyl acetate	100	101		ug/L		101	26 - 160
Vinyl chloride	50.0	40.9		ug/L		82	59 - 136
Xylenes, Total	100	90.2		ug/L		90	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*98*		*72 - 119*
Dibromofluoromethane	*100*		*75 - 126*
Toluene-d8 (Surr)	*95*		*64 - 132*

Lab Sample ID: MB 400-608467/4
Matrix: Water
Analysis Batch: 608467

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			01/14/23 08:11	1
Acrolein	ND		20	3.3	ug/L			01/14/23 08:11	1
Acrylonitrile	ND		10	2.8	ug/L			01/14/23 08:11	1
Benzene	ND		1.0	0.13	ug/L			01/14/23 08:11	1
Bromobenzene	ND		1.0	0.54	ug/L			01/14/23 08:11	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/14/23 08:11	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/14/23 08:11	1
Bromoform	ND		5.0	0.25	ug/L			01/14/23 08:11	1
Bromomethane	ND		1.0	0.98	ug/L			01/14/23 08:11	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/14/23 08:11	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/14/23 08:11	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/14/23 08:11	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/14/23 08:11	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/14/23 08:11	1
Chloroethane	ND		1.0	0.76	ug/L			01/14/23 08:11	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/14/23 08:11	1
Chloroform	ND		1.0	1.0	ug/L			01/14/23 08:11	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/14/23 08:11	1
Chloromethane	ND		1.0	0.32	ug/L			01/14/23 08:11	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/14/23 08:11	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/14/23 08:11	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/14/23 08:11	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/14/23 08:11	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/14/23 08:11	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/14/23 08:11	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/14/23 08:11	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/14/23 08:11	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/14/23 08:11	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/14/23 08:11	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/14/23 08:11	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/14/23 08:11	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-608467/4
Matrix: Water
Analysis Batch: 608467

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/14/23 08:11	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/14/23 08:11	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/14/23 08:11	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/14/23 08:11	1
2-Hexanone	ND		25	1.4	ug/L			01/14/23 08:11	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/14/23 08:11	1
Methylene bromide	ND		5.0	0.22	ug/L			01/14/23 08:11	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/14/23 08:11	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/14/23 08:11	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/14/23 08:11	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/14/23 08:11	1
Naphthalene	ND		5.0	3.0	ug/L			01/14/23 08:11	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/14/23 08:11	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/14/23 08:11	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/14/23 08:11	1
o-Xylene	ND		5.0	0.60	ug/L			01/14/23 08:11	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/14/23 08:11	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/14/23 08:11	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			01/14/23 08:11	1
Styrene	ND		1.0	1.0	ug/L			01/14/23 08:11	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/14/23 08:11	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/14/23 08:11	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/14/23 08:11	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/14/23 08:11	1
Toluene	ND		1.0	0.41	ug/L			01/14/23 08:11	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/14/23 08:11	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/14/23 08:11	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/14/23 08:11	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/14/23 08:11	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/14/23 08:11	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/14/23 08:11	1
Trichloroethene	ND		1.0	0.15	ug/L			01/14/23 08:11	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/14/23 08:11	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/14/23 08:11	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/14/23 08:11	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/14/23 08:11	1
Vinyl acetate	ND		25	0.93	ug/L			01/14/23 08:11	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/14/23 08:11	1
Xylenes, Total	ND		10	1.6	ug/L			01/14/23 08:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*72 - 119*		*01/14/23 08:11*	*1*
Dibromofluoromethane	*104*		*75 - 126*		*01/14/23 08:11*	*1*
Toluene-d8 (Surr)	*94*		*64 - 132*		*01/14/23 08:11*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-608467/1002
Matrix: Water
Analysis Batch: 608467

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	200	208		ug/L		104	43 - 160
Acrolein	500	486		ug/L		97	38 - 160
Acrylonitrile	500	504		ug/L		101	64 - 142
Benzene	50.0	49.3		ug/L		99	70 - 130
Bromobenzene	50.0	48.1		ug/L		96	70 - 132
Bromochloromethane	50.0	52.9		ug/L		106	70 - 130
Bromodichloromethane	50.0	50.7		ug/L		101	67 - 133
Bromoform	50.0	49.3		ug/L		99	57 - 140
Bromomethane	50.0	43.7		ug/L		87	10 - 160
2-Butanone (MEK)	200	205		ug/L		102	61 - 145
Carbon disulfide	50.0	44.6		ug/L		89	61 - 137
Carbon tetrachloride	50.0	46.8		ug/L		94	61 - 137
Chlorobenzene	50.0	48.4		ug/L		97	70 - 130
Dibromochloromethane	50.0	49.2		ug/L		98	67 - 135
Chloroethane	50.0	41.9		ug/L		84	55 - 141
2-Chloroethyl vinyl ether	50.0	60.8		ug/L		122	10 - 160
Chloroform	50.0	48.3		ug/L		97	69 - 130
1-Chlorohexane	50.0	45.2		ug/L		90	69 - 130
Chloromethane	50.0	36.0		ug/L		72	58 - 137
cis-1,2-Dichloroethene	50.0	47.5		ug/L		95	68 - 130
cis-1,3-Dichloropropene	50.0	53.4		ug/L		107	69 - 132
1,2-Dichlorobenzene	50.0	50.1		ug/L		100	67 - 130
1,3-Dichlorobenzene	50.0	49.4		ug/L		99	70 - 130
1,4-Dichlorobenzene	50.0	49.7		ug/L		99	70 - 130
Dichlorodifluoromethane	50.0	31.1		ug/L		62	41 - 146
1,1-Dichloroethane	50.0	49.3		ug/L		99	70 - 130
1,2-Dichloroethane	50.0	49.7		ug/L		99	69 - 130
1,1-Dichloroethene	50.0	48.2		ug/L		96	63 - 134
1,2-Dichloropropane	50.0	50.5		ug/L		101	70 - 130
1,3-Dichloropropane	50.0	51.4		ug/L		103	70 - 130
2,2-Dichloropropane	50.0	50.2		ug/L		100	52 - 135
1,1-Dichloropropene	50.0	49.4		ug/L		99	70 - 130
Ethylbenzene	50.0	46.4		ug/L		93	70 - 130
Ethyl methacrylate	50.0	50.0		ug/L		100	68 - 130
Hexachlorobutadiene	50.0	52.5		ug/L		105	53 - 140
2-Hexanone	200	202		ug/L		101	65 - 137
Isopropy benzene	50.0	46.3		ug/L		93	70 - 130
Methylene bromide	50.0	53.8		ug/L		108	70 - 130
Methylene Chloride	50.0	52.5		ug/L		105	66 - 135
4-Methyl-2-pentanone (MIBK)	200	222		ug/L		111	69 - 138
Methyl tert-butyl ether	50.0	54.8		ug/L		110	66 - 130
m-Xylene & p-Xylene	50.0	46.4		ug/L		93	70 - 130
Naphthalene	50.0	59.4		ug/L		119	47 - 149
n-Butylbenzene	50.0	48.1		ug/L		96	67 - 130
N-Propylbenzene	50.0	47.2		ug/L		94	70 - 130
o-Chlorotoluene	50.0	45.7		ug/L		91	70 - 130
o-Xylene	50.0	47.2		ug/L		94	70 - 130
p-Chlorotoluene	50.0	46.7		ug/L		93	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-608467/1002
Matrix: Water
Analysis Batch: 608467

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	46.8		ug/L		94	65 - 130
sec-Butylbenzene	50.0	46.3		ug/L		93	66 - 130
Styrene	50.0	46.8		ug/L		94	70 - 130
tert-Butylbenzene	50.0	50.8		ug/L		102	64 - 139
1,1,1,2-Tetrachloroethane	50.0	49.0		ug/L		98	67 - 131
1,1,2,2-Tetrachloroethane	50.0	48.7		ug/L		97	70 - 131
Tetrachloroethene	50.0	50.3		ug/L		101	65 - 130
Toluene	50.0	46.2		ug/L		92	70 - 130
trans-1,2-Dichloroethene	50.0	49.0		ug/L		98	70 - 130
trans-1,3-Dichloropropene	50.0	49.8		ug/L		100	63 - 130
1,2,3-Trichlorobenzene	50.0	58.4		ug/L		117	60 - 138
1,2,4-Trichlorobenzene	50.0	56.0		ug/L		112	60 - 140
1,1,1-Trichloroethane	50.0	47.5		ug/L		95	68 - 130
1,1,2-Trichloroethane	50.0	49.8		ug/L		100	70 - 130
Trichloroethene	50.0	50.6		ug/L		101	70 - 130
Trichlorofluoromethane	50.0	43.7		ug/L		87	65 - 138
1,2,3-Trichloropropane	50.0	48.7		ug/L		97	70 - 130
1,2,4-Trimethy benzene	50.0	47.4		ug/L		95	70 - 130
1,3,5-Trimethy benzene	50.0	46.7		ug/L		93	69 - 130
Vinyl acetate	100	113		ug/L		113	26 - 160
Vinyl chloride	50.0	42.3		ug/L		85	59 - 136
Xylenes, Total	100	93.6		ug/L		94	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*98*		*72 - 119*
Dibromofluoromethane	*101*		*75 - 126*
Toluene-d8 (Surr)	*95*		*64 - 132*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-608610/1-A
Matrix: Water
Analysis Batch: 608937

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 608610

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.8	ug/L		01/16/23 09:16	01/18/23 18:12	1
Benzenethiol	ND		10	1.7	ug/L		01/16/23 09:16	01/18/23 18:12	1
Benzoic acid	ND		30	7.3	ug/L		01/16/23 09:16	01/18/23 18:12	1
Benzyl alcohol	ND		10	2.0	ug/L		01/16/23 09:16	01/18/23 18:12	1
Bis(2-chloroethoxy)methane	ND		10	0.16	ug/L		01/16/23 09:16	01/18/23 18:12	1
Bis(2-chloroethyl)ether	ND		10	2.7	ug/L		01/16/23 09:16	01/18/23 18:12	1
bis (2-chloroisopropyl) ether	ND		10	0.16	ug/L		01/16/23 09:16	01/18/23 18:12	1
Bis(2-ethylhexyl) phthalate	ND		10	5.0	ug/L		01/16/23 09:16	01/18/23 18:12	1
4-Bromophenyl phenyl ether	ND		10	0.20	ug/L		01/16/23 09:16	01/18/23 18:12	1
Butyl benzyl phthalate	ND		10	0.19	ug/L		01/16/23 09:16	01/18/23 18:12	1
4-Chloroaniline	ND		10	3.4	ug/L		01/16/23 09:16	01/18/23 18:12	1
4-Chloro-3-methylphenol	ND		10	3.8	ug/L		01/16/23 09:16	01/18/23 18:12	1
2-Chloronaphthalene	ND		10	0.14	ug/L		01/16/23 09:16	01/18/23 18:12	1
2-Chlorophenol	ND		10	2.2	ug/L		01/16/23 09:16	01/18/23 18:12	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-608610/1-A
Matrix: Water
Analysis Batch: 608937

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 608610

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		01/16/23 09:16	01/18/23 18:12	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/16/23 09:16	01/18/23 18:12	1
Dibenzofuran	ND		10	0.17	ug/L		01/16/23 09:16	01/18/23 18:12	1
3,3'-Dichlorobenzidine	ND		10	2.6	ug/L		01/16/23 09:16	01/18/23 18:12	1
2,4-Dichlorophenol	ND		10	3.0	ug/L		01/16/23 09:16	01/18/23 18:12	1
Diethyl phthalate	ND		10	0.24	ug/L		01/16/23 09:16	01/18/23 18:12	1
2,4-Dimethylphenol	ND		10	3.5	ug/L		01/16/23 09:16	01/18/23 18:12	1
Dimethyl phthalate	ND		10	0.17	ug/L		01/16/23 09:16	01/18/23 18:12	1
Di-n-butyl phthalate	ND		10	2.7	ug/L		01/16/23 09:16	01/18/23 18:12	1
4,6-Dinitro-ortho-cresol	ND		10	1.6	ug/L		01/16/23 09:16	01/18/23 18:12	1
2,4-Dinitrophenol	ND		30	3.4	ug/L		01/16/23 09:16	01/18/23 18:12	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		01/16/23 09:16	01/18/23 18:12	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		01/16/23 09:16	01/18/23 18:12	1
Di-n-octyl phthalate	ND		10	0.17	ug/L		01/16/23 09:16	01/18/23 18:12	1
1,4-Dioxane	ND		10	1.0	ug/L		01/16/23 09:16	01/18/23 18:12	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/16/23 09:16	01/18/23 18:12	1
Hexachlorobenzene	ND		10	0.17	ug/L		01/16/23 09:16	01/18/23 18:12	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		01/16/23 09:16	01/18/23 18:12	1
Hexachloroethane	ND		10	4.2	ug/L		01/16/23 09:16	01/18/23 18:12	1
Indene	ND		10	1.0	ug/L		01/16/23 09:16	01/18/23 18:12	1
Isophorone	ND		10	0.14	ug/L		01/16/23 09:16	01/18/23 18:12	1
2-Methylphenol	ND		10	1.8	ug/L		01/16/23 09:16	01/18/23 18:12	1
3 & 4 Methylphenol	ND		20	0.39	ug/L		01/16/23 09:16	01/18/23 18:12	1
2-Nitroaniline	ND		10	2.2	ug/L		01/16/23 09:16	01/18/23 18:12	1
3-Nitroaniline	ND		10	1.8	ug/L		01/16/23 09:16	01/18/23 18:12	1
4-Nitroaniline	ND		10	1.5	ug/L		01/16/23 09:16	01/18/23 18:12	1
Nitrobenzene	ND		10	0.13	ug/L		01/16/23 09:16	01/18/23 18:12	1
2-Nitrophenol	ND		10	5.2	ug/L		01/16/23 09:16	01/18/23 18:12	1
4-Nitrophenol	ND		10	2.1	ug/L		01/16/23 09:16	01/18/23 18:12	1
N-Nitrosodimethylamine	ND		10	3.5	ug/L		01/16/23 09:16	01/18/23 18:12	1
N-Nitrosodi-n-propylamine	ND		10	3.3	ug/L		01/16/23 09:16	01/18/23 18:12	1
N-Nitrosodiphenylamine	ND		10	0.18	ug/L		01/16/23 09:16	01/18/23 18:12	1
Pentachlorophenol	ND		20	1.4	ug/L		01/16/23 09:16	01/18/23 18:12	1
Phenol	ND		10	2.6	ug/L		01/16/23 09:16	01/18/23 18:12	1
Pyridine	ND		10	3.2	ug/L		01/16/23 09:16	01/18/23 18:12	1
Quinoline	ND		10	4.5	ug/L		01/16/23 09:16	01/18/23 18:12	1
2,4,5-Trichlorophenol	ND		10	3.7	ug/L		01/16/23 09:16	01/18/23 18:12	1
2,4,6-Trichlorophenol	ND		10	3.5	ug/L		01/16/23 09:16	01/18/23 18:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*102*		*46 - 124*	*01/16/23 09:16*	*01/18/23 18:12*	*1*
2-Fluorophenol	*14*		*13 - 113*	*01/16/23 09:16*	*01/18/23 18:12*	*1*
Nitrobenzene-d5	*95*		*36 - 126*	*01/16/23 09:16*	*01/18/23 18:12*	*1*
Phenol-d5	*63*		*17 - 127*	*01/16/23 09:16*	*01/18/23 18:12*	*1*
Terphenyl-d14	*124*		*44 - 149*	*01/16/23 09:16*	*01/18/23 18:12*	*1*
2,4,6-Tribromophenol	*80*		*26 - 150*	*01/16/23 09:16*	*01/18/23 18:12*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-608610/2-A
Matrix: Water
Analysis Batch: 608937

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 608610

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aniline	120	132		ug/L		110	21 - 120
Benzoic acid	554	247		ug/L		45	10 - 144
Benzyl alcohol	120	120		ug/L		100	28 - 120
Bis(2-chloroethoxy)methane	120	112		ug/L		93	47 - 120
Bis(2-chloroethyl)ether	120	109		ug/L		91	44 - 120
bis (2-chloroisopropyl) ether	120	125		ug/L		104	33 - 121
Bis(2-ethylhexyl) phthalate	120	129		ug/L		107	52 - 147
4-Bromophenyl phenyl ether	120	107		ug/L		89	54 - 122
Butyl benzyl phthalate	120	128		ug/L		107	54 - 133
4-Chloroaniline	120	134		ug/L		112	26 - 120
4-Chloro-3-methylphenol	120	122		ug/L		102	48 - 131
2-Chloronaphthalene	120	119		ug/L		99	52 - 121
2-Chlorophenol	120	98.8		ug/L		82	40 - 120
4-Chlorophenyl phenyl ether	120	121		ug/L		100	56 - 125
Dibenz[a,h]acridine	120	57.6		ug/L		48	31 - 150
Dibenzofuran	120	125		ug/L		104	56 - 122
3,3'-Dichlorobenzidine	160	222	*+	ug/L		139	36 - 132
2,4-Dichlorophenol	120	113		ug/L		94	49 - 120
Diethyl phthalate	120	125		ug/L		104	50 - 137
2,4-Dimethylphenol	120	114		ug/L		95	48 - 120
Dimethyl phthalate	120	121		ug/L		101	57 - 124
Di-n-butyl phthalate	120	128		ug/L		107	58 - 126
4,6-Dinitro-ortho-cresol	240	199		ug/L		83	23 - 148
2,4-Dinitrophenol	240	168		ug/L		70	10 - 150
2,4-Dinitrotoluene	120	128		ug/L		107	54 - 142
2,6-Dinitrotoluene	120	122		ug/L		101	55 - 130
Di-n-octyl phthalate	120	132		ug/L		110	57 - 138
1,4-Dioxane	120	77.5		ug/L		65	31 - 120
1,2-Diphenylhydrazine (as Azobenzene)	120	119		ug/L		99	45 - 124
Hexachlorobenzene	120	112		ug/L		93	52 - 129
Hexachlorocyclopentadiene	120	85.5		ug/L		71	10 - 134
Hexachloroethane	120	99.1		ug/L		83	20 - 120
Indene	120	109		ug/L		90	49 - 120
Isophorone	120	114		ug/L		95	48 - 120
2-Methylphenol	120	114		ug/L		95	46 - 124
3 & 4 Methylphenol	120	118		ug/L		98	45 - 120
2-Nitroaniline	120	132		ug/L		110	51 - 145
3-Nitroaniline	120	145		ug/L		120	37 - 127
4-Nitroaniline	120	143		ug/L		119	36 - 137
Nitrobenzene	120	110		ug/L		92	45 - 120
2-Nitrophenol	120	116		ug/L		97	40 - 124
4-Nitrophenol	240	240		ug/L		100	23 - 146
N-Nitrosodimethylamine	120	118		ug/L		98	29 - 137
N-Nitrosodi-n-propylamine	120	120		ug/L		100	45 - 120
N-Nitrosodiphenylamine	119	108		ug/L		91	54 - 120
Pentachlorophenol	240	204		ug/L		85	31 - 130
Phenol	120	107		ug/L		90	11 - 120
Pyridine	240	182		ug/L		76	16 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-608610/2-A
Matrix: Water
Analysis Batch: 608937

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 608610

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Quinoline			120	63.2		ug/L		53	49 - 130		
2,4,5-Trichlorophenol			120	117		ug/L		97	51 - 136		
2,4,6-Trichlorophenol			120	119		ug/L		99	50 - 127		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*100*		*46 - 124*
2-Fluorophenol	*64*		*13 - 113*
Nitrobenzene-d5	*106*		*36 - 126*
Phenol-d5	*95*		*17 - 127*
Terphenyl-d14	*111*		*44 - 149*
2,4,6-Tribromophenol	*104*		*26 - 150*

Lab Sample ID: LCS 400-608610/4-A
Matrix: Water
Analysis Batch: 608937

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 608610

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzenethiol			120	11.3	*-	ug/L		9	10 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*100*		*46 - 124*
2-Fluorophenol	*42*		*13 - 113*
Nitrobenzene-d5	*93*		*36 - 126*
Phenol-d5	*77*		*17 - 127*
Terphenyl-d14	*119*		*44 - 149*
2,4,6-Tribromophenol	*41*		*26 - 150*

Lab Sample ID: LCSD 400-608610/3-A
Matrix: Water
Analysis Batch: 608937

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 608610

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aniline			120	142		ug/L		118	21 - 120	7	30
Benzoic acid			554	316		ug/L		57	10 - 144	25	30
Benzyl alcohol			120	121		ug/L		101	28 - 120	1	30
Bis(2-chloroethoxy)methane			120	115		ug/L		96	47 - 120	3	30
Bis(2-chloroethyl)ether			120	105		ug/L		88	44 - 120	4	30
bis (2-chloroisopropyl) ether			120	126		ug/L		105	33 - 121	1	30
Bis(2-ethylhexyl) phthalate			120	128		ug/L		107	52 - 147	0	30
4-Bromophenyl phenyl ether			120	111		ug/L		93	54 - 122	4	30
Butyl benzyl phthalate			120	128		ug/L		107	54 - 133	0	30
4-Chloroaniline			120	142		ug/L		118	26 - 120	5	30
4-Chloro-3-methylphenol			120	127		ug/L		106	48 - 131	4	30
2-Chloronaphthalene			120	121		ug/L		101	52 - 121	2	30
2-Chlorophenol			120	72.6	*1	ug/L		61	40 - 120	31	30
4-Chlorophenyl phenyl ether			120	125		ug/L		104	56 - 125	3	30
Dibenz[a,h]acridine			120	55.2		ug/L		46	31 - 150	4	30
Dibenzofuran			120	128		ug/L		107	56 - 122	3	30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-608610/3-A
Matrix: Water
Analysis Batch: 608937

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 608610

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
3,3'-Dichlorobenzidine			160	220	*+	ug/L		138	36 - 132	1	30
2,4-Dichlorophenol			120	108		ug/L		90	49 - 120	5	30
Diethyl phthalate			120	127		ug/L		106	50 - 137	2	30
2,4-Dimethylphenol			120	116		ug/L		97	48 - 120	2	30
Dimethyl phthalate			120	124		ug/L		104	57 - 124	3	30
Di-n-butyl phthalate			120	132		ug/L		110	58 - 126	3	30
4,6-Dinitro-ortho-cresol			240	203		ug/L		85	23 - 148	2	30
2,4-Dinitrophenol			240	170		ug/L		71	10 - 150	1	30
2,4-Dinitrotoluene			120	132		ug/L		110	54 - 142	3	30
2,6-Dinitrotoluene			120	125		ug/L		104	55 - 130	3	30
Di-n-octyl phthalate			120	132		ug/L		110	57 - 138	0	30
1,4-Dioxane			120	79.3		ug/L		66	31 - 120	2	30
1,2-Diphenylhydrazine (as Azobenzene)			120	124		ug/L		103	45 - 124	4	30
Hexachlorobenzene			120	116		ug/L		97	52 - 129	3	30
Hexachlorocyclopentadiene			120	90.3		ug/L		75	10 - 134	5	30
Hexachloroethane			120	99.6		ug/L		83	20 - 120	0	30
Indene			120	109		ug/L		91	49 - 120	0	30
Isophorone			120	117		ug/L		97	48 - 120	3	30
2-Methylphenol			120	113		ug/L		94	46 - 124	1	30
3 & 4 Methylphenol			120	114		ug/L		95	45 - 120	3	30
2-Nitroaniline			120	134		ug/L		112	51 - 145	2	30
3-Nitroaniline			120	146		ug/L		121	37 - 127	1	30
4-Nitroaniline			120	143		ug/L		119	36 - 137	0	30
Nitrobenzene			120	113		ug/L		94	45 - 120	3	30
2-Nitrophenol			120	106		ug/L		89	40 - 124	9	30
4-Nitrophenol			240	244		ug/L		102	23 - 146	2	30
N-Nitrosodimethylamine			120	124		ug/L		104	29 - 137	6	30
N-Nitrosodi-n-propylamine			120	123		ug/L		103	45 - 120	3	30
N-Nitrosodiphenylamine			119	114		ug/L		96	54 - 120	5	30
Pentachlorophenol			240	211		ug/L		88	31 - 130	4	30
Phenol			120	90.6		ug/L		75	11 - 120	17	30
Pyridine			240	189		ug/L		79	16 - 120	4	30
Quinoline			120	65.2		ug/L		55	49 - 130	3	30
2,4,5-Trichlorophenol			120	119		ug/L		99	51 - 136	1	30
2,4,6-Trichlorophenol			120	118		ug/L		98	50 - 127	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*100*		*46 - 124*
2-Fluorophenol	*28*		*13 - 113*
Nitrobenzene-d5	*105*		*36 - 126*
Phenol-d5	*78*		*17 - 127*
Terphenyl-d14	*108*		*44 - 149*
2,4,6-Tribromophenol	*103*		*26 - 150*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-608610/5-A
Matrix: Water
Analysis Batch: 608937

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 608610

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzenethiol			120	10.1	*-	ug/L		8	10 - 120	11	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*109*		*46 - 124*
2-Fluorophenol	*46*		*13 - 113*
Nitrobenzene-d5	*101*		*36 - 126*
Phenol-d5	*84*		*17 - 127*
Terphenyl-d14	*124*		*44 - 149*
2,4,6-Tribromophenol	*35*		*26 - 150*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 400-608610/1-A
Matrix: Water
Analysis Batch: 608984

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 608610

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.032	ug/L		01/16/23 09:16	01/18/23 15:11	1
Acenaphthylene	ND		0.20	0.045	ug/L		01/16/23 09:16	01/18/23 15:11	1
Anthracene	ND		0.20	0.032	ug/L		01/16/23 09:16	01/18/23 15:11	1
Benzo[a]anthracene	ND		0.20	0.046	ug/L		01/16/23 09:16	01/18/23 15:11	1
Benzo[a]pyrene	ND		0.20	0.042	ug/L		01/16/23 09:16	01/18/23 15:11	1
Benzo[b]fluoranthene	ND		0.20	0.034	ug/L		01/16/23 09:16	01/18/23 15:11	1
Benzo[g,h,i]perylene	ND		0.20	0.13	ug/L		01/16/23 09:16	01/18/23 15:11	1
Benzo[k]fluoranthene	ND		0.20	0.10	ug/L		01/16/23 09:16	01/18/23 15:11	1
Chrysene	ND		0.20	0.074	ug/L		01/16/23 09:16	01/18/23 15:11	1
Dibenz(a,h)anthracene	ND		0.20	0.050	ug/L		01/16/23 09:16	01/18/23 15:11	1
Fluoranthene	ND		0.20	0.068	ug/L		01/16/23 09:16	01/18/23 15:11	1
Fluorene	ND		0.20	0.11	ug/L		01/16/23 09:16	01/18/23 15:11	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.043	ug/L		01/16/23 09:16	01/18/23 15:11	1
1-Methylnaphthalene	ND		0.20	0.074	ug/L		01/16/23 09:16	01/18/23 15:11	1
2-Methylnaphthalene	ND		0.20	0.060	ug/L		01/16/23 09:16	01/18/23 15:11	1
Phenanthrene	ND		0.20	0.036	ug/L		01/16/23 09:16	01/18/23 15:11	1
Pyrene	0.0856	J	0.20	0.040	ug/L		01/16/23 09:16	01/18/23 15:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*109*		*15 - 122*	*01/16/23 09:16*	*01/18/23 15:11*	*1*
Nitrobenzene-d5	*74*		*19 - 130*	*01/16/23 09:16*	*01/18/23 15:11*	*1*
Terphenyl-d14	*130*		*33 - 138*	*01/16/23 09:16*	*01/18/23 15:11*	*1*

Lab Sample ID: LCS 400-608610/2-A
Matrix: Water
Analysis Batch: 608984

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 608610

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	120	114		ug/L		95	41 - 120
Acenaphthylene	120	119		ug/L		99	44 - 120
Anthracene	120	120		ug/L		100	49 - 120

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCS 400-608610/2-A
Matrix: Water
Analysis Batch: 608984

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 608610

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzo[a]anthracene			120	114		ug/L		95	61 - 135		
Benzo[a]pyrene			120	105		ug/L		87	52 - 120		
Benzo[b]fluoranthene			120	101		ug/L		85	53 - 134		
Benzo[g,h,i]perylene			120	83.9		ug/L		70	47 - 133		
Benzo[k]fluoranthene			120	114		ug/L		95	57 - 134		
Chrysene			120	106		ug/L		88	55 - 122		
Dibenz(a,h)anthracene			120	97.1		ug/L		81	48 - 146		
Fluoranthene			120	113		ug/L		95	54 - 128		
Fluorene			120	119		ug/L		99	45 - 125		
Indeno[1,2,3-cd]pyrene			120	98.9		ug/L		82	43 - 142		
1-Methylnaphthalene			120	91.9		ug/L		77	41 - 120		
2-Methylnaphthalene			120	89.6		ug/L		75	32 - 124		
Phenanthrene			120	112		ug/L		93	48 - 120		
Pyrene			120	118		ug/L		98	48 - 132		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*96*		*15 - 122*
Nitrobenzene-d5	*61*		*19 - 130*
Terphenyl-d14	*91*		*33 - 138*

Lab Sample ID: LCSD 400-608610/3-A
Matrix: Water
Analysis Batch: 608984

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 608610

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene			120	125		ug/L		104	41 - 120	9	56
Acenaphthylene			120	126		ug/L		105	44 - 120	6	56
Anthracene			120	130		ug/L		108	49 - 120	8	51
Benzo[a]anthracene			120	126		ug/L		105	61 - 135	10	49
Benzo[a]pyrene			120	108		ug/L		90	52 - 120	4	50
Benzo[b]fluoranthene			120	115		ug/L		96	53 - 134	12	54
Benzo[g,h,i]perylene			120	81.1		ug/L		68	47 - 133	3	50
Benzo[k]fluoranthene			120	119		ug/L		99	57 - 134	4	52
Chrysene			120	116		ug/L		97	55 - 122	9	50
Dibenz(a,h)anthracene			120	93.2		ug/L		78	48 - 146	4	50
Fluoranthene			120	121		ug/L		101	54 - 128	6	52
Fluorene			120	129		ug/L		108	45 - 125	8	56
Indeno[1,2,3-cd]pyrene			120	94.4		ug/L		79	43 - 142	5	51
1-Methylnaphthalene			120	98.0		ug/L		82	41 - 120	6	55
2-Methylnaphthalene			120	96.6		ug/L		81	32 - 124	8	57
Phenanthrene			120	122		ug/L		101	48 - 120	8	56
Pyrene			120	129		ug/L		107	48 - 132	9	52

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*100*		*15 - 122*
Nitrobenzene-d5	*54*		*19 - 130*
Terphenyl-d14	*102*		*33 - 138*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - RE

Lab Sample ID: MB 400-611779/1-A
Matrix: Water
Analysis Batch: 614365

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 611779

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene - RE	ND		0.20	0.034	ug/L		02/09/23 13:26	02/28/23 16:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl - RE	*91*		*15 - 122*	*02/09/23 13:26*	*02/28/23 16:56*	*1*
Nitrobenzene-d5 - RE	*98*		*19 - 130*	*02/09/23 13:26*	*02/28/23 16:56*	*1*
Terphenyl-d14 - RE	*106*		*33 - 138*	*02/09/23 13:26*	*02/28/23 16:56*	*1*

Lab Sample ID: LCS 400-611779/2-A
Matrix: Water
Analysis Batch: 611978

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 611779

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzo[b]fluoranthene - RE			120	115		ug/L		96	53 - 134		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl - RE	*93*		*15 - 122*
Nitrobenzene-d5 - RE	*118*		*19 - 130*
Terphenyl-d14 - RE	*104*		*33 - 138*

Lab Sample ID: LCSD 400-611779/3-A
Matrix: Water
Analysis Batch: 611978

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 611779

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzo[b]fluoranthene - RE			120	125		ug/L		104	53 - 134	9	54

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl - RE	*90*		*15 - 122*
Nitrobenzene-d5 - RE	*115*		*19 - 130*
Terphenyl-d14 - RE	*100*		*33 - 138*

Method: 8011 - EDB and DBCP in Water by Microextraction

Lab Sample ID: MB 400-608768/1-A
Matrix: Water
Analysis Batch: 608815

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 608768

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND		0.030	0.017	ug/L		01/17/23 10:00	01/17/23 13:00	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/17/23 10:00	01/17/23 13:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*105*		*51 - 149*	*01/17/23 10:00*	*01/17/23 13:00*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction (Continued)

Lab Sample ID: LCS 400-608768/2-A
Matrix: Water
Analysis Batch: 608815

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 608768

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,2-D bromo-3-Chloropropane			0.101	0.165	*+	ug/L		164	60 - 140		
1,2-D bromoethane			0.101	0.0951		ug/L		94	60 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*114*		*51 - 149*

Lab Sample ID: LCSD 400-608768/3-A
Matrix: Water
Analysis Batch: 608815

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 608768

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-D bromo-3-Chloropropane			0.101	0.163	*+	ug/L		163	60 - 140	1	30
1,2-D bromoethane			0.101	0.0949		ug/L		94	60 - 140	0	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*110*		*51 - 149*

Lab Sample ID: MB 400-609095/1-A
Matrix: Water
Analysis Batch: 609205

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 609095

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND		0.030	0.017	ug/L		01/19/23 10:05	01/19/23 16:05	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/19/23 10:05	01/19/23 16:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*118*		*51 - 149*	*01/19/23 10:05*	*01/19/23 16:05*	*1*

Lab Sample ID: LCS 400-609095/2-A
Matrix: Water
Analysis Batch: 609205

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 609095

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,2-D bromo-3-Chloropropane			0.101	0.157	*+	ug/L		156	60 - 140		
1,2-D bromoethane			0.101	0.101		ug/L		100	60 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*131*		*51 - 149*

Lab Sample ID: LCSD 400-609095/3-A
Matrix: Water
Analysis Batch: 609205

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 609095

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-D bromo-3-Chloropropane			0.101	0.155	*+	ug/L		154	60 - 140	1	30
1,2-D bromoethane			0.101	0.0966		ug/L		96	60 - 140	4	30

Method: 8011 - EDB and DBCP in Water by Microextraction (Continued)

Lab Sample ID: LCSD 400-609095/3-A
Matrix: Water
Analysis Batch: 609205

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 609095

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	131		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: (_____)

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
Melissa Remiger	25278	DATE: 1/9/2023
PO #	**GSAP Project ID**	PAGE: 1 of 2
60697537 – 3.1.2	USPC/00114/R/02	

SAMPLING COMPANY:	LOG CODE:	SITE ADDRESS: Street and City	State	AECOM Project / Task Number:
AECOM		900 South Central Ave; ROXANA	IL	Roxana Quarterly GW 60697537 – 3.1.2

ADDRESS:	EDF DELIVERABLE TO (Name, Company, Office Location):	PHONE NO.:	E-MAIL:	AECOM Other ID:
100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA	Melissa Remiger - please see special instructions	314-802-1207	melissa.remiger@aecom.com	

PROJECT CONTACT (Hardcopy or PDF Report to):	SAMPLER NAME(S) (Print):	LAB USE ONLY
Melissa Remiger, Mary Massa, Brett Howell	Mary Massa, Joe Mayer, Travis Jenkins	

TELEPHONE:	FAX:	Bill To Contact E-MAIL:
314-429-0100	314-429-0462	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 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD_____

TEMPERATURE ON RECEIPT C°	Cooler #1	Cooler #2	Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :

Email reports to: melissa.remiger@aecom.com; mary.massa@aecom.com; brett.howell@aecom.com

Please include "J" values on Reports.
Please provide sample receipt upon login.
Please send EQuiS EDDs to EDDSubmissions@aecomshell.com; loredana.filimon@aecom.com

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS
60697537 – 3.1.2

400-231505 COC

FIELD NOTES:

TEMPERATURE ON RECEIPT C°: 0.3, 1.5°C

Container PID Readings or Laboratory Notes: 1 of 8

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VOC 8260	8011 EDB + DBCP	SVOC 8270	PAH 8270LL
	TB-ROX-010923-8260-A	1/9/2023	0000	Water	2					2	X			
	TB-ROX-010923-8011-A	1/9/2023	0000	Water	2					2		X		
	MW4-ROX-010923-EB	1/9/2023	0820	Water	6			2		8	X	X	X	X
	MW4-ROX-010923	1/9/2023	0925	Water	6			2		8	X	X	X	X
	MW25-ROX-010923	1/9/2023	1045	Water	6			2		8	X	X	X	X
	MW8-ROX-010923	1/9/2023	1140	Water	6			2		8	X	X	X	X
	MW8-ROX-010923-DUP	1/9/2023	1140	Water	6			2		8	X	X	X	X
	MW7-ROX-010923	1/9/2023	1300	Water	6			2		8	X	X	X	X

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
MARY MASSA	FEDEX: 5564 3932 8535, 5564 3932 8557	1/9/2023	1600
Relinquished by: (Signature)	Received by: (Signature) EETS	Date: 1/10/23	Time: 943
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Version: 13Oct22

CUSTODY SEALS: 2026350, 2026351, 1745810. 1745811

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 (_____)

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
Melissa Remiger	25278	DATE: 1/9/2023
PO #	**GSAP Project ID**	PAGE: 2 of 2
60697537 – 3.1.2	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 60697537 – 3.1.2
ADDRESS: 100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA
EDF DELIVERABLE TO (Name, Company, Office Location): Melissa Remiger - please see special instructions
PHONE NO.: 314-802-1207
E-MAIL: melissa.remiger@aecom.com
AECOM Other ID:
PROJECT CONTACT (Hardcopy or PDF Report to): Melissa Remiger, Mary Massa, Brett Howell
SAMPLER NAME(S) (Print): T. Jones, S. Beadle
LAB USE ONLY
TELEPHONE: 314-429-0100
FAX: 314-429-0462
Bill To Contact E-MAIL: 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 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD
TEMPERATURE ON RECEIPT C° | Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :

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Please provide sample receipt upon login.
Please send EQuiS EDDs to EDDSubmissions@aecomshell.com; loredana.filimon@aecom.com

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS
60697537 – 3.1.2

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	8011 EDB + DBCP	SVOC 8270	PAH 8270LL
	TB-ROX-010923-8260-B	1/6/2023	0000	Water	2					2	X			
	TB-ROX-010923-8011-B	1/6/2023	0000	Water	2					2		X		
	MW13-ROX-010923-EB	1/6/2023	0850	Water	6			2		8	X	X	X	X
	MW13-ROX-010923	1/6/2023	0950	Water	6			2		8	X	X	X	X
	MW14-ROX-010923	1/6/2023	1145	Water	6			2		8	X	X	X	X
	MW14-ROX-010923-DUP	1/6/2023	1145	Water	6			2		8	X	X	X	X
	P56-ROX-010923	1/6/2023	1335	Water	6			2		8	X	X	X	X

Sam Beadle 1/9/23

Relinquished by: (Signature) Sam Beadle	Received by: (Signature) FEDEX: See page 1	Date: 1/9/2023	Time: 1600
Relinquished by: (Signature)	Received by: (Signature) EQIS	Date: 1/10/23	Time: 943
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

CUSTODY SEALS: See page 1

Version: 13Oct22

Page 92 of 98

3/3/2023 (Rev. 1)

Leah Klingensmith

From: Massa, Mary <Mary.Massa@aecom.com>
Sent: Thursday, January 12, 2023 7:48 AM
To: Leah Klingensmith
Cc: Howell, Brett; Remiger, Melissa
Subject: RE: ***Please Note***Eurofins Environment Testing Southeast, LLC Sample Login Confirmation files from 400-231505 ROXANA QUARTERLY GW
Attachments: 1Q23 Roxana GW COC_010923.pdf

EXTERNAL EMAIL*

Apologies Leah, please see attached for the corrected 1/9 COC.

Thanks!
Mary Massa *(D'Angelo)*, RG *(MO)*

Geologist, US West Environment
M +1 (314) 795-7580
mary.massa@aecom.com

AECOM
100 N. Broadway
20th Floor
St. Louis, MO, 63102, US
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From: Leah Klingensmith <Leah.Klingensmith@et.eurofinsus.com>
Sent: Wednesday, January 11, 2023 7:16 AM
To: Howell, Brett <brett.howell@aecom.com>; Massa, Mary <Mary.Massa@aecom.com>; Remiger, Melissa <melissa.remiger@aecom.com>
Subject: ***Please Note***Eurofins Environment Testing Southeast, LLC Sample Login Confirmation files from 400-231505 ROXANA QUARTERLY GW

Hello,

The date listed on page 2 of the COC is 1/6 and not 1/9

Attached, please find the Sample Confirmation files for job 400-231505; ROXANA QUARTERLY GW

Please feel free to contact me if you have any questions.

Thank you.

Leah Klingensmith
Project Manager

Eurofins Pensacola
Phone: 615-301-5038

E-mail: Leah.Klingensmith@et.eurofinsus.com
www.eurofinsus.com/env

Reference: [400-674216]
Attachments: 4

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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 (_____)

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
Melissa Remiger	25278
PO #	**GSAP Project ID**
60697537 – 3.1.2	USPC/00114/R/02

☐ CHECK IF NO INCIDENT # APPLIES
DATE: 1/9/2023
PAGE: 1 of 2

SAMPLING COMPANY: AECOM
LOG CODE:
SITE ADDRESS: Street and City: 900 South Central Ave; ROXANA
State: IL
AECOM Project / Task Number: Roxana Quarterly GW 60697537 – 3.1.2
ADDRESS: 100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA
EDF DELIVERABLE TO (Name, Company, Office Location): Melissa Remiger - please see special instructions
PHONE NO.: 314-802-1207
E-MAIL: melissa.remiger@aecom.com
AECOM Other ID:
PROJECT CONTACT (Hardcopy or PDF Report to): Melissa Remiger, Mary Massa, Brett Howell
SAMPLER NAME(S) (Print): Mary Massa, Joe Mayer, Travis Jenkins
LAB USE ONLY
TELEPHONE: 314-429-0100
FAX: 314-429-0462
Bill To Contact E-MAIL: 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 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) _EDD_____
TEMPERATURE ON RECEIPT C°: Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
Email reports to: melissa.remiger@aecom.com; mary.massa@aecom.com; brett.howell@aecom.com

* Please include "J" values on Reports.
* Please provide sample receipt upon login.
* Please send EQuiS EDDs to EDDSubmissions@aecomshell.com; loredana.fillmon@aecom.com

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS 60697537 – 3.1.2

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	8011 EDB + DBCP	SVOC 8270	PAH 8270LL
	TB-ROX-010923-8260-A	1/9/2023	0000	Water	2					2	X			
	TB-ROX-010923-8011-A	1/9/2023	0000	Water	2					2		X		
	MW4-ROX-010923-EB	1/9/2023	0820	Water	6			2		8	X	X	X	X
	MW4-ROX-010923	1/9/2023	0925	Water	6			2		8	X	X	X	X
	MW25-ROX-010923	1/9/2023	1045	Water	6			2		8	X	X	X	X
	MW8-ROX-010923	1/9/2023	1140	Water	6			2		8	X	X	X	X
	MW8-ROX-010923-DUP	1/9/2023	1140	Water	6			2		8	X	X	X	X
	MW7-ROX-010923	1/9/2023	1300	Water	6			2		8	X	X	X	X

MM 1/9/23

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
MARY MASSA	FEDEX: 5564 3932 8535, 5564 3932 8557	1/9/2023	1600
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Version 13Oct22

CUSTODY SEALS: 2026350, 2026351, 1745810, 1745811

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3/3/2023 (Rev. 1)

13

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 (_____)

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
Melissa Remiger	25278	DATE: 1/9/2023
PO #	**GSAP Project ID**	PAGE: 2 of 2
60697537 – 3.1.2	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 60697537 – 3.1.2
ADDRESS: 100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA
EDF DELIVERABLE TO (Name, Company, Office Location): Melissa Remiger - please see special instructions
PHONE NO.: 314-802-1207
E-MAIL: melissa.remiger@aecom.com
AECOM Other ID:
PROJECT CONTACT (Hardcopy or PDF Report to): Melissa Remiger, Mary Massa, Brett Howell
SAMPLER NAME(S) (Print): T. Jones, S. Beadle
LAB USE ONLY
TELEPHONE: 314-429-0100
FAX: 314-429-0462
Bill To Contact E-MAIL: 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 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT C° | Cooler #1 | Cooler #2 | Cooler #3

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* Please include "J" values on Reports.
* Please provide sample receipt upon login.
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☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS
60697537 – 3.1.2

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	8011 EDB + DBCP	SVOC 8270	PAH 8270LL
	TB-ROX-010923-8260-B	1/9/2023	0000	Water	2					2	X			
	TB-ROX-010923-8011-B	1/9/2023	0000	Water	2					2		X		
	MW13-ROX-010923-EB	1/9/2023	0850	Water	6			2		8	X	X	X	X
	MW13-ROX-010923	1/9/2023	0950	Water	6			2		8	X	X	X	X
	MW14-ROX-010923	1/9/2023	1145	Water	6			2		8	X	X	X	X
	MW14-ROX-010923-DUP	1/9/2023	1145	Water	6			2		8	X	X	X	X
	P56-ROX-010923	1/9/2023	1335	Water	6			2		8	X	X	X	X

Sam Beadle 1/9/23

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Sam Beadle	FEDEX: See page 1	1/9/2023	1600
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

CUSTODY SEALS: See page 1

Version 13Oct22

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Login Sample Receipt Checklist

Client: AECOM Technical Services Inc. Job Number: 400-231505-1

Login Number: 231505 **List Source: Eurofins Pensacola**
List Number: 1
Creator: Perez, Trina M

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	0.3°C, 1.5°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.	N/A	
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. Job ID: 400-231505-1
Project/Site: ROXANA QUARTERLY GW

Laboratory: Eurofins Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	06-30-23
ANAB	ISO/IEC 17025	L2471	02-22-26
Arkansas DEQ	State	88-0689	09-01-23
California	State	2510	06-30-23
Florida	NELAP	E81010	06-30-23
Georgia	State	E81010(FL)	06-30-23
Illinois	NELAP	200041	10-09-23
Kansas	NELAP	E-10253	10-31-23
Kentucky (UST)	State	53	06-30-23
Louisiana (All)	NELAP	30976	06-30-23
Louisiana (DW)	State	LA017	12-31-23
Maryland	State	233	09-30-23
Michigan	State	9912	06-30-23
North Carolina (WW/SW)	State	314	12-31-23
Oklahoma	NELAP	9810	08-31-23
Pennsylvania	NELAP	68-00467	01-31-24
South Carolina	State	96026	06-30-23
Tennessee	State	TN02907	06-30-23
Texas	NELAP	T104704286	09-30-23
US Fish & Wildlife	US Federal Programs	A22340	06-30-23
USDA	US Federal Programs	FLGNV23001	01-08-26
USDA	US Federal Programs	P330-21-00056	05-17-24
Virginia	NELAP	460166	06-14-23
West Virginia DEP	State	136	03-31-23

Roxana Groundwater Quarterly – 1st Quarter 2023 Data Review

Laboratory SDG: 400-231616-1-Rev.1

Data Reviewer: Andreia Vladimirescu

Peer Reviewer: Cheyana Cokley

Date Reviewed: 03/13/2023

Guidance: USEPA National Functional Guidelines for Organic Superfund Methods Data Review 2020

Sample Identification	Sample Identification
TB-ROX-011023-8260-A	TB-ROX-011023-8011-A
MW5-ROX-011023	B-ROX-011023-8260-B
TB-ROX-011023-8011-B	MW22-ROX-011023-EB
MW22-ROX-011023	ROST4PZE-ROX-011023
P74-ROX-011023	P57-ROX-011023

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 that PAHs in equipment blank MW22-ROX-011023-EB were re-extracted outside of the extraction time criteria. Several PAHs were detected in equipment blank MW22-ROX-011023-EB. Several SVOC and VOC by 8011 LCS/LCSD recoveries, and/or SVOC LCS/LCSD RPDs, were outside evaluation criteria. The surrogate recovery for SVOC 2-fluorophenol in sample MW5-ROX-011023, and the surrogate recovery for VOCs by 8011 4-bromofluorobenzene in samples ROST4PZE-ROX-011023 and P57-ROX-011023, were outside criteria. MS/MSD recoveries for 2-chloroethyl vinyl ether, 1,2-dibromo-3-Chloropropane, and several SVOCs, and MS/MSD RPDs, were outside evaluation criteria in sample MW5-ROX-011023. The continuing calibration verification (CCV) for phenol, di-n-octyl phthalate and 1,2-dibromo-3-chloropropane was outside evaluation criteria biased high. The CCV for hexachlorocyclopentadiene was outside evaluation criteria, biased low. These issues are addressed further in the appropriate sections of this data review. The laboratory report was revised on January 25, 2023, to correct the false positive pentacholophenol result for MW5-ROX-011023.

Three of 70 (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?

No, PAHs in sample MW22-ROX-011023-EB were re-extracted 23 days outside extraction holding time criteria (7 days) and then re-analyzed for confirmation; both sets of data are

reported. With regard to initial MW22-ROX-011023-EB PAH data, the laboratory issued a Corrective Action Report (CAR) stating that through confirmation analyses, many previous detections were not confirmed and were therefore deemed laboratory contamination. Equipment blanks are quality control samples and do not require qualification. No qualification of data was required.

4.0 Blank Contamination

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

Yes

Blank ID	Parameter	Analyte	Concentration /Amount
MW22-ROX-011023-EB	PAHs	Anthracene	0.032 µg/L
MW22-ROX-011023-EB	PAHs	Benzo[a]anthracene	0.13 µg/L
MW22-ROX-011023-EB	PAHs	Benzo[a]pyrene	0.063 µg/L
MW22-ROX-011023-EB	PAHs	Benzo[b]fluoranthene	0.078 µg/L
MW22-ROX-011023-EB	PAHs	Chrysene	0.13 µg/L
MW22-ROX-011023-EB	PAHs	Fluoranthene	0.11 µg/L
MW22-ROX-011023-EB	PAHs	Phenanthrene	0.095 µg/L
MW22-ROX-011023-EB	PAHs	Pyrene	0.13 µg/L
MW22-ROX-011023-EB-RE	PAHs	Anthracene	0.47 µg/L
MW22-ROX-011023-EB-RE	PAHs	Benzo[a]anthracene	0.28 µg/L
MW22-ROX-011023-EB-RE	PAHs	Benzo[a]pyrene	0.50 µg/L
MW22-ROX-011023-EB-RE	PAHs	Benzo[b]fluoranthene	0.62 µg/L
MW22-ROX-011023-EB-RE	PAHs	Benzo[k]fluoranthene	0.48 µg/L
MW22-ROX-011023-EB-RE	PAHs	Chrysene	0.23 µg/L
MW22-ROX-011023-EB-RE	PAHs	Fluoranthene	0.93 µg/L
MW22-ROX-011023-EB-RE	PAHs	Phenanthrene	0.56 µg/L
MW22-ROX-011023-EB-RE	PAHs	Pyrene	0.79 µg/L
MB 400-607999/1-A	PAHs	Benzo[a]pyrene	0.153 µg/L
MB 400-607999/1-A	PAHs	Benzo[b]fluoranthene	0.149 µg/L
MB 400-607999/1-A	PAHs	Benzo[k]fluoranthene	0.113 µg/L

Analytical data that was 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 400-607999/4-A/5-A	SVOCs	Benzenethiol	**5/6**	7	10-120/30
LCS/LCSD 400-607999/2-A/3-A	SVOCs	4-Chloroaniline	**124/127**	2	26-120/30
LCS/LCSD 400-607999/2-A/3-A	SVOCs	3,3'-Dichlorobenzidine	**161/162**	1	36-132/30

LCS/LCSD ID	Parameter	Analyte	LCS/LCSD Recovery	RPD	LCS/LCSD/ RPD Criteria
LCS/LCSD 400-607999/2-A/3-A	SVOCs	3-Nitroaniline	**132/135**	2	37-127/30
LCS/LCSD 400-607999/2-A	SVOCs	1,4-Dioxane	36/68	**61**	31-120/30
LCS/LCSD 400-609095/2-A/3-A	VOCs by 8011	1,2-Dibromo-3-Chloropropane	**156/154**	1	60-140/30

Analytical data that required qualification based on LCS/LCSD data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Professional judgment was used to qualify, however not reject, data associated with benzenethiol below evaluation criteria; benzenethiol has been identified as a poor performing analyte under Method 8270. Analytical data associated with LCS/LCSD RPD alone outside evaluation criteria did not require qualification.

Sample ID	Parameter	Analyte	Qualification
MW5-ROX-011023	SVOCs	Benzenethiol	**UJ**
MW22-ROX-011023	SVOCs	Benzenethiol	**UJ**
ROST4PZE-ROX-011023	SVOCs	Benzenethiol	**UJ**
P74-ROX-011023	SVOCs	Benzenethiol	**UJ**
P57-ROX-011023	SVOCs	Benzenethiol	**UJ**
MW22-ROX-011023	VOCs by 8011	1,2-Dibromo-3-Chloropropane	**J**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
MW5-ROX-011023	SVOCs	2-Fluorophenol	**4**	13-113
ROST4PZE-ROX-011023	VOCs by 8011	4-Bromofluorobenzene	**236**	51-149
P57-ROX-011023	VOCs by 8011	4-Bromofluorobenzene	**182**	51-149

Qualifications due to surrogate recoveries were not required if only one of three base/neutral and/or acid surrogate recoveries were outside evaluation criteria. 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?

Yes, sample MW5-ROX-011023 was spiked and analyzed for VOCs, SVOCs, PAHs and VOCs by 8011.

Were MS/MSD recoveries within evaluation criteria?

No

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
MW5-ROX-011023 MS/MSD	VOCs	2-Chloroethyl vinyl ether	**0/0**	**NC**	10-150/50
MW5-ROX-011023 MS/MSD	SVOCs	Aniline	**123**/129	6	10-150/63
MW5-ROX-011023 MS/MSD	SVOCs	Bis (2-chloroisopropyl) ether	**123**/119	2	28-120/41
MW5-ROX-011023 MS/MSD	SVOCs	4-Chloroaniline	**130**/112	14	10-120/94
MW5-ROX-011023 MS/MSD	SVOCs	3,3'-Dichlorobenzidine	**136/133**	0	10-120/58
MW5-ROX-011023 MS/MSD	SVOCs	2,4-Dinitrotoluene	**122**/119	1	53-120/28
MW5-ROX-011023 MS/MSD	SVOCs	Di-n-octyl phthalate	**122/122**	2	35-121/35
MW5-ROX-011023 MS/MSD	SVOCs	1,4-Dioxane	**47**/71	**42**	50-150/40
MW5-ROX-011023 MS/MSD	SVOCs	2-Nitroaniline	**139/133**	3	45-120/33
MW5-ROX-011023 MS/MSD	SVOCs	3-Nitroaniline	129/**132**	4	10-130/39
MW5-ROX-011023 MS/MSD	SVOCs	4-Nitroaniline	**138/139**	2	10-132/50
MW5-ROX-011023 MS/MSD	SVOCs	4-Nitrophenol	114/**121**	8	10-120/82
MW5-ROX-011023 MS/MSD	VOCs by 8011	1,2-Dibromo-3-Chloropropane	**155/169**	6	10-150/20

Analytical data that required qualification based on MS/MSD data are included in the table below. Analytical data reported as non-detect and associated with MS/MSD recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Professional judgement was used to qualify; however, not reject the compound 2-chloroethyl vinyl ether due to acceptable LCS recoveries for this compound and to the acid reactive nature of 2-chloroethyl vinyl ether.

Sample ID	Parameter	Analyte	Qualification
MW5-ROX-011023	VOCs	2-Chloroethyl vinyl ether	**UJ**
MW5-ROX-011023	SVOCs	Di-n-octyl phthalate	**J**
MW5-ROX-011023	SVOCs	1,4-Dioxane	**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; analytes were detected in samples that were diluted.

12.0 Additional Qualifications

Were additional qualifications applied?

Yes, the continuing calibration verification for phenol and di-n-octyl phthalate was outside evaluation criteria, biased high. The continuing calibration verification for hexachlorocyclopentadiene was outside evaluation criteria, biased low. Analytes are qualified as summarized in the following table.

Sample ID	Parameter	Analyte	Qualification
P57-ROX-011023	SVOCs	Phenol	**J**
MW5-ROX-011023	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW22-ROX-011023	SVOCs	Hexachlorocyclopentadiene	**UJ**
ROST4PZE-ROX-011023	SVOCs	Hexachlorocyclopentadiene	**UJ**
P74-ROX-011023	SVOCs	Hexachlorocyclopentadiene	**UJ**
P57-ROX-011023	SVOCs	Hexachlorocyclopentadiene	**UJ**

Di-n-octyl phthalate, in sample MW5-ROX-011023, has been previously qualified in Section 7.0 of this data review due to a MS/MSD criteria exceedance. No additional qualification of di-n-octyl phthalate is required.

1,2-Dibromo-3-chloropropane was outside evaluation criteria, biased high, in two continuing calibration verifications. Sample MW22-ROX-011023 has been previously qualified in Section 5.0 of this data review due to an LCS/LCSD criteria exceedance. No additional qualification of 1,2-dibromo-3-chloropropane is required.

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 3/3/2023 4:19:47 PM Revision 1

JOB DESCRIPTION

ROXANA QUARTERLY GW

JOB NUMBER

400-231616-1

Eurofins Pensacola
3355 McLemore Drive
Pensacola FL 32514

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet all NELAP requirements for accredited parameters, unless otherwise noted, and relate only to the referenced samples. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval from the laboratory. For questions please contact the Project Manager at the e-mail address listed on this page, or the telephone number at the bottom of the page. Eurofins Environment Testing Southeast LLC, Pensacola Certifications and Approvals: Alabama (40150), Arizona (AZ0710), Arkansas (88-0689), Florida (E81010), Illinois (200041), Iowa (367), Kansas (E-10253), Kentucky UST (53), Louisiana (30748), Maryland (233), Massachusetts (M-FL094), Michigan (9912), New Hampshire (250510), New Jersey (FL006), North Carolina (314), Oklahoma (9810), Pennsylvania (68-00467), Rhode Island (LAO00307), South Carolina (96026), Tennessee (TN02907), Texas (T104704286-10-2), Virginia (00008), Washington (C2043), West Virginia (136), USDA Foreign Soil Permit (P330-08-00006).

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization

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Job ID: 400-231616-1

Laboratory: Eurofins Pensacola

Narrative

Job Narrative
400-231616-1

Comment
Revised Report
Report revised to correct pentacholophenol result for MW5-ROX-011023 (400-231616-3). After inspection of the extracted ion chromatograms and reference spectra it was determined this result was a false positive and the data has been re-reported as non-detect. Supersedes report dated 1-25-2023.

The 8270 data for this job was reviewed when it was determined the original results did not match historical data. Confirmation analyses of the initial extract and in some instances analysis of re-extracted samples were performed. The results of these re-analyses confirm in some cases and are reported again in the revision. The difference in a result that does not confirm is most likely due to trace level contamination. The result with the highest confidence level is currently reported when all results are in hold. In instances where a confirmation analysis was performed outside of holding time both the initial and out of hold results are reported.

Receipt
The samples were received on 1/11/2023 8:57 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.0°C and 1.0°C

GC/MS VOA
Method 8260B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 400-608552 were outside control limits for 2-Chloroethyl vinyl ether due to the acidic nature of the parent sample.

Method 8260B: The RPD for the MS/MSD for 2-chloroethyl vinyl ether was not calculable for analytical batch 400-608552 becau the recoveries were below the reporting limit due to the acidic nature of the parent sample.

Method 8260B: The preservative used in the sample containers provided is not compatible with one of the Method 8260 analyte requested. The following samples were received preserved with hydrochloric acid: TB-ROX-011023-8260-A (400-231616-1), MW5-ROX-011023 (400-231616-3), TB-ROX-011023-8260-B (400-231616-4), MW22-ROX-011023-EB (400-231616-6), MW22-ROX-011023 (400-231616-7), ROST4PZE-ROX-011023 (400-231616-8), P74-ROX-011023 (400-231616-9) and P57-ROX-011023 (400-231616-10). The requested target analyte list includes 2-Chloroethyl vinyl ether, Acrolein and Acrylonitril which are acid-labile compounds that degrades in an acidic medium.

Method 8260B: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW22-ROX-011023 (400-231616-7). 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/MS Semi VOA
Method 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: MW5-ROX-011023 (400-231616-3). These results have been reported and qualified.

Method 8270D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 400-607999 and analytical batch 400-608161 recovered outside control limits for the following analytes: 3,3'-Dichlorobenzidine, 3-Nitroaniline and 4-Chloroaniline. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 400-607999 and analytical batch 400-608161 recovered outside control limits for the following analytes: 1,4-Dioxane.

Method 8270D: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 400-607999 and analytical batch 400-608161 recovered outside control limits for the following analyte(s): Benzenethiol. Benzenethiol has

Job ID: 400-231616-1 (Continued)

Laboratory: Eurofins Pensacola (Continued)

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 8270D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 400-607999 and analytical batch 400-608382 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8270D: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 400-607999 and analytical batch 400-608382 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.

Method 8270D: The continuing calibration verification (CCV) associated with batch 400-608382 recovered outside acceptance criteria, low biased, for Hexachlorocyclopentadiene. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8270D LL The method blank for preparation batch 400 607999 and analytical batch 400 608245 contained Benzo[b]fluoranthene, Benzo[k]fluoranthene and Benzo[a]pyrene 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.

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

GC Semi VOA

Method 8011: The continuing calibration verification (CCV) associated with batch 400-609205 recovered above the upper contro limit for 1,2-Dibromo-3-Chloropropane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8011: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 400-609095 and analytical batch 400-609205 recovered outside control limits for the following analytes: 1,2-Dibromo-3-Chloropropane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8011: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 400-609095 and analytical batch 400-609205 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected.

Method 8011: Surrogate recovery for the following samples were outside the upper control limit: ROST4PZE-ROX-011023 (400-231616-8) and P57-ROX-011023 (400-231616-10). This sample did not contain any target analytes; therefore, re-extractic 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.

GC/MS Semi VOA

Job ID: 400-231616-1 (Continued)

Laboratory: Eurofins Pensacola (Continued)

Method 8270D: The continuing calibration verification (CCV) associated with batch 400-608382 recovered above the upper cont limit for Benzenethiol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data hav been reported.

Method 8270D: The continuing calibration verification (CCV) associated with batch 400-608382 recovered above the upper cont limit for Quinoline. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8270D: The continuing calibration verification (CCV) associated with batch 400-608382 recovered above the upper cont limit for Bis(2-chloroethyl)ether, Nitrobenzene, Isophorone, Bis(2-ethylhexyl) phthalate, Di-n-butyl phthalate, 4-Chloro-3-methylphenol, N-Nitrosodi-n-propylamine, 2-Methylphenol, 3-Nitroaniline, Aniline, Bis(2-chloroethoxy)methane, 3 & 4 Methylphenol, Benzyl alcohol, N-Nitrosodimethylamine, 1,2-Diphenylhydrazine (as Azobenzene), Phenol, 4-Chloroaniline, bis (2-chloroisopropyl) ether, Pyridine and Di-n-octyl phthalate. The samples associated with this CCV were less than the reporting limit(RL) for the affected analytes; therefore, the data have been reported.

Method 8270D: The continuing calibration verification (CCV) associated with batch 400-608382 recovered above the upper cont limit for Indene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have bee reported.

Method 8270D LL: The method blank for preparation batch 400-607999 and analytical batch 400-608245 contained Benzo[b]fluoranthene, Benzo[k]fluoranthene and Benzo[a]pyrene 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 8270D LL: The following sample was re-prepared outside of preparation holding time to confirm original results: MW22-ROX-011023-EB (400-231616-6). Re-extract data confirms the original extraction. Both sets of data are reported.

Method 8270D LL: The following analyte(s) recovered marginally outside control limits for the LCS/LCSD associated with 61177 Anthracene. The actual recovery is 122% and the limit is 120%.

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

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Sample Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231616-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-231616-1	TB-ROX-011023-8260-A	Water	01/10/23 12:00	01/11/23 08:57
400-231616-2	TB-ROX-011023-8011-A	Water	01/10/23 12:00	01/11/23 08:57
400-231616-3	MW5-ROX-011023	Water	01/10/23 09:25	01/11/23 08:57
400-231616-4	TB-ROX-011023-8260-B	Water	01/10/23 12:00	01/11/23 08:57
400-231616-5	TB-ROX-011023-8011-B	Water	01/10/23 12:00	01/11/23 08:57
400-231616-6	MW22-ROX-011023-EB	Water	01/10/23 09:25	01/11/23 08:57
400-231616-7	MW22-ROX-011023	Water	01/10/23 09:55	01/11/23 08:57
400-231616-8	ROST4PZE-ROX-011023	Water	01/10/23 10:50	01/11/23 08:57
400-231616-9	P74-ROX-011023	Water	01/10/23 12:45	01/11/23 08:57
400-231616-10	P57-ROX-011023	Water	01/10/23 13:40	01/11/23 08:57

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231616-1

Client Sample ID: TB-ROX-011023-8260-A — Lab Sample ID: 400-231616-1

No Detections.

Client Sample ID: TB-ROX-011023-8011-A — Lab Sample ID: 400-231616-2

No Detections.

Client Sample ID: MW5-ROX-011023 — Lab Sample ID: 400-231616-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	2.6		1.0	0.22	ug/L	1		8260B	Total/NA
tert-Butylbenzene	1.6		1.0	0.63	ug/L	1		8260B	Total/NA
Benzoic acid	34		31	7.5	ug/L	1		8270D	Total/NA
Di-n-octyl phthalate	3.7	J J	10	0.17	ug/L	1		8270D	Total/NA

Client Sample ID: TB-ROX-011023-8260-B — Lab Sample ID: 400-231616-4

No Detections.

Client Sample ID: TB-ROX-011023-8011-B — Lab Sample ID: 400-231616-5

No Detections.

Client Sample ID: MW22-ROX-011023-EB — Lab Sample ID: 400-231616-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Anthracene	0.032	J	0.19	0.031	ug/L	1		8270D LL	Total/NA
Benzo[a]anthracene	0.13	J	0.19	0.044	ug/L	1		8270D LL	Total/NA
Benzo[a]pyrene	0.063	J B	0.19	0.040	ug/L	1		8270D LL	Total/NA
Benzo[b]fluoranthene	0.078	J B	0.19	0.032	ug/L	1		8270D LL	Total/NA
Chrysene	0.13	J	0.19	0.071	ug/L	1		8270D LL	Total/NA
Fluoranthene	0.11	J	0.19	0.065	ug/L	1		8270D LL	Total/NA
Phenanthrene	0.095	J	0.19	0.034	ug/L	1		8270D LL	Total/NA
Pyrene	0.13	J	0.19	0.038	ug/L	1		8270D LL	Total/NA
Anthracene - RE	0.47	H	0.19	0.030	ug/L	1		8270D LL	Total/NA
Benzo[a]anthracene - RE	0.28	H	0.19	0.043	ug/L	1		8270D LL	Total/NA
Benzo[a]pyrene - RE	0.50	H	0.19	0.040	ug/L	1		8270D LL	Total/NA
Benzo[b]fluoranthene - RE	0.62	H	0.19	0.032	ug/L	1		8270D LL	Total/NA
Benzo[k]fluoranthene - RE	0.48	H	0.19	0.094	ug/L	1		8270D LL	Total/NA
Chrysene - RE	0.23	H	0.19	0.070	ug/L	1		8270D LL	Total/NA
Fluoranthene - RE	0.93	H	0.19	0.064	ug/L	1		8270D LL	Total/NA
Phenanthrene - RE	0.56	H	0.19	0.034	ug/L	1		8270D LL	Total/NA
Pyrene - RE	0.79	H	0.19	0.038	ug/L	1		8270D LL	Total/NA

Client Sample ID: MW22-ROX-011023 — Lab Sample ID: 400-231616-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	29	J	50	20	ug/L	2		8260B	Total/NA
Benzene	8.5		2.0	0.26	ug/L	2		8260B	Total/NA
2-Butanone (MEK)	8.6	J	50	5.2	ug/L	2		8260B	Total/NA
Ethylbenzene	85		2.0	1.0	ug/L	2		8260B	Total/NA
Isopropy benzene	21		2.0	1.1	ug/L	2		8260B	Total/NA
m-Xylene & p-Xylene	240		10	1.3	ug/L	2		8260B	Total/NA
Naphthalene	41		10	6.0	ug/L	2		8260B	Total/NA
n-Butylbenzene	4.1		2.0	1.5	ug/L	2		8260B	Total/NA
N-Propylbenzene	42		2.0	1.4	ug/L	2		8260B	Total/NA
o-Xylene	9.7	J	10	1.2	ug/L	2		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW22-ROX-011023 (Continued) — Lab Sample ID: 400-231616-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
p-Isopropyltoluene	3.5		2.0	1.4	ug/L	2		8260B	Total/NA
sec-Butylbenzene	2.2		2.0	1.4	ug/L	2		8260B	Total/NA
tert-Butylbenzene	4.4		2.0	1.3	ug/L	2		8260B	Total/NA
Toluene	11		2.0	0.82	ug/L	2		8260B	Total/NA
1,2,4-Trimethy benzene	210		2.0	1.6	ug/L	2		8260B	Total/NA
1,3,5-Trimethy benzene	47		2.0	1.1	ug/L	2		8260B	Total/NA
Xylenes, Total	250		20	3.2	ug/L	2		8260B	Total/NA
1-Methylnaphthalene	6.7		0.19	0.072	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	6.3		0.19	0.058	ug/L	1		8270D LL	Total/NA
1,2-D bromo-3-Chloropropane	0.041	*+ J	0.030	0.017	ug/L	1		8011	Total/NA

Client Sample ID: ROST4PZE-ROX-011023 — Lab Sample ID: 400-231616-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	85		25	10	ug/L	1		8260B	Total/NA
Benzene	4.3		1.0	0.13	ug/L	1		8260B	Total/NA
2-Butanone (MEK)	38		25	2.6	ug/L	1		8260B	Total/NA
Ethylbenzene	33		1.0	0.50	ug/L	1		8260B	Total/NA
Isopropy benzene	5.2		1.0	0.53	ug/L	1		8260B	Total/NA
m-Xylene & p-Xylene	97		5.0	0.63	ug/L	1		8260B	Total/NA
Naphthalene	63		5.0	3.0	ug/L	1		8260B	Total/NA
n-Butylbenzene	1.6		1.0	0.76	ug/L	1		8260B	Total/NA
N-Propylbenzene	4.8		1.0	0.69	ug/L	1		8260B	Total/NA
o-Xylene	14		5.0	0.60	ug/L	1		8260B	Total/NA
p-Isopropyltoluene	0.75	J	1.0	0.71	ug/L	1		8260B	Total/NA
sec-Butylbenzene	0.82	J	1.0	0.70	ug/L	1		8260B	Total/NA
Toluene	3.7		1.0	0.41	ug/L	1		8260B	Total/NA
1,2,4-Trimethy benzene	120		1.0	0.82	ug/L	1		8260B	Total/NA
1,3,5-Trimethy benzene	6.6		1.0	0.56	ug/L	1		8260B	Total/NA
Xylenes, Total	110		10	1.6	ug/L	1		8260B	Total/NA
Acenaphthene	4.0		0.19	0.030	ug/L	1		8270D LL	Total/NA
Acenaphthylene	0.64		0.19	0.043	ug/L	1		8270D LL	Total/NA
Anthracene	1.7		0.19	0.030	ug/L	1		8270D LL	Total/NA
Benzo[a]anthracene	0.15	J	0.19	0.044	ug/L	1		8270D LL	Total/NA
Chrysene	0.15	J	0.19	0.070	ug/L	1		8270D LL	Total/NA
Fluoranthene	0.32		0.19	0.064	ug/L	1		8270D LL	Total/NA
Fluorene	2.7		0.19	0.10	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene	65		0.19	0.070	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	49		0.19	0.057	ug/L	1		8270D LL	Total/NA
Phenanthrene	8.5		0.19	0.034	ug/L	1		8270D LL	Total/NA
Pyrene	0.70		0.19	0.038	ug/L	1		8270D LL	Total/NA
Dibenzofuran	3.0	J	9.5	0.16	ug/L	1		8270D	Total/NA

Client Sample ID: P74-ROX-011023 — Lab Sample ID: 400-231616-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.3		1.0	0.13	ug/L	1		8260B	Total/NA
Pyrene	0.044	J	0.19	0.038	ug/L	1		8270D LL	Total/NA
Diethyl phthalate	0.31	J	9.6	0.23	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 GW

Job ID: 400-231616-1

Client Sample ID: P57-ROX-011023

Lab Sample ID: 400-231616-10

Analyte	Result	Qualifier		RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	10	J		25	10	ug/L	1		8260B	Total/NA
Benzene	50			1.0	0.13	ug/L	1		8260B	Total/NA
2-Butanone (MEK)	2.8	J		25	2.6	ug/L	1		8260B	Total/NA
Ethylbenzene	0.95	J		1.0	0.50	ug/L	1		8260B	Total/NA
Isopropy benzene	21			1.0	0.53	ug/L	1		8260B	Total/NA
m-Xylene & p-Xylene	0.92	J		5.0	0.63	ug/L	1		8260B	Total/NA
Naphthalene	8.2			5.0	3.0	ug/L	1		8260B	Total/NA
n-Butylbenzene	2.3			1.0	0.76	ug/L	1		8260B	Total/NA
N-Propylbenzene	23			1.0	0.69	ug/L	1		8260B	Total/NA
sec-Butylbenzene	4.6			1.0	0.70	ug/L	1		8260B	Total/NA
tert-Butylbenzene	5.4			1.0	0.63	ug/L	1		8260B	Total/NA
Toluene	2.8			1.0	0.41	ug/L	1		8260B	Total/NA
Acenaphthene	0.47			0.19	0.030	ug/L	1		8270D LL	Total/NA
Fluorene	0.69			0.19	0.10	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene	27			0.19	0.071	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	7.9			0.19	0.057	ug/L	1		8270D LL	Total/NA
Phenanthrene	0.45			0.19	0.034	ug/L	1		8270D LL	Total/NA
Dibenzofuran	0.77	J		9.5	0.16	ug/L	1		8270D	Total/NA
Diethyl phthalate	0.91	J		9.5	0.23	ug/L	1		8270D	Total/NA
Phenol	7.1	J	J	9.5	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 GW

Job ID: 400-231616-1

Client Sample ID: TB-ROX-011023-8260-A
Date Collected: 01/10/23 12:00
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-1
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/15/23 14:52	1
Acrolein	ND		20	3.3	ug/L			01/15/23 14:52	1
Acrylonitrile	ND		10	2.8	ug/L			01/15/23 14:52	1
Benzene	ND		1.0	0.13	ug/L			01/15/23 14:52	1
Bromobenzene	ND		1.0	0.54	ug/L			01/15/23 14:52	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/15/23 14:52	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/15/23 14:52	1
Bromoform	ND		5.0	0.25	ug/L			01/15/23 14:52	1
Bromomethane	ND		1.0	0.98	ug/L			01/15/23 14:52	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/15/23 14:52	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/15/23 14:52	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/15/23 14:52	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/15/23 14:52	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/15/23 14:52	1
Chloroethane	ND		1.0	0.76	ug/L			01/15/23 14:52	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/15/23 14:52	1
Chloroform	ND		1.0	1.0	ug/L			01/15/23 14:52	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/15/23 14:52	1
Chloromethane	ND		1.0	0.32	ug/L			01/15/23 14:52	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/15/23 14:52	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/15/23 14:52	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/15/23 14:52	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/15/23 14:52	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/15/23 14:52	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/15/23 14:52	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/15/23 14:52	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/15/23 14:52	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/15/23 14:52	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 14:52	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 14:52	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 14:52	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/15/23 14:52	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/15/23 14:52	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/15/23 14:52	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/15/23 14:52	1
2-Hexanone	ND		25	1.4	ug/L			01/15/23 14:52	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/15/23 14:52	1
Methylene bromide	ND		5.0	0.22	ug/L			01/15/23 14:52	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/15/23 14:52	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/15/23 14:52	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/15/23 14:52	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/15/23 14:52	1
Naphthalene	ND		5.0	3.0	ug/L			01/15/23 14:52	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/15/23 14:52	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/15/23 14:52	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/15/23 14:52	1
o-Xylene	ND		5.0	0.60	ug/L			01/15/23 14:52	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/15/23 14:52	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/15/23 14:52	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231616-1

Client Sample ID: TB-ROX-011023-8260-A
Date Collected: 01/10/23 12:00
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-1
Matrix: Water

Method: SW846 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			01/15/23 14:52	1
Styrene	ND		1.0	1.0	ug/L			01/15/23 14:52	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/15/23 14:52	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/15/23 14:52	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/15/23 14:52	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/15/23 14:52	1
Toluene	ND		1.0	0.41	ug/L			01/15/23 14:52	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/15/23 14:52	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/15/23 14:52	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/15/23 14:52	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/15/23 14:52	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/15/23 14:52	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/15/23 14:52	1
Trichloroethene	ND		1.0	0.15	ug/L			01/15/23 14:52	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/15/23 14:52	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/15/23 14:52	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/15/23 14:52	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/15/23 14:52	1
Vinyl acetate	ND		25	0.93	ug/L			01/15/23 14:52	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/15/23 14:52	1
Xylenes, Total	ND		10	1.6	ug/L			01/15/23 14:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*72 - 119*		*01/15/23 14:52*	*1*
Dibromofluoromethane	*106*		*75 - 126*		*01/15/23 14:52*	*1*
Toluene-d8 (Surr)	*94*		*64 - 132*		*01/15/23 14:52*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231616-1

Client Sample ID: TB-ROX-011023-8011-A
Date Collected: 01/10/23 12:00
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-2
Matrix: Water

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.031	0.018	ug/L		01/19/23 10:05	01/19/23 20:50	1
1,2-D bromoethane	ND		0.021	0.015	ug/L		01/19/23 10:05	01/19/23 20:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*112*	*p*	*51 - 149*	*01/19/23 10:05*	*01/19/23 20:50*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231616-1

Client Sample ID: MW5-ROX-011023
Date Collected: 01/10/23 09:25
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-3
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/15/23 12:14	1
Acrolein	ND		20	3.3	ug/L			01/15/23 12:14	1
Acrylonitrile	ND		10	2.8	ug/L			01/15/23 12:14	1
Benzene	ND		1.0	0.13	ug/L			01/15/23 12:14	1
Bromobenzene	ND		1.0	0.54	ug/L			01/15/23 12:14	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/15/23 12:14	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/15/23 12:14	1
Bromoform	ND		5.0	0.25	ug/L			01/15/23 12:14	1
Bromomethane	ND		1.0	0.98	ug/L			01/15/23 12:14	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/15/23 12:14	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/15/23 12:14	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/15/23 12:14	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/15/23 12:14	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/15/23 12:14	1
Chloroethane	ND		1.0	0.76	ug/L			01/15/23 12:14	1
2-Chloroethyl vinyl ether	ND	F1	5.0	2.0	ug/L			01/15/23 12:14	1
Chloroform	ND		1.0	1.0	ug/L			01/15/23 12:14	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/15/23 12:14	1
Chloromethane	ND		1.0	0.32	ug/L			01/15/23 12:14	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/15/23 12:14	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/15/23 12:14	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/15/23 12:14	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/15/23 12:14	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/15/23 12:14	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/15/23 12:14	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/15/23 12:14	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/15/23 12:14	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/15/23 12:14	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 12:14	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 12:14	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 12:14	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/15/23 12:14	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/15/23 12:14	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/15/23 12:14	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/15/23 12:14	1
2-Hexanone	ND		25	1.4	ug/L			01/15/23 12:14	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/15/23 12:14	1
Methylene bromide	ND		5.0	0.22	ug/L			01/15/23 12:14	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/15/23 12:14	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/15/23 12:14	1
Methyl tert-butyl ether	**2.6**		1.0	0.22	ug/L			01/15/23 12:14	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/15/23 12:14	1
Naphthalene	ND		5.0	3.0	ug/L			01/15/23 12:14	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/15/23 12:14	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/15/23 12:14	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/15/23 12:14	1
o-Xylene	ND		5.0	0.60	ug/L			01/15/23 12:14	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/15/23 12:14	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/15/23 12:14	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231616-1

Client Sample ID: MW5-ROX-011023
Date Collected: 01/10/23 09:25
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-3
Matrix: Water

Method: SW846 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			01/15/23 12:14	1
Styrene	ND		1.0	1.0	ug/L			01/15/23 12:14	1
tert-Butylbenzene	**1.6**		1.0	0.63	ug/L			01/15/23 12:14	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/15/23 12:14	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/15/23 12:14	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/15/23 12:14	1
Toluene	ND		1.0	0.41	ug/L			01/15/23 12:14	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/15/23 12:14	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/15/23 12:14	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/15/23 12:14	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/15/23 12:14	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/15/23 12:14	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/15/23 12:14	1
Trichloroethene	ND		1.0	0.15	ug/L			01/15/23 12:14	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/15/23 12:14	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/15/23 12:14	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/15/23 12:14	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/15/23 12:14	1
Vinyl acetate	ND		25	0.93	ug/L			01/15/23 12:14	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/15/23 12:14	1
Xylenes, Total	ND		10	1.6	ug/L			01/15/23 12:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*72 - 119*		*01/15/23 12:14*	*1*
Dibromofluoromethane	*105*		*75 - 126*		*01/15/23 12:14*	*1*
Toluene-d8 (Surr)	*95*		*64 - 132*		*01/15/23 12:14*	*1*

Method: SW846 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	0.033	ug/L		01/12/23 08:30	01/13/23 16:01	1
Acenaphthylene	ND		0.20	0.046	ug/L		01/12/23 08:30	01/13/23 16:01	1
Anthracene	ND		0.20	0.033	ug/L		01/12/23 08:30	01/13/23 16:01	1
Benzo[a]anthracene	ND		0.20	0.047	ug/L		01/12/23 08:30	01/13/23 16:01	1
Benzo[a]pyrene	ND		0.20	0.043	ug/L		01/12/23 08:30	01/13/23 16:01	1
Benzo[b]fluoranthene	ND		0.20	0.035	ug/L		01/12/23 08:30	01/13/23 16:01	1
Benzo[g,h,i]perylene	ND		0.20	0.13	ug/L		01/12/23 08:30	01/13/23 16:01	1
Benzo[k]fluoranthene	ND		0.20	0.10	ug/L		01/12/23 08:30	01/13/23 16:01	1
Chrysene	ND		0.20	0.076	ug/L		01/12/23 08:30	01/13/23 16:01	1
Dibenz(a,h)anthracene	ND		0 20	0 051	ug/L		01/12/23 08 30	01/13/23 16 01	1
Fluoranthene	ND		0.20	0.069	ug/L		01/12/23 08:30	01/13/23 16:01	1
Fluorene	ND		0.20	0.11	ug/L		01/12/23 08:30	01/13/23 16:01	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.044	ug/L		01/12/23 08:30	01/13/23 16:01	1
1-Methylnaphthalene	ND		0.20	0.076	ug/L		01/12/23 08:30	01/13/23 16:01	1
2-Methylnaphthalene	ND		0.20	0.061	ug/L		01/12/23 08:30	01/13/23 16:01	1
Phenanthrene	ND		0.20	0.037	ug/L		01/12/23 08:30	01/13/23 16:01	1
Pyrene	ND		0.20	0.041	ug/L		01/12/23 08:30	01/13/23 16:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*114*		*15 - 122*	*01/12/23 08:30*	*01/13/23 16:01*	*1*
Nitrobenzene-d5	*77*		*19 - 130*	*01/12/23 08:30*	*01/13/23 16:01*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231616-1

Client Sample ID: MW5-ROX-011023
Date Collected: 01/10/23 09:25
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-3
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*115*		*33 - 138*	*01/12/23 08:30*	*01/13/23 16:01*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.9	ug/L		01/12/23 08:30	01/13/23 16:47	1
Benzenethiol	ND	*-	10	1.7	ug/L		01/12/23 08:30	01/13/23 16:47	1
Benzoic acid	**34**		31	7.5	ug/L		01/12/23 08:30	01/13/23 16:47	1
Benzyl alcohol	ND		10	2.0	ug/L		01/12/23 08:30	01/13/23 16:47	1
Bis(2-chloroethoxy)methane	ND		10	0.16	ug/L		01/12/23 08:30	01/13/23 16:47	1
Bis(2-chloroethyl)ether	ND		10	2.8	ug/L		01/12/23 08:30	01/13/23 16:47	1
bis (2-chloroisopropyl) ether	ND		10	0.16	ug/L		01/12/23 08:30	01/13/23 16:47	1
Bis(2-ethylhexyl) phthalate	ND		10	5.1	ug/L		01/12/23 08:30	01/13/23 16:47	1
4-Bromophenyl phenyl ether	ND		10	0.20	ug/L		01/12/23 08:30	01/13/23 16:47	1
Butyl benzyl phthalate	ND		10	0.19	ug/L		01/12/23 08:30	01/13/23 16:47	1
4-Chloroaniline	ND	*+	10	3.5	ug/L		01/12/23 08:30	01/13/23 16:47	1
4-Chloro-3-methylphenol	ND		10	3.9	ug/L		01/12/23 08:30	01/13/23 16:47	1
2-Chloronaphthalene	ND		10	0.14	ug/L		01/12/23 08:30	01/13/23 16:47	1
2-Chlorophenol	ND		10	2.2	ug/L		01/12/23 08:30	01/13/23 16:47	1
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		01/12/23 08:30	01/13/23 16:47	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/12/23 08:30	01/13/23 16:47	1
Dibenzofuran	ND		10	0.17	ug/L		01/12/23 08:30	01/13/23 16:47	1
3,3'-Dichlorobenzidine	ND	*+	10	2.7	ug/L		01/12/23 08:30	01/13/23 16:47	1
2,4-Dichlorophenol	ND		10	3.1	ug/L		01/12/23 08:30	01/13/23 16:47	1
Diethyl phthalate	ND		10	0.25	ug/L		01/12/23 08:30	01/13/23 16:47	1
2,4-Dimethylphenol	ND		10	3.6	ug/L		01/12/23 08:30	01/13/23 16:47	1
Dimethyl phthalate	ND		10	0.17	ug/L		01/12/23 08:30	01/13/23 16:47	1
Di-n-butyl phthalate	ND		10	2.8	ug/L		01/12/23 08:30	01/13/23 16:47	1
4,6-Dinitro-ortho-cresol	ND		10	1.6	ug/L		01/12/23 08:30	01/13/23 16:47	1
2,4-Dinitrophenol	ND		31	3.5	ug/L		01/12/23 08:30	01/13/23 16:47	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		01/12/23 08:30	01/13/23 16:47	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		01/12/23 08:30	01/13/23 16:47	1
Di-n-octyl phthalate	**3.7**	**J**	10	0.17	ug/L		01/12/23 08:30	01/13/23 16:47	1
1,4-Dioxane	ND	*1	10	1.0	ug/L		01/12/23 08:30	01/13/23 16:47	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/12/23 08:30	01/13/23 16:47	1
Hexachlorobenzene	ND		10	0.17	ug/L		01/12/23 08:30	01/13/23 16:47	1
Hexachlorocyclopentadiene	ND		20	2.7	ug/L		01/12/23 08:30	01/13/23 16:47	1
Hexachloroethane	ND		10	4.3	ug/L		01/12/23 08:30	01/13/23 16:47	1
Indene	ND		10	1.0	ug/L		01/12/23 08:30	01/13/23 16:47	1
Isophorone	ND		10	0.14	ug/L		01/12/23 08:30	01/13/23 16:47	1
2-Methylphenol	ND		10	1.8	ug/L		01/12/23 08:30	01/13/23 16:47	1
3 & 4 Methylphenol	ND		20	0.40	ug/L		01/12/23 08:30	01/13/23 16:47	1
2-Nitroaniline	ND		10	2.2	ug/L		01/12/23 08:30	01/13/23 16:47	1
3-Nitroaniline	ND	*+	10	1.8	ug/L		01/12/23 08:30	01/13/23 16:47	1
4-Nitroaniline	ND		10	1.5	ug/L		01/12/23 08:30	01/13/23 16:47	1
Nitrobenzene	ND		10	0.13	ug/L		01/12/23 08:30	01/13/23 16:47	1
2-Nitrophenol	ND		10	5.3	ug/L		01/12/23 08:30	01/13/23 16:47	1
4-Nitrophenol	ND		10	2.1	ug/L		01/12/23 08:30	01/13/23 16:47	1
N-Nitrosodimethylamine	ND		10	3.6	ug/L		01/12/23 08:30	01/13/23 16:47	1

Client Sample ID: MW5-ROX-011023
Date Collected: 01/10/23 09:25
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-3
Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		10	3.4	ug/L		01/12/23 08:30	01/13/23 16:47	1
N-Nitrosodiphenylamine	ND		10	0.18	ug/L		01/12/23 08:30	01/13/23 16:47	1
Phenol	ND		10	2.7	ug/L		01/12/23 08:30	01/13/23 16:47	1
Pyridine	ND		10	3.3	ug/L		01/12/23 08:30	01/13/23 16:47	1
Quinoline	ND		10	4.6	ug/L		01/12/23 08:30	01/13/23 16:47	1
2,4,5-Trichlorophenol	ND		10	3.8	ug/L		01/12/23 08:30	01/13/23 16:47	1
2,4,6-Trichlorophenol	ND		10	3.6	ug/L		01/12/23 08:30	01/13/23 16:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*122*		*46 - 124*	*01/12/23 08:30*	*01/13/23 16:47*	*1*
2-Fluorophenol	*4*	*S1-*	*13 - 113*	*01/12/23 08:30*	*01/13/23 16:47*	*1*
Nitrobenzene-d5	*113*		*36 - 126*	*01/12/23 08:30*	*01/13/23 16:47*	*1*
Phenol-d5	*35*		*17 - 127*	*01/12/23 08:30*	*01/13/23 16:47*	*1*
Terphenyl-d14	*127*		*44 - 149*	*01/12/23 08:30*	*01/13/23 16:47*	*1*
2,4,6-Tribromophenol	*89*		*26 - 150*	*01/12/23 08:30*	*01/13/23 16:47*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		20	1.4	ug/L		01/12/23 08:30	01/27/23 22:41	1

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+ F1	0.030	0.017	ug/L		01/19/23 10:05	01/19/23 21:10	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/19/23 10:05	01/19/23 21:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*115*	*p*	*51 - 149*	*01/19/23 10:05*	*01/19/23 21:10*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231616-1

Client Sample ID: TB-ROX-011023-8260-B
Date Collected: 01/10/23 12:00
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-4
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/15/23 15:19	1
Acrolein	ND		20	3.3	ug/L			01/15/23 15:19	1
Acrylonitrile	ND		10	2.8	ug/L			01/15/23 15:19	1
Benzene	ND		1.0	0.13	ug/L			01/15/23 15:19	1
Bromobenzene	ND		1.0	0.54	ug/L			01/15/23 15:19	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/15/23 15:19	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/15/23 15:19	1
Bromoform	ND		5.0	0.25	ug/L			01/15/23 15:19	1
Bromomethane	ND		1.0	0.98	ug/L			01/15/23 15:19	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/15/23 15:19	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/15/23 15:19	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/15/23 15:19	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/15/23 15:19	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/15/23 15:19	1
Chloroethane	ND		1.0	0.76	ug/L			01/15/23 15:19	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/15/23 15:19	1
Chloroform	ND		1.0	1.0	ug/L			01/15/23 15:19	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/15/23 15:19	1
Chloromethane	ND		1.0	0.32	ug/L			01/15/23 15:19	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/15/23 15:19	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/15/23 15:19	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/15/23 15:19	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/15/23 15:19	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/15/23 15:19	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/15/23 15:19	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/15/23 15:19	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/15/23 15:19	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/15/23 15:19	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 15:19	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 15:19	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 15:19	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/15/23 15:19	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/15/23 15:19	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/15/23 15:19	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/15/23 15:19	1
2-Hexanone	ND		25	1.4	ug/L			01/15/23 15:19	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/15/23 15:19	1
Methylene bromide	ND		5.0	0.22	ug/L			01/15/23 15:19	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/15/23 15:19	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/15/23 15:19	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/15/23 15:19	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/15/23 15:19	1
Naphthalene	ND		5.0	3.0	ug/L			01/15/23 15:19	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/15/23 15:19	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/15/23 15:19	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/15/23 15:19	1
o-Xylene	ND		5.0	0.60	ug/L			01/15/23 15:19	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/15/23 15:19	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/15/23 15:19	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231616-1

Client Sample ID: TB-ROX-011023-8260-B
Date Collected: 01/10/23 12:00
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-4
Matrix: Water

Method: SW846 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			01/15/23 15:19	1
Styrene	ND		1.0	1.0	ug/L			01/15/23 15:19	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/15/23 15:19	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/15/23 15:19	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/15/23 15:19	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/15/23 15:19	1
Toluene	ND		1.0	0.41	ug/L			01/15/23 15:19	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/15/23 15:19	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/15/23 15:19	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/15/23 15:19	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/15/23 15:19	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/15/23 15:19	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/15/23 15:19	1
Trichloroethene	ND		1.0	0.15	ug/L			01/15/23 15:19	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/15/23 15:19	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/15/23 15:19	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/15/23 15:19	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/15/23 15:19	1
Vinyl acetate	ND		25	0.93	ug/L			01/15/23 15:19	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/15/23 15:19	1
Xylenes, Total	ND		10	1.6	ug/L			01/15/23 15:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*72 - 119*		*01/15/23 15:19*	*1*
Dibromofluoromethane	*106*		*75 - 126*		*01/15/23 15:19*	*1*
Toluene-d8 (Surr)	*94*		*64 - 132*		*01/15/23 15:19*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231616-1

Client Sample ID: TB-ROX-011023-8011-B
Date Collected: 01/10/23 12:00
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-5
Matrix: Water

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.031	0.017	ug/L		01/19/23 10:05	01/19/23 22:32	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/19/23 10:05	01/19/23 22:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*117*	*p*	*51 - 149*	*01/19/23 10:05*	*01/19/23 22:32*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231616-1

Client Sample ID: MW22-ROX-011023-EB

Date Collected: 01/10/23 09:25
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-6

Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/15/23 15:45	1
Acrolein	ND		20	3.3	ug/L			01/15/23 15:45	1
Acrylonitrile	ND		10	2.8	ug/L			01/15/23 15:45	1
Benzene	ND		1.0	0.13	ug/L			01/15/23 15:45	1
Bromobenzene	ND		1.0	0.54	ug/L			01/15/23 15:45	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/15/23 15:45	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/15/23 15:45	1
Bromoform	ND		5.0	0.25	ug/L			01/15/23 15:45	1
Bromomethane	ND		1.0	0.98	ug/L			01/15/23 15:45	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/15/23 15:45	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/15/23 15:45	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/15/23 15:45	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/15/23 15:45	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/15/23 15:45	1
Chloroethane	ND		1.0	0.76	ug/L			01/15/23 15:45	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/15/23 15:45	1
Chloroform	ND		1.0	1.0	ug/L			01/15/23 15:45	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/15/23 15:45	1
Chloromethane	ND		1.0	0.32	ug/L			01/15/23 15:45	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/15/23 15:45	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/15/23 15:45	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/15/23 15:45	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/15/23 15:45	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/15/23 15:45	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/15/23 15:45	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/15/23 15:45	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/15/23 15:45	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/15/23 15:45	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 15:45	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 15:45	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 15:45	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/15/23 15:45	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/15/23 15:45	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/15/23 15:45	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/15/23 15:45	1
2-Hexanone	ND		25	1.4	ug/L			01/15/23 15:45	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/15/23 15:45	1
Methylene bromide	ND		5.0	0.22	ug/L			01/15/23 15:45	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/15/23 15:45	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/15/23 15:45	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/15/23 15:45	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/15/23 15:45	1
Naphthalene	ND		5.0	3.0	ug/L			01/15/23 15:45	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/15/23 15:45	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/15/23 15:45	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/15/23 15:45	1
o-Xylene	ND		5.0	0.60	ug/L			01/15/23 15:45	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/15/23 15:45	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/15/23 15:45	1

Client Sample ID: MW22-ROX-011023-EB
Date Collected: 01/10/23 09:25
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-6
Matrix: Water

Method: SW846 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			01/15/23 15:45	1
Styrene	ND		1.0	1.0	ug/L			01/15/23 15:45	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/15/23 15:45	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/15/23 15:45	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/15/23 15:45	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/15/23 15:45	1
Toluene	ND		1.0	0.41	ug/L			01/15/23 15:45	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/15/23 15:45	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/15/23 15:45	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/15/23 15:45	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/15/23 15:45	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/15/23 15:45	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/15/23 15:45	1
Trichloroethene	ND		1.0	0.15	ug/L			01/15/23 15:45	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/15/23 15:45	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/15/23 15:45	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/15/23 15:45	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/15/23 15:45	1
Vinyl acetate	ND		25	0.93	ug/L			01/15/23 15:45	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/15/23 15:45	1
Xylenes, Total	ND		10	1.6	ug/L			01/15/23 15:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*72 - 119*		*01/15/23 15:45*	*1*
Dibromofluoromethane	*107*		*75 - 126*		*01/15/23 15:45*	*1*
Toluene-d8 (Surr)	*92*		*64 - 132*		*01/15/23 15:45*	*1*

Method: SW846 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	0.031	ug/L		01/12/23 08:30	01/13/23 16:53	1
Acenaphthylene	ND		0.19	0.043	ug/L		01/12/23 08:30	01/13/23 16:53	1
Anthracene	**0.032**	**J**	0.19	0.031	ug/L		01/12/23 08:30	01/27/23 23:27	1
Benzo[a]anthracene	**0.13**	**J**	0.19	0.044	ug/L		01/12/23 08:30	01/27/23 23:27	1
Benzo[a]pyrene	**0.063**	**J B**	0.19	0.040	ug/L		01/12/23 08:30	01/27/23 23:27	1
Benzo[b]fluoranthene	**0.078**	**J B**	0.19	0.032	ug/L		01/12/23 08:30	01/27/23 23:27	1
Benzo[g,h,i]perylene	ND		0.19	0.12	ug/L		01/12/23 08:30	01/13/23 16:53	1
Benzo[k]fluoranthene	ND		0.19	0.095	ug/L		01/12/23 08:30	01/27/23 23:27	1
Chrysene	**0.13**	**J**	0.19	0.071	ug/L		01/12/23 08:30	01/27/23 23:27	1
Dibenz(a,h)anthracene	ND		0.19	0.048	ug/L		01/12/23 08:30	01/13/23 16:53	1
Fluoranthene	**0.11**	**J**	0.19	0.065	ug/L		01/12/23 08:30	01/27/23 23:27	1
Fluorene	ND		0.19	0.10	ug/L		01/12/23 08:30	01/13/23 16:53	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.041	ug/L		01/12/23 08:30	01/13/23 16:53	1
1-Methylnaphthalene	ND		0.19	0.071	ug/L		01/12/23 08:30	01/13/23 16:53	1
2-Methylnaphthalene	ND		0.19	0.057	ug/L		01/12/23 08:30	01/27/23 23:27	1
Phenanthrene	**0.095**	**J**	0.19	0.034	ug/L		01/12/23 08:30	01/27/23 23:27	1
Pyrene	**0.13**	**J**	0.19	0.038	ug/L		01/12/23 08:30	01/27/23 23:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*109*		*15 - 122*	*01/12/23 08:30*	*01/13/23 16:53*	*1*
Nitrobenzene-d5	*76*		*19 - 130*	*01/12/23 08:30*	*01/13/23 16:53*	*1*

Client Sample ID: MW22-ROX-011023-EB
Date Collected: 01/10/23 09:25
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-6
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*115*		*33 - 138*	*01/12/23 08:30*	*01/13/23 16:53*	*1*

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	**0.47**	**H**	0.19	0.030	ug/L		02/09/23 13:26	02/28/23 17:30	1
Benzo[a]anthracene	**0.28**	**H**	0.19	0.043	ug/L		02/09/23 13:26	02/28/23 17:30	1
Benzo[a]pyrene	**0.50**	**H**	0.19	0.040	ug/L		02/09/23 13:26	02/28/23 17:30	1
Benzo[b]fluoranthene	**0.62**	**H**	0.19	0.032	ug/L		02/09/23 13:26	02/28/23 17:30	1
Benzo[k]fluoranthene	**0.48**	**H**	0.19	0.094	ug/L		02/09/23 13:26	02/28/23 17:30	1
Chrysene	**0.23**	**H**	0.19	0.070	ug/L		02/09/23 13:26	02/28/23 17:30	1
Fluoranthene	**0.93**	**H**	0.19	0.064	ug/L		02/09/23 13:26	02/28/23 17:30	1
Phenanthrene	**0.56**	**H**	0.19	0.034	ug/L		02/09/23 13:26	02/28/23 17:30	1
Pyrene	**0.79**	**H**	0.19	0.038	ug/L		02/09/23 13:26	02/28/23 17:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	*86*		*15 - 122*	*02/09/23 13:26*	*02/28/23 17:30*	*1*
Nitrobenzene-d5	*94*		*19 - 130*	*02/09/23 13:26*	*02/28/23 17:30*	*1*
Terphenyl-d14	*107*		*33 - 138*	*02/09/23 13:26*	*02/28/23 17:30*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.5	3.6	ug/L		01/12/23 08:30	01/13/23 17:52	1
Benzenethiol	ND	*-	9.5	1.6	ug/L		01/12/23 08:30	01/13/23 17:52	1
Benzoic acid	ND		29	7.0	ug/L		01/12/23 08:30	01/13/23 17:52	1
Benzyl alcohol	ND		9.5	1.9	ug/L		01/12/23 08:30	01/13/23 17:52	1
Bis(2-chloroethoxy)methane	ND		9.5	0.15	ug/L		01/12/23 08:30	01/13/23 17:52	1
Bis(2-chloroethyl)ether	ND		9.5	2.6	ug/L		01/12/23 08:30	01/13/23 17:52	1
bis (2-chloroisopropyl) ether	ND		9.5	0.15	ug/L		01/12/23 08:30	01/13/23 17:52	1
Bis(2-ethylhexyl) phthalate	ND		9.5	4.8	ug/L		01/12/23 08:30	01/13/23 17:52	1
4-Bromophenyl phenyl ether	ND		9.5	0.19	ug/L		01/12/23 08:30	01/13/23 17:52	1
Butyl benzyl phthalate	ND		9.5	0.18	ug/L		01/12/23 08:30	01/13/23 17:52	1
4-Chloroaniline	ND	*+	9.5	3.2	ug/L		01/12/23 08:30	01/13/23 17:52	1
4-Chloro-3-methylphenol	ND		9.5	3.6	ug/L		01/12/23 08:30	01/13/23 17:52	1
2-Chloronaphthalene	ND		9.5	0.13	ug/L		01/12/23 08:30	01/13/23 17:52	1
2-Chlorophenol	ND		9.5	2.1	ug/L		01/12/23 08:30	01/13/23 17:52	1
4-Chlorophenyl phenyl ether	ND		9.5	1.9	ug/L		01/12/23 08:30	01/13/23 17:52	1
Dibenz[a,h]acridine	ND		9.5	0.95	ug/L		01/12/23 08:30	01/13/23 17:52	1
Dibenzofuran	ND		9.5	0.16	ug/L		01/12/23 08:30	01/13/23 17:52	1
3,3'-Dichlorobenzidine	ND	*+	9.5	2.5	ug/L		01/12/23 08:30	01/13/23 17:52	1
2,4-Dichlorophenol	ND		9.5	2.9	ug/L		01/12/23 08:30	01/13/23 17:52	1
Diethyl phthalate	ND		9.5	0.23	ug/L		01/12/23 08:30	01/13/23 17:52	1
2,4-Dimethylphenol	ND		9.5	3.3	ug/L		01/12/23 08:30	01/13/23 17:52	1
Dimethyl phthalate	ND		9.5	0.16	ug/L		01/12/23 08:30	01/13/23 17:52	1
Di-n-butyl phthalate	ND		9.5	2.6	ug/L		01/12/23 08:30	01/13/23 17:52	1
4,6-Dinitro-ortho-cresol	ND		9.5	1.5	ug/L		01/12/23 08:30	01/13/23 17:52	1
2,4-Dinitrophenol	ND		29	3.2	ug/L		01/12/23 08:30	01/13/23 17:52	1
2,4-Dinitrotoluene	ND		9.5	1.8	ug/L		01/12/23 08:30	01/13/23 17:52	1
2,6-Dinitrotoluene	ND		9.5	1.8	ug/L		01/12/23 08:30	01/13/23 17:52	1
Di-n-octyl phthalate	ND		9.5	0.16	ug/L		01/12/23 08:30	01/13/23 17:52	1
1,4-Dioxane	ND	*1	9.5	0.95	ug/L		01/12/23 08:30	01/13/23 17:52	1

Client Sample ID: MW22-ROX-011023-EB
Date Collected: 01/10/23 09:25
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-6
Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.5	0.95	ug/L		01/12/23 08:30	01/13/23 17:52	1
Hexachlorobenzene	ND		9.5	0.16	ug/L		01/12/23 08:30	01/13/23 17:52	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		01/12/23 08:30	01/13/23 17:52	1
Hexachloroethane	ND		9.5	4.0	ug/L		01/12/23 08:30	01/13/23 17:52	1
Indene	ND		9.5	0.95	ug/L		01/12/23 08:30	01/13/23 17:52	1
Isophorone	ND		9.5	0.13	ug/L		01/12/23 08:30	01/13/23 17:52	1
2-Methylphenol	ND		9.5	1.7	ug/L		01/12/23 08:30	01/13/23 17:52	1
3 & 4 Methylphenol	ND		19	0.37	ug/L		01/12/23 08:30	01/13/23 17:52	1
2-Nitroaniline	ND		9.5	2.1	ug/L		01/12/23 08:30	01/13/23 17:52	1
3-Nitroaniline	ND	*+	9.5	1.7	ug/L		01/12/23 08:30	01/13/23 17:52	1
4-Nitroaniline	ND		9.5	1.4	ug/L		01/12/23 08:30	01/13/23 17:52	1
Nitrobenzene	ND		9.5	0.12	ug/L		01/12/23 08:30	01/13/23 17:52	1
2-Nitrophenol	ND		9.5	5.0	ug/L		01/12/23 08:30	01/13/23 17:52	1
4-Nitrophenol	ND		9.5	2.0	ug/L		01/12/23 08:30	01/13/23 17:52	1
N-Nitrosodimethylamine	ND		9.5	3.3	ug/L		01/12/23 08:30	01/13/23 17:52	1
N-Nitrosodi-n-propylamine	ND		9.5	3.1	ug/L		01/12/23 08:30	01/13/23 17:52	1
N-Nitrosodiphenylamine	ND		9.5	0.17	ug/L		01/12/23 08:30	01/13/23 17:52	1
Pentachlorophenol	ND		19	1.3	ug/L		01/12/23 08:30	01/13/23 17:52	1
Phenol	ND		9.5	2.5	ug/L		01/12/23 08:30	01/13/23 17:52	1
Pyridine	ND		9.5	3.1	ug/L		01/12/23 08:30	01/13/23 17:52	1
Quinoline	ND		9.5	4.3	ug/L		01/12/23 08:30	01/13/23 17:52	1
2,4,5-Trichlorophenol	ND		9.5	3.5	ug/L		01/12/23 08:30	01/13/23 17:52	1
2,4,6-Trichlorophenol	ND		9.5	3.3	ug/L		01/12/23 08:30	01/13/23 17:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*108*		*46 - 124*	*01/12/23 08:30*	*01/13/23 17:52*	*1*
2-Fluorophenol	*38*		*13 - 113*	*01/12/23 08:30*	*01/13/23 17:52*	*1*
Nitrobenzene-d5	*103*		*36 - 126*	*01/12/23 08:30*	*01/13/23 17:52*	*1*
Phenol-d5	*84*		*17 - 127*	*01/12/23 08:30*	*01/13/23 17:52*	*1*
Terphenyl-d14	*122*		*44 - 149*	*01/12/23 08:30*	*01/13/23 17:52*	*1*
2,4,6-Tribromophenol	*91*		*26 - 150*	*01/12/23 08:30*	*01/13/23 17:52*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.030	0.017	ug/L		01/19/23 10:05	01/19/23 22:52	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/19/23 10:05	01/19/23 22:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*117*	*p*	*51 - 149*	*01/19/23 10:05*	*01/19/23 22:52*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231616-1

Client Sample ID: MW22-ROX-011023
Date Collected: 01/10/23 09:55
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-7
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**29**	**J**	50	20	ug/L			01/15/23 12:40	2
Acrolein	ND		40	6.6	ug/L			01/15/23 12:40	2
Acrylonitrile	ND		20	5.6	ug/L			01/15/23 12:40	2
Benzene	**8.5**		2.0	0.26	ug/L			01/15/23 12:40	2
Bromobenzene	ND		2.0	1.1	ug/L			01/15/23 12:40	2
Bromochloromethane	ND		2.0	0.42	ug/L			01/15/23 12:40	2
Bromodichloromethane	ND		2.0	1.0	ug/L			01/15/23 12:40	2
Bromoform	ND		10	0.50	ug/L			01/15/23 12:40	2
Bromomethane	ND		2.0	2.0	ug/L			01/15/23 12:40	2
2-Butanone (MEK)	**8.6**	**J**	50	5.2	ug/L			01/15/23 12:40	2
Carbon disulfide	ND		2.0	1.0	ug/L			01/15/23 12:40	2
Carbon tetrachloride	ND		2.0	0.38	ug/L			01/15/23 12:40	2
Chlorobenzene	ND		2.0	0.30	ug/L			01/15/23 12:40	2
Dibromochloromethane	ND		2.0	0.48	ug/L			01/15/23 12:40	2
Chloroethane	ND		2.0	1.5	ug/L			01/15/23 12:40	2
2-Chloroethyl vinyl ether	ND		10	4.0	ug/L			01/15/23 12:40	2
Chloroform	ND		2.0	2.0	ug/L			01/15/23 12:40	2
1-Chlorohexane	ND		2.0	0.64	ug/L			01/15/23 12:40	2
Chloromethane	ND		2.0	0.64	ug/L			01/15/23 12:40	2
cis-1,2-Dichloroethene	ND		2.0	0.40	ug/L			01/15/23 12:40	2
cis-1,3-Dichloropropene	ND		10	1.0	ug/L			01/15/23 12:40	2
1,2-Dichlorobenzene	ND		2.0	1.0	ug/L			01/15/23 12:40	2
1,3-Dichlorobenzene	ND		2.0	1.1	ug/L			01/15/23 12:40	2
1,4-Dichlorobenzene	ND		2.0	1.3	ug/L			01/15/23 12:40	2
Dichlorodifluoromethane	ND		2.0	1.7	ug/L			01/15/23 12:40	2
1,1-Dichloroethane	ND		2.0	1.0	ug/L			01/15/23 12:40	2
1,2-Dichloroethane	ND		2.0	0.38	ug/L			01/15/23 12:40	2
1,1-Dichloroethene	ND		2.0	1.0	ug/L			01/15/23 12:40	2
1,2-Dichloropropane	ND		2.0	1.0	ug/L			01/15/23 12:40	2
1,3-Dichloropropane	ND		2.0	1.0	ug/L			01/15/23 12:40	2
2,2-Dichloropropane	ND		2.0	1.0	ug/L			01/15/23 12:40	2
1,1-Dichloropropene	ND		2.0	1.0	ug/L			01/15/23 12:40	2
Ethylbenzene	**85**		2.0	1.0	ug/L			01/15/23 12:40	2
Ethyl methacrylate	ND		2.0	1.2	ug/L			01/15/23 12:40	2
Hexachlorobutadiene	ND		10	1.8	ug/L			01/15/23 12:40	2
2-Hexanone	ND		50	2.8	ug/L			01/15/23 12:40	2
Isopropylbenzene	**21**		2.0	1.1	ug/L			01/15/23 12:40	2
Methylene bromide	ND		10	0.44	ug/L			01/15/23 12:40	2
Methylene Chloride	ND		10	6.0	ug/L			01/15/23 12:40	2
4-Methyl-2-pentanone (MIBK)	ND		50	3.6	ug/L			01/15/23 12:40	2
Methyl tert-butyl ether	ND		2.0	0.44	ug/L			01/15/23 12:40	2
m-Xylene & p-Xylene	**240**		10	1.3	ug/L			01/15/23 12:40	2
Naphthalene	**41**		10	6.0	ug/L			01/15/23 12:40	2
n-Butylbenzene	**4.1**		2.0	1.5	ug/L			01/15/23 12:40	2
N-Propylbenzene	**42**		2.0	1.4	ug/L			01/15/23 12:40	2
o-Chlorotoluene	ND		2.0	1.1	ug/L			01/15/23 12:40	2
o-Xylene	**9.7**	**J**	10	1.2	ug/L			01/15/23 12:40	2
p-Chlorotoluene	ND		2.0	1.1	ug/L			01/15/23 12:40	2
p-Isopropyltoluene	**3.5**		2.0	1.4	ug/L			01/15/23 12:40	2

Client Sample ID: MW22-ROX-011023
Date Collected: 01/10/23 09:55
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-7
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	**2.2**		2.0	1.4	ug/L			01/15/23 12:40	2
Styrene	ND		2.0	2.0	ug/L			01/15/23 12:40	2
tert-Butylbenzene	**4.4**		2.0	1.3	ug/L			01/15/23 12:40	2
1,1,1,2-Tetrachloroethane	ND		2.0	0.32	ug/L			01/15/23 12:40	2
1,1,2,2-Tetrachloroethane	ND		2.0	1.0	ug/L			01/15/23 12:40	2
Tetrachloroethene	ND		2.0	1.8	ug/L			01/15/23 12:40	2
Toluene	**11**		2.0	0.82	ug/L			01/15/23 12:40	2
trans-1,2-Dichloroethene	ND		2.0	1.0	ug/L			01/15/23 12:40	2
trans-1,3-Dichloropropene	ND		10	0.40	ug/L			01/15/23 12:40	2
1,2,3-Trichlorobenzene	ND		2.0	1.8	ug/L			01/15/23 12:40	2
1,2,4-Trichlorobenzene	ND		2.0	1.6	ug/L			01/15/23 12:40	2
1,1,1-Trichloroethane	ND		2.0	0.36	ug/L			01/15/23 12:40	2
1,1,2-Trichloroethane	ND		10	0.42	ug/L			01/15/23 12:40	2
Trichloroethene	ND		2.0	0.30	ug/L			01/15/23 12:40	2
Trichlorofluoromethane	ND		2.0	1.0	ug/L			01/15/23 12:40	2
1,2,3-Trichloropropane	ND		10	1.7	ug/L			01/15/23 12:40	2
1,2,4-Trimethylbenzene	**210**		2.0	1.6	ug/L			01/15/23 12:40	2
1,3,5-Trimethylbenzene	**47**		2.0	1.1	ug/L			01/15/23 12:40	2
Vinyl acetate	ND		50	1.9	ug/L			01/15/23 12:40	2
Vinyl chloride	ND		2.0	1.0	ug/L			01/15/23 12:40	2
Xylenes, Total	**250**		20	3.2	ug/L			01/15/23 12:40	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*72 - 119*		*01/15/23 12:40*	*2*
Dibromofluoromethane	*100*		*75 - 126*		*01/15/23 12:40*	*2*
Toluene-d8 (Surr)	*95*		*64 - 132*		*01/15/23 12:40*	*2*

Method: SW846 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	0.031	ug/L		01/12/23 08:30	01/13/23 17:10	1
Acenaphthylene	ND		0.19	0.044	ug/L		01/12/23 08:30	01/13/23 17:10	1
Anthracene	ND		0.19	0.031	ug/L		01/12/23 08:30	01/13/23 17:10	1
Benzo[a]anthracene	ND		0.19	0.045	ug/L		01/12/23 08:30	01/13/23 17:10	1
Benzo[a]pyrene	ND		0.19	0.041	ug/L		01/12/23 08:30	01/27/23 23:44	1
Benzo[b]fluoranthene	ND		0.19	0.033	ug/L		01/12/23 08:30	01/27/23 23:44	1
Benzo[g,h,i]perylene	ND		0.19	0.13	ug/L		01/12/23 08:30	01/13/23 17:10	1
Benzo[k]fluoranthene	ND		0.19	0.097	ug/L		01/12/23 08:30	01/27/23 23:44	1
Chrysene	ND		0.19	0.072	ug/L		01/12/23 08:30	01/13/23 17:10	1
Dibenz(a,h)anthracene	ND		0 19	0 048	ug/L		01/12/23 08 30	01/13/23 17 10	1
Fluoranthene	ND		0.19	0.066	ug/L		01/12/23 08:30	01/27/23 23:44	1
Fluorene	ND		0.19	0.11	ug/L		01/12/23 08:30	01/13/23 17:10	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.042	ug/L		01/12/23 08:30	01/13/23 17:10	1
1-Methylnaphthalene	**6.7**		0.19	0.072	ug/L		01/12/23 08:30	01/13/23 17:10	1
2-Methylnaphthalene	**6.3**		0.19	0.058	ug/L		01/12/23 08:30	01/13/23 17:10	1
Phenanthrene	ND		0.19	0.035	ug/L		01/12/23 08:30	01/13/23 17:10	1
Pyrene	ND		0.19	0.039	ug/L		01/12/23 08:30	01/27/23 23:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*108*		*15 - 122*	*01/12/23 08:30*	*01/13/23 17:10*	*1*
Nitrobenzene-d5	*79*		*19 - 130*	*01/12/23 08:30*	*01/13/23 17:10*	*1*

Client Sample ID: MW22-ROX-011023
Date Collected: 01/10/23 09:55
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-7
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*104*		*33 - 138*	*01/12/23 08:30*	*01/13/23 17:10*	*1*

Method: SW846 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		01/12/23 08:30	01/13/23 18:14	1
Benzenethiol	ND	*- UJ	9.7	1.6	ug/L		01/12/23 08:30	01/13/23 18:14	1
Benzoic acid	ND		29	7.1	ug/L		01/12/23 08:30	01/13/23 18:14	1
Benzyl alcohol	ND		9.7	1.9	ug/L		01/12/23 08:30	01/13/23 18:14	1
Bis(2-chloroethoxy)methane	ND		9.7	0.16	ug/L		01/12/23 08:30	01/13/23 18:14	1
Bis(2-chloroethyl)ether	ND		9.7	2.6	ug/L		01/12/23 08:30	01/13/23 18:14	1
bis (2-chloroisopropyl) ether	ND		9.7	0.16	ug/L		01/12/23 08:30	01/13/23 18:14	1
Bis(2-ethylhexyl) phthalate	ND		9.7	4.8	ug/L		01/12/23 08:30	01/13/23 18:14	1
4-Bromophenyl phenyl ether	ND		9.7	0.19	ug/L		01/12/23 08:30	01/13/23 18:14	1
Butyl benzyl phthalate	ND		9.7	0.18	ug/L		01/12/23 08:30	01/13/23 18:14	1
4-Chloroaniline	ND	*+	9.7	3.3	ug/L		01/12/23 08:30	01/13/23 18:14	1
4-Chloro-3-methylphenol	ND		9.7	3.7	ug/L		01/12/23 08:30	01/13/23 18:14	1
2-Chloronaphthalene	ND		9.7	0.14	ug/L		01/12/23 08:30	01/13/23 18:14	1
2-Chlorophenol	ND		9.7	2.1	ug/L		01/12/23 08:30	01/13/23 18:14	1
4-Chlorophenyl phenyl ether	ND		9.7	1.9	ug/L		01/12/23 08:30	01/13/23 18:14	1
Dibenz[a,h]acridine	ND		9.7	0.97	ug/L		01/12/23 08:30	01/13/23 18:14	1
Dibenzofuran	ND		9.7	0.16	ug/L		01/12/23 08:30	01/13/23 18:14	1
3,3'-Dichlorobenzidine	ND	*+	9.7	2.5	ug/L		01/12/23 08:30	01/13/23 18:14	1
2,4-Dichlorophenol	ND		9.7	2.9	ug/L		01/12/23 08:30	01/13/23 18:14	1
Diethyl phthalate	ND		9.7	0.23	ug/L		01/12/23 08:30	01/13/23 18:14	1
2,4-Dimethylphenol	ND		9.7	3.4	ug/L		01/12/23 08:30	01/13/23 18:14	1
Dimethyl phthalate	ND		9.7	0.16	ug/L		01/12/23 08:30	01/13/23 18:14	1
Di-n-butyl phthalate	ND		9.7	2.6	ug/L		01/12/23 08:30	01/13/23 18:14	1
4,6-Dinitro-ortho-cresol	ND		9.7	1.6	ug/L		01/12/23 08:30	01/13/23 18:14	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		01/12/23 08:30	01/13/23 18:14	1
2,4-Dinitrotoluene	ND		9.7	1.8	ug/L		01/12/23 08:30	01/13/23 18:14	1
2,6-Dinitrotoluene	ND		9.7	1.8	ug/L		01/12/23 08:30	01/13/23 18:14	1
Di-n-octyl phthalate	ND		9.7	0.16	ug/L		01/12/23 08:30	01/13/23 18:14	1
1,4-Dioxane	ND	*1	9.7	0.97	ug/L		01/12/23 08:30	01/13/23 18:14	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.7	0.97	ug/L		01/12/23 08:30	01/13/23 18:14	1
Hexachlorobenzene	ND		9.7	0.16	ug/L		01/12/23 08:30	01/13/23 18:14	1
Hexachlorocyclopentadiene	ND	UJ	19	2.5	ug/L		01/12/23 08:30	01/13/23 18:14	1
Hexachloroethane	ND		9.7	4.1	ug/L		01/12/23 08:30	01/13/23 18:14	1
Indene	ND		9.7	0.97	ug/L		01/12/23 08:30	01/13/23 18:14	1
Isophorone	ND		9.7	0.14	ug/L		01/12/23 08:30	01/13/23 18:14	1
2-Methylphenol	ND		9.7	1.7	ug/L		01/12/23 08:30	01/13/23 18:14	1
3 & 4 Methylphenol	ND		19	0.38	ug/L		01/12/23 08:30	01/13/23 18:14	1
2-Nitroaniline	ND		9.7	2.1	ug/L		01/12/23 08:30	01/13/23 18:14	1
3-Nitroaniline	ND	*+	9.7	1.7	ug/L		01/12/23 08:30	01/13/23 18:14	1
4-Nitroaniline	ND		9.7	1.5	ug/L		01/12/23 08:30	01/13/23 18:14	1
Nitrobenzene	ND		9.7	0.13	ug/L		01/12/23 08:30	01/13/23 18:14	1
2-Nitrophenol	ND		9.7	5.0	ug/L		01/12/23 08:30	01/13/23 18:14	1
4-Nitrophenol	ND		9.7	2.0	ug/L		01/12/23 08:30	01/13/23 18:14	1
N-Nitrosodimethylamine	ND		9.7	3.4	ug/L		01/12/23 08:30	01/13/23 18:14	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231616-1

Client Sample ID: MW22-ROX-011023

Date Collected: 01/10/23 09:55
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-7

Matrix: Water

Method: SW846 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		01/12/23 08:30	01/13/23 18:14	1
N-Nitrosodiphenylamine	ND		9.7	0.17	ug/L		01/12/23 08:30	01/13/23 18:14	1
Pentachlorophenol	ND		19	1.4	ug/L		01/12/23 08:30	01/13/23 18:14	1
Phenol	ND		9.7	2.5	ug/L		01/12/23 08:30	01/13/23 18:14	1
Pyridine	ND		9.7	3.1	ug/L		01/12/23 08:30	01/13/23 18:14	1
Quinoline	ND		9.7	4.4	ug/L		01/12/23 08:30	01/13/23 18:14	1
2,4,5-Trichlorophenol	ND		9.7	3.6	ug/L		01/12/23 08:30	01/13/23 18:14	1
2,4,6-Trichlorophenol	ND		9.7	3.4	ug/L		01/12/23 08:30	01/13/23 18:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*104*		*46 - 124*	*01/12/23 08:30*	*01/13/23 18:14*	*1*
2-Fluorophenol	*49*		*13 - 113*	*01/12/23 08:30*	*01/13/23 18:14*	*1*
Nitrobenzene-d5	*102*		*36 - 126*	*01/12/23 08:30*	*01/13/23 18:14*	*1*
Phenol-d5	*85*		*17 - 127*	*01/12/23 08:30*	*01/13/23 18:14*	*1*
Terphenyl-d14	*101*		*44 - 149*	*01/12/23 08:30*	*01/13/23 18:14*	*1*
2,4,6-Tribromophenol	*95*		*26 - 150*	*01/12/23 08:30*	*01/13/23 18:14*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	**0.041**	*+	0.030	0.017	ug/L		01/19/23 10:05	01/19/23 23:13	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/19/23 10:05	01/19/23 23:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*117*	*p*	*51 - 149*	*01/19/23 10:05*	*01/19/23 23:13*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231616-1

Client Sample ID: ROST4PZE-ROX-011023
Date Collected: 01/10/23 10:50
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-8
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**85**		25	10	ug/L			01/15/23 16:38	1
Acrolein	ND		20	3.3	ug/L			01/15/23 16:38	1
Acrylonitrile	ND		10	2.8	ug/L			01/15/23 16:38	1
Benzene	**4.3**		1.0	0.13	ug/L			01/15/23 16:38	1
Bromobenzene	ND		1.0	0.54	ug/L			01/15/23 16:38	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/15/23 16:38	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/15/23 16:38	1
Bromoform	ND		5.0	0.25	ug/L			01/15/23 16:38	1
Bromomethane	ND		1.0	0.98	ug/L			01/15/23 16:38	1
2-Butanone (MEK)	**38**		25	2.6	ug/L			01/15/23 16:38	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/15/23 16:38	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/15/23 16:38	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/15/23 16:38	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/15/23 16:38	1
Chloroethane	ND		1.0	0.76	ug/L			01/15/23 16:38	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/15/23 16:38	1
Chloroform	ND		1.0	1.0	ug/L			01/15/23 16:38	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/15/23 16:38	1
Chloromethane	ND		1.0	0.32	ug/L			01/15/23 16:38	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/15/23 16:38	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/15/23 16:38	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/15/23 16:38	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/15/23 16:38	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/15/23 16:38	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/15/23 16:38	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/15/23 16:38	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/15/23 16:38	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/15/23 16:38	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 16:38	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 16:38	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 16:38	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/15/23 16:38	1
Ethylbenzene	**33**		1.0	0.50	ug/L			01/15/23 16:38	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/15/23 16:38	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/15/23 16:38	1
2-Hexanone	ND		25	1.4	ug/L			01/15/23 16:38	1
Isopropylbenzene	**5.2**		1.0	0.53	ug/L			01/15/23 16:38	1
Methylene bromide	ND		5.0	0.22	ug/L			01/15/23 16:38	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/15/23 16:38	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/15/23 16:38	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/15/23 16:38	1
m-Xylene & p-Xylene	**97**		5.0	0.63	ug/L			01/15/23 16:38	1
Naphthalene	**63**		5.0	3.0	ug/L			01/15/23 16:38	1
n-Butylbenzene	**1.6**		1.0	0.76	ug/L			01/15/23 16:38	1
N-Propylbenzene	**4.8**		1.0	0.69	ug/L			01/15/23 16:38	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/15/23 16:38	1
o-Xylene	**14**		5.0	0.60	ug/L			01/15/23 16:38	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/15/23 16:38	1
p-Isopropyltoluene	**0.75**	**J**	1.0	0.71	ug/L			01/15/23 16:38	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231616-1

Client Sample ID: ROST4PZE-ROX-011023
Date Collected: 01/10/23 10:50
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-8
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	**0.82**	**J**	1.0	0.70	ug/L			01/15/23 16:38	1
Styrene	ND		1.0	1.0	ug/L			01/15/23 16:38	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/15/23 16:38	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/15/23 16:38	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/15/23 16:38	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/15/23 16:38	1
Toluene	**3.7**		1.0	0.41	ug/L			01/15/23 16:38	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/15/23 16:38	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/15/23 16:38	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/15/23 16:38	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/15/23 16:38	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/15/23 16:38	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/15/23 16:38	1
Trichloroethene	ND		1.0	0.15	ug/L			01/15/23 16:38	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/15/23 16:38	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/15/23 16:38	1
1,2,4-Trimethylbenzene	**120**		1.0	0.82	ug/L			01/15/23 16:38	1
1,3,5-Trimethylbenzene	**6.6**		1.0	0.56	ug/L			01/15/23 16:38	1
Vinyl acetate	ND		25	0.93	ug/L			01/15/23 16:38	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/15/23 16:38	1
Xylenes, Total	**110**		10	1.6	ug/L			01/15/23 16:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*72 - 119*		*01/15/23 16:38*	*1*
Dibromofluoromethane	*101*		*75 - 126*		*01/15/23 16:38*	*1*
Toluene-d8 (Surr)	*95*		*64 - 132*		*01/15/23 16:38*	*1*

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**4.0**		0.19	0.030	ug/L		01/12/23 08:30	01/28/23 00:02	1
Acenaphthylene	**0.64**		0.19	0.043	ug/L		01/12/23 08:30	01/28/23 00:02	1
Anthracene	**1.7**		0.19	0.030	ug/L		01/12/23 08:30	01/28/23 00:02	1
Benzo[a]anthracene	**0.15**	**J**	0.19	0.044	ug/L		01/12/23 08:30	01/28/23 00:02	1
Benzo[a]pyrene	ND		0.19	0.040	ug/L		01/12/23 08:30	01/28/23 00:02	1
Benzo[b]fluoranthene	ND		0.19	0.032	ug/L		01/12/23 08:30	01/28/23 00:02	1
Benzo[g,h,i]perylene	ND		0.19	0.12	ug/L		01/12/23 08:30	01/28/23 00:02	1
Benzo[k]fluoranthene	ND		0.19	0.095	ug/L		01/12/23 08:30	01/28/23 00:02	1
Chrysene	**0.15**	**J**	0.19	0.070	ug/L		01/12/23 08:30	01/28/23 00:02	1
Dibenz(a,h)anthracene	ND		0.19	0.047	ug/L		01/12/23 08:30	01/28/23 00:02	1
Fluoranthene	**0.32**		0.19	0.064	ug/L		01/12/23 08:30	01/28/23 00:02	1
Fluorene	**2.7**		0.19	0.10	ug/L		01/12/23 08:30	01/28/23 00:02	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.041	ug/L		01/12/23 08:30	01/28/23 00:02	1
1-Methylnaphthalene	**65**		0.19	0.070	ug/L		01/12/23 08:30	01/28/23 00:02	1
2-Methylnaphthalene	**49**		0.19	0.057	ug/L		01/12/23 08:30	01/28/23 00:02	1
Phenanthrene	**8.5**		0.19	0.034	ug/L		01/12/23 08:30	01/28/23 00:02	1
Pyrene	**0.70**		0.19	0.038	ug/L		01/12/23 08:30	01/28/23 00:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*82*		*15 - 122*	*01/12/23 08:30*	*01/28/23 00:02*	*1*
Nitrobenzene-d5	*88*		*19 - 130*	*01/12/23 08:30*	*01/28/23 00:02*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231616-1

Client Sample ID: ROST4PZE-ROX-011023

Date Collected: 01/10/23 10:50
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-8

Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*91*		*33 - 138*	*01/12/23 08:30*	*01/28/23 00:02*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.5	3.6	ug/L		01/12/23 08:30	01/13/23 18:36	1
Benzenethiol	ND	*-	9.5	1.6	ug/L		01/12/23 08:30	01/13/23 18:36	1
Benzoic acid	ND		28	6.9	ug/L		01/12/23 08:30	01/13/23 18:36	1
Benzyl alcohol	ND		9.5	1.9	ug/L		01/12/23 08:30	01/13/23 18:36	1
Bis(2-chloroethoxy)methane	ND		9.5	0.15	ug/L		01/12/23 08:30	01/13/23 18:36	1
Bis(2-chloroethyl)ether	ND		9.5	2.6	ug/L		01/12/23 08:30	01/13/23 18:36	1
bis (2-chloroisopropyl) ether	ND		9.5	0.15	ug/L		01/12/23 08:30	01/13/23 18:36	1
Bis(2-ethylhexyl) phthalate	ND		9.5	4.7	ug/L		01/12/23 08:30	01/13/23 18:36	1
4-Bromophenyl phenyl ether	ND		9.5	0.19	ug/L		01/12/23 08:30	01/13/23 18:36	1
Butyl benzyl phthalate	ND		9.5	0.18	ug/L		01/12/23 08:30	01/13/23 18:36	1
4-Chloroaniline	ND	*+	9.5	3.2	ug/L		01/12/23 08:30	01/13/23 18:36	1
4-Chloro-3-methylphenol	ND		9.5	3.6	ug/L		01/12/23 08:30	01/13/23 18:36	1
2-Chloronaphthalene	ND		9.5	0.13	ug/L		01/12/23 08:30	01/13/23 18:36	1
2-Chlorophenol	ND		9.5	2.1	ug/L		01/12/23 08:30	01/13/23 18:36	1
4-Chlorophenyl phenyl ether	ND		9.5	1.9	ug/L		01/12/23 08:30	01/13/23 18:36	1
Dibenz[a,h]acridine	ND		9.5	0.95	ug/L		01/12/23 08:30	01/13/23 18:36	1
Dibenzofuran	**3.0**	**J**	9.5	0.16	ug/L		01/12/23 08:30	01/13/23 18:36	1
3,3'-Dichlorobenzidine	ND	*+	9.5	2.5	ug/L		01/12/23 08:30	01/13/23 18:36	1
2,4-Dichlorophenol	ND		9.5	2.8	ug/L		01/12/23 08:30	01/13/23 18:36	1
Diethyl phthalate	ND		9.5	0.23	ug/L		01/12/23 08:30	01/13/23 18:36	1
2,4-Dimethylphenol	ND		9.5	3.3	ug/L		01/12/23 08:30	01/13/23 18:36	1
Dimethyl phthalate	ND		9.5	0.16	ug/L		01/12/23 08:30	01/13/23 18:36	1
Di-n-butyl phthalate	ND		9.5	2.6	ug/L		01/12/23 08:30	01/13/23 18:36	1
4,6-Dinitro-ortho-cresol	ND		9.5	1.5	ug/L		01/12/23 08:30	01/13/23 18:36	1
2,4-Dinitrophenol	ND		28	3.2	ug/L		01/12/23 08:30	01/13/23 18:36	1
2,4-Dinitrotoluene	ND		9.5	1.8	ug/L		01/12/23 08:30	01/13/23 18:36	1
2,6-Dinitrotoluene	ND		9.5	1.8	ug/L		01/12/23 08:30	01/13/23 18:36	1
Di-n-octyl phthalate	ND		9.5	0.16	ug/L		01/12/23 08:30	01/13/23 18:36	1
1,4-Dioxane	ND	*1	9.5	0.95	ug/L		01/12/23 08:30	01/13/23 18:36	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.5	0.95	ug/L		01/12/23 08:30	01/13/23 18:36	1
Hexachlorobenzene	ND		9.5	0.16	ug/L		01/12/23 08:30	01/13/23 18:36	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		01/12/23 08:30	01/13/23 18:36	1
Hexachloroethane	ND		9.5	4.0	ug/L		01/12/23 08:30	01/13/23 18:36	1
Indene	ND		9.5	0.95	ug/L		01/12/23 08:30	01/13/23 18:36	1
Isophorone	ND		9.5	0.13	ug/L		01/12/23 08:30	01/13/23 18:36	1
2-Methylphenol	ND		9.5	1.7	ug/L		01/12/23 08:30	01/13/23 18:36	1
3 & 4 Methylphenol	ND		19	0.37	ug/L		01/12/23 08:30	01/13/23 18:36	1
2-Nitroaniline	ND		9.5	2.1	ug/L		01/12/23 08:30	01/13/23 18:36	1
3-Nitroaniline	ND	*+	9.5	1.7	ug/L		01/12/23 08:30	01/13/23 18:36	1
4-Nitroaniline	ND		9.5	1.4	ug/L		01/12/23 08:30	01/13/23 18:36	1
Nitrobenzene	ND		9.5	0.12	ug/L		01/12/23 08:30	01/13/23 18:36	1
2-Nitrophenol	ND		9.5	4.9	ug/L		01/12/23 08:30	01/13/23 18:36	1
4-Nitrophenol	ND		9.5	2.0	ug/L		01/12/23 08:30	01/13/23 18:36	1
N-Nitrosodimethylamine	ND		9.5	3.3	ug/L		01/12/23 08:30	01/13/23 18:36	1

Client Sample ID: ROST4PZE-ROX-011023
Date Collected: 01/10/23 10:50
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-8
Matrix: Water

Method: SW846 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	3.1	ug/L		01/12/23 08:30	01/13/23 18:36	1
N-Nitrosodiphenylamine	ND		9.5	0.17	ug/L		01/12/23 08:30	01/13/23 18:36	1
Pentachlorophenol	ND		19	1.3	ug/L		01/12/23 08:30	01/13/23 18:36	1
Phenol	ND		9.5	2.5	ug/L		01/12/23 08:30	01/13/23 18:36	1
Pyridine	ND		9.5	3.0	ug/L		01/12/23 08:30	01/13/23 18:36	1
Quinoline	ND		9.5	4.3	ug/L		01/12/23 08:30	01/13/23 18:36	1
2,4,5-Trichlorophenol	ND		9.5	3.5	ug/L		01/12/23 08:30	01/13/23 18:36	1
2,4,6-Trichlorophenol	ND		9.5	3.3	ug/L		01/12/23 08:30	01/13/23 18:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*116*		*46 - 124*	*01/12/23 08:30*	*01/13/23 18:36*	*1*
2-Fluorophenol	*65*		*13 - 113*	*01/12/23 08:30*	*01/13/23 18:36*	*1*
Nitrobenzene-d5	*113*		*36 - 126*	*01/12/23 08:30*	*01/13/23 18:36*	*1*
Phenol-d5	*102*		*17 - 127*	*01/12/23 08:30*	*01/13/23 18:36*	*1*
Terphenyl-d14	*110*		*44 - 149*	*01/12/23 08:30*	*01/13/23 18:36*	*1*
2,4,6-Tribromophenol	*110*		*26 - 150*	*01/12/23 08:30*	*01/13/23 18:36*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.029	0.017	ug/L		01/19/23 10:05	01/19/23 23:33	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/19/23 10:05	01/19/23 23:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*236*	*p S1+*	*51 - 149*	*01/19/23 10:05*	*01/19/23 23:33*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231616-1

Client Sample ID: P74-ROX-011023
Date Collected: 01/10/23 12:45
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-9
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/15/23 17:04	1
Acrolein	ND		20	3.3	ug/L			01/15/23 17:04	1
Acrylonitrile	ND		10	2.8	ug/L			01/15/23 17:04	1
Benzene	**1.3**		1.0	0.13	ug/L			01/15/23 17:04	1
Bromobenzene	ND		1.0	0.54	ug/L			01/15/23 17:04	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/15/23 17:04	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/15/23 17:04	1
Bromoform	ND		5.0	0.25	ug/L			01/15/23 17:04	1
Bromomethane	ND		1.0	0.98	ug/L			01/15/23 17:04	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/15/23 17:04	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/15/23 17:04	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/15/23 17:04	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/15/23 17:04	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/15/23 17:04	1
Chloroethane	ND		1.0	0.76	ug/L			01/15/23 17:04	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/15/23 17:04	1
Chloroform	ND		1.0	1.0	ug/L			01/15/23 17:04	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/15/23 17:04	1
Chloromethane	ND		1.0	0.32	ug/L			01/15/23 17:04	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/15/23 17:04	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/15/23 17:04	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/15/23 17:04	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/15/23 17:04	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/15/23 17:04	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/15/23 17:04	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/15/23 17:04	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/15/23 17:04	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/15/23 17:04	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 17:04	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 17:04	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 17:04	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/15/23 17:04	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/15/23 17:04	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/15/23 17:04	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/15/23 17:04	1
2-Hexanone	ND		25	1.4	ug/L			01/15/23 17:04	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/15/23 17:04	1
Methylene bromide	ND		5.0	0.22	ug/L			01/15/23 17:04	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/15/23 17:04	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/15/23 17:04	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/15/23 17:04	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/15/23 17:04	1
Naphthalene	ND		5.0	3.0	ug/L			01/15/23 17:04	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/15/23 17:04	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/15/23 17:04	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/15/23 17:04	1
o-Xylene	ND		5.0	0.60	ug/L			01/15/23 17:04	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/15/23 17:04	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/15/23 17:04	1

Client Sample ID: P74-ROX-011023
Date Collected: 01/10/23 12:45
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-9
Matrix: Water

Method: SW846 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			01/15/23 17:04	1
Styrene	ND		1.0	1.0	ug/L			01/15/23 17:04	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/15/23 17:04	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/15/23 17:04	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/15/23 17:04	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/15/23 17:04	1
Toluene	ND		1.0	0.41	ug/L			01/15/23 17:04	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/15/23 17:04	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/15/23 17:04	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/15/23 17:04	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/15/23 17:04	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/15/23 17:04	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/15/23 17:04	1
Trichloroethene	ND		1.0	0.15	ug/L			01/15/23 17:04	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/15/23 17:04	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/15/23 17:04	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/15/23 17:04	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/15/23 17:04	1
Vinyl acetate	ND		25	0.93	ug/L			01/15/23 17:04	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/15/23 17:04	1
Xylenes, Total	ND		10	1.6	ug/L			01/15/23 17:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*72 - 119*		*01/15/23 17:04*	*1*
Dibromofluoromethane	*106*		*75 - 126*		*01/15/23 17:04*	*1*
Toluene-d8 (Surr)	*94*		*64 - 132*		*01/15/23 17:04*	*1*

Method: SW846 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	0.031	ug/L		01/12/23 08:30	01/13/23 17:44	1
Acenaphthylene	ND		0.19	0.043	ug/L		01/12/23 08:30	01/13/23 17:44	1
Anthracene	ND		0.19	0.031	ug/L		01/12/23 08:30	01/13/23 17:44	1
Benzo[a]anthracene	ND		0.19	0.044	ug/L		01/12/23 08:30	01/13/23 17:44	1
Benzo[a]pyrene	ND		0.19	0.040	ug/L		01/12/23 08:30	01/28/23 00:19	1
Benzo[b]fluoranthene	ND		0.19	0.033	ug/L		01/12/23 08:30	01/28/23 00:19	1
Benzo[g,h,i]perylene	ND		0.19	0.12	ug/L		01/12/23 08:30	01/13/23 17:44	1
Benzo[k]fluoranthene	ND		0.19	0.096	ug/L		01/12/23 08:30	01/13/23 17:44	1
Chrysene	ND		0.19	0.071	ug/L		01/12/23 08:30	01/13/23 17:44	1
Dibenz(a,h)anthracene	ND		0 19	0 048	ug/L		01/12/23 08 30	01/13/23 17 44	1
Fluoranthene	ND		0.19	0.065	ug/L		01/12/23 08:30	01/28/23 00:19	1
Fluorene	ND		0.19	0.11	ug/L		01/12/23 08:30	01/13/23 17:44	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.041	ug/L		01/12/23 08:30	01/13/23 17:44	1
1-Methylnaphthalene	ND		0.19	0.071	ug/L		01/12/23 08:30	01/13/23 17:44	1
2-Methylnaphthalene	ND		0.19	0.058	ug/L		01/12/23 08:30	01/13/23 17:44	1
Phenanthrene	ND		0.19	0.035	ug/L		01/12/23 08:30	01/13/23 17:44	1
Pyrene	**0.044**	**J**	0.19	0.038	ug/L		01/12/23 08:30	01/28/23 00:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*114*		*15 - 122*	*01/12/23 08:30*	*01/13/23 17:44*	*1*
Nitrobenzene-d5	*80*		*19 - 130*	*01/12/23 08:30*	*01/13/23 17:44*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231616-1

Client Sample ID: P74-ROX-011023
Date Collected: 01/10/23 12:45
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-9
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*101*		*33 - 138*	*01/12/23 08:30*	*01/13/23 17:44*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.6	3.6	ug/L		01/12/23 08:30	01/13/23 18:57	1
Benzenethiol	ND	*-	9.6	1.6	ug/L		01/12/23 08:30	01/13/23 18:57	1
Benzoic acid	ND		29	7.0	ug/L		01/12/23 08:30	01/13/23 18:57	1
Benzyl alcohol	ND		9.6	1.9	ug/L		01/12/23 08:30	01/13/23 18:57	1
Bis(2-chloroethoxy)methane	ND		9.6	0.15	ug/L		01/12/23 08:30	01/13/23 18:57	1
Bis(2-chloroethyl)ether	ND		9.6	2.6	ug/L		01/12/23 08:30	01/13/23 18:57	1
bis (2-chloroisopropyl) ether	ND		9.6	0.15	ug/L		01/12/23 08:30	01/13/23 18:57	1
Bis(2-ethylhexyl) phthalate	ND		9.6	4.8	ug/L		01/12/23 08:30	01/13/23 18:57	1
4-Bromophenyl phenyl ether	ND		9.6	0.19	ug/L		01/12/23 08:30	01/13/23 18:57	1
Butyl benzyl phthalate	ND		9.6	0.18	ug/L		01/12/23 08:30	01/13/23 18:57	1
4-Chloroaniline	ND	*+	9.6	3.3	ug/L		01/12/23 08:30	01/13/23 18:57	1
4-Chloro-3-methylphenol	ND		9.6	3.6	ug/L		01/12/23 08:30	01/13/23 18:57	1
2-Chloronaphthalene	ND		9.6	0.13	ug/L		01/12/23 08:30	01/13/23 18:57	1
2-Chlorophenol	ND		9.6	2.1	ug/L		01/12/23 08:30	01/13/23 18:57	1
4-Chlorophenyl phenyl ether	ND		9.6	1.9	ug/L		01/12/23 08:30	01/13/23 18:57	1
Dibenz[a,h]acridine	ND		9.6	0.96	ug/L		01/12/23 08:30	01/13/23 18:57	1
Dibenzofuran	ND		9.6	0.16	ug/L		01/12/23 08:30	01/13/23 18:57	1
3,3'-Dichlorobenzidine	ND	*+	9.6	2.5	ug/L		01/12/23 08:30	01/13/23 18:57	1
2,4-Dichlorophenol	ND		9.6	2.9	ug/L		01/12/23 08:30	01/13/23 18:57	1
Diethyl phthalate	**0.31**	**J**	9.6	0.23	ug/L		01/12/23 08:30	01/13/23 18:57	1
2,4-Dimethylphenol	ND		9.6	3.4	ug/L		01/12/23 08:30	01/13/23 18:57	1
Dimethyl phthalate	ND		9.6	0.16	ug/L		01/12/23 08:30	01/13/23 18:57	1
Di-n-butyl phthalate	ND		9.6	2.6	ug/L		01/12/23 08:30	01/13/23 18:57	1
4,6-Dinitro-ortho-cresol	ND		9.6	1.5	ug/L		01/12/23 08:30	01/13/23 18:57	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		01/12/23 08:30	01/13/23 18:57	1
2,4-Dinitrotoluene	ND		9.6	1.8	ug/L		01/12/23 08:30	01/13/23 18:57	1
2,6-Dinitrotoluene	ND		9.6	1.8	ug/L		01/12/23 08:30	01/13/23 18:57	1
Di-n-octyl phthalate	ND		9.6	0.16	ug/L		01/12/23 08:30	01/13/23 18:57	1
1,4-Dioxane	ND	*1	9.6	0.96	ug/L		01/12/23 08:30	01/13/23 18:57	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.6	0.96	ug/L		01/12/23 08:30	01/13/23 18:57	1
Hexachlorobenzene	ND		9.6	0.16	ug/L		01/12/23 08:30	01/13/23 18:57	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		01/12/23 08:30	01/13/23 18:57	1
Hexachloroethane	ND		9.6	4.0	ug/L		01/12/23 08:30	01/13/23 18:57	1
Indene	ND		9.6	0.96	ug/L		01/12/23 08:30	01/13/23 18:57	1
Isophorone	ND		9.6	0.13	ug/L		01/12/23 08:30	01/13/23 18:57	1
2-Methylphenol	ND		9.6	1.7	ug/L		01/12/23 08:30	01/13/23 18:57	1
3 & 4 Methylphenol	ND		19	0.37	ug/L		01/12/23 08:30	01/13/23 18:57	1
2-Nitroaniline	ND		9.6	2.1	ug/L		01/12/23 08:30	01/13/23 18:57	1
3-Nitroaniline	ND	*+	9.6	1.7	ug/L		01/12/23 08:30	01/13/23 18:57	1
4-Nitroaniline	ND		9.6	1.4	ug/L		01/12/23 08:30	01/13/23 18:57	1
Nitrobenzene	ND		9.6	0.12	ug/L		01/12/23 08:30	01/13/23 18:57	1
2-Nitrophenol	ND		9.6	5.0	ug/L		01/12/23 08:30	01/13/23 18:57	1
4-Nitrophenol	ND		9.6	2.0	ug/L		01/12/23 08:30	01/13/23 18:57	1
N-Nitrosodimethylamine	ND		9.6	3.4	ug/L		01/12/23 08:30	01/13/23 18:57	1

Client Sample ID: P74-ROX-011023
Date Collected: 01/10/23 12:45
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-9
Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		9.6	3.2	ug/L		01/12/23 08:30	01/13/23 18:57	1
N-Nitrosodiphenylamine	ND		9.6	0.17	ug/L		01/12/23 08:30	01/13/23 18:57	1
Pentachlorophenol	ND		19	1.3	ug/L		01/12/23 08:30	01/13/23 18:57	1
Phenol	ND		9.6	2.5	ug/L		01/12/23 08:30	01/13/23 18:57	1
Pyridine	ND		9.6	3.1	ug/L		01/12/23 08:30	01/13/23 18:57	1
Quinoline	ND		9.6	4.3	ug/L		01/12/23 08:30	01/13/23 18:57	1
2,4,5-Trichlorophenol	ND		9.6	3.5	ug/L		01/12/23 08:30	01/13/23 18:57	1
2,4,6-Trichlorophenol	ND		9.6	3.4	ug/L		01/12/23 08:30	01/13/23 18:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*122*		*46 - 124*	*01/12/23 08:30*	*01/13/23 18:57*	*1*
2-Fluorophenol	*44*		*13 - 113*	*01/12/23 08:30*	*01/13/23 18:57*	*1*
Nitrobenzene-d5	*116*		*36 - 126*	*01/12/23 08:30*	*01/13/23 18:57*	*1*
Phenol-d5	*96*		*17 - 127*	*01/12/23 08:30*	*01/13/23 18:57*	*1*
Terphenyl-d14	*114*		*44 - 149*	*01/12/23 08:30*	*01/13/23 18:57*	*1*
2,4,6-Tribromophenol	*102*		*26 - 150*	*01/12/23 08:30*	*01/13/23 18:57*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.030	0.017	ug/L		01/19/23 10:05	01/19/23 23:53	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/19/23 10:05	01/19/23 23:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*119*	*p*	*51 - 149*	*01/19/23 10:05*	*01/19/23 23:53*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231616-1

Client Sample ID: P57-ROX-011023
Date Collected: 01/10/23 13:40
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-10
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**10**	**J**	25	10	ug/L			01/15/23 17:31	1
Acrolein	ND		20	3.3	ug/L			01/15/23 17:31	1
Acrylonitrile	ND		10	2.8	ug/L			01/15/23 17:31	1
Benzene	**50**		1.0	0.13	ug/L			01/15/23 17:31	1
Bromobenzene	ND		1.0	0.54	ug/L			01/15/23 17:31	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/15/23 17:31	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/15/23 17:31	1
Bromoform	ND		5.0	0.25	ug/L			01/15/23 17:31	1
Bromomethane	ND		1.0	0.98	ug/L			01/15/23 17:31	1
2-Butanone (MEK)	**2.8**	**J**	25	2.6	ug/L			01/15/23 17:31	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/15/23 17:31	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/15/23 17:31	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/15/23 17:31	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/15/23 17:31	1
Chloroethane	ND		1.0	0.76	ug/L			01/15/23 17:31	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/15/23 17:31	1
Chloroform	ND		1.0	1.0	ug/L			01/15/23 17:31	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/15/23 17:31	1
Chloromethane	ND		1.0	0.32	ug/L			01/15/23 17:31	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/15/23 17:31	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/15/23 17:31	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/15/23 17:31	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/15/23 17:31	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/15/23 17:31	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/15/23 17:31	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/15/23 17:31	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/15/23 17:31	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/15/23 17:31	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 17:31	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 17:31	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 17:31	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/15/23 17:31	1
Ethylbenzene	**0.95**	**J**	1.0	0.50	ug/L			01/15/23 17:31	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/15/23 17:31	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/15/23 17:31	1
2-Hexanone	ND		25	1.4	ug/L			01/15/23 17:31	1
Isopropylbenzene	**21**		1.0	0.53	ug/L			01/15/23 17:31	1
Methylene bromide	ND		5.0	0.22	ug/L			01/15/23 17:31	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/15/23 17:31	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/15/23 17:31	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/15/23 17:31	1
m-Xylene & p-Xylene	**0.92**	**J**	5.0	0.63	ug/L			01/15/23 17:31	1
Naphthalene	**8.2**		5.0	3.0	ug/L			01/15/23 17:31	1
n-Butylbenzene	**2.3**		1.0	0.76	ug/L			01/15/23 17:31	1
N-Propylbenzene	**23**		1.0	0.69	ug/L			01/15/23 17:31	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/15/23 17:31	1
o-Xylene	ND		5.0	0.60	ug/L			01/15/23 17:31	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/15/23 17:31	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/15/23 17:31	1

Client Sample ID: P57-ROX-011023
Date Collected: 01/10/23 13:40
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-10
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	**4.6**		1.0	0.70	ug/L			01/15/23 17:31	1
Styrene	ND		1.0	1.0	ug/L			01/15/23 17:31	1
tert-Butylbenzene	**5.4**		1.0	0.63	ug/L			01/15/23 17:31	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/15/23 17:31	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/15/23 17:31	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/15/23 17:31	1
Toluene	**2.8**		1.0	0.41	ug/L			01/15/23 17:31	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/15/23 17:31	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/15/23 17:31	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/15/23 17:31	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/15/23 17:31	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/15/23 17:31	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/15/23 17:31	1
Trichloroethene	ND		1.0	0.15	ug/L			01/15/23 17:31	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/15/23 17:31	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/15/23 17:31	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/15/23 17:31	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/15/23 17:31	1
Vinyl acetate	ND		25	0.93	ug/L			01/15/23 17:31	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/15/23 17:31	1
Xylenes, Total	ND		10	1.6	ug/L			01/15/23 17:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*72 - 119*		*01/15/23 17:31*	*1*
Dibromofluoromethane	*101*		*75 - 126*		*01/15/23 17:31*	*1*
Toluene-d8 (Surr)	*95*		*64 - 132*		*01/15/23 17:31*	*1*

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**0.47**		0.19	0.030	ug/L		01/12/23 08:30	01/13/23 18:01	1
Acenaphthylene	ND		0.19	0.043	ug/L		01/12/23 08:30	01/13/23 18:01	1
Anthracene	ND		0.19	0.030	ug/L		01/12/23 08:30	01/13/23 18:01	1
Benzo[a]anthracene	ND		0.19	0.044	ug/L		01/12/23 08:30	01/13/23 18:01	1
Benzo[a]pyrene	ND		0.19	0.040	ug/L		01/12/23 08:30	01/13/23 18:01	1
Benzo[b]fluoranthene	ND		0.19	0.032	ug/L		01/12/23 08:30	01/13/23 18:01	1
Benzo[g,h,i]perylene	ND		0.19	0.12	ug/L		01/12/23 08:30	01/13/23 18:01	1
Benzo[k]fluoranthene	ND		0.19	0.095	ug/L		01/12/23 08:30	01/13/23 18:01	1
Chrysene	ND		0.19	0.071	ug/L		01/12/23 08:30	01/13/23 18:01	1
Dibenz(a,h)anthracene	ND		0 19	0 048	ug/L		01/12/23 08 30	01/13/23 18 01	1
Fluoranthene	ND		0.19	0.065	ug/L		01/12/23 08:30	01/13/23 18:01	1
Fluorene	**0.69**		0.19	0.10	ug/L		01/12/23 08:30	01/13/23 18:01	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.041	ug/L		01/12/23 08:30	01/13/23 18:01	1
1-Methylnaphthalene	**27**		0.19	0.071	ug/L		01/12/23 08:30	01/13/23 18:01	1
2-Methylnaphthalene	**7.9**		0.19	0.057	ug/L		01/12/23 08:30	01/13/23 18:01	1
Phenanthrene	**0.45**		0.19	0.034	ug/L		01/12/23 08:30	01/13/23 18:01	1
Pyrene	ND		0.19	0.038	ug/L		01/12/23 08:30	01/13/23 18:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*107*		*15 - 122*	*01/12/23 08:30*	*01/13/23 18:01*	*1*
Nitrobenzene-d5	*74*		*19 - 130*	*01/12/23 08:30*	*01/13/23 18:01*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231616-1

Client Sample ID: P57-ROX-011023
Date Collected: 01/10/23 13:40
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-10
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*66*		*33 - 138*	*01/12/23 08:30*	*01/13/23 18:01*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.5	3.6	ug/L		01/12/23 08:30	01/13/23 19:19	1
Benzenethiol	ND	*-	9.5	1.6	ug/L		01/12/23 08:30	01/13/23 19:19	1
Benzoic acid	ND		29	7.0	ug/L		01/12/23 08:30	01/13/23 19:19	1
Benzyl alcohol	ND		9.5	1.9	ug/L		01/12/23 08:30	01/13/23 19:19	1
Bis(2-chloroethoxy)methane	ND		9.5	0.15	ug/L		01/12/23 08:30	01/13/23 19:19	1
Bis(2-chloroethyl)ether	ND		9.5	2.6	ug/L		01/12/23 08:30	01/13/23 19:19	1
bis (2-chloroisopropyl) ether	ND		9.5	0.15	ug/L		01/12/23 08:30	01/13/23 19:19	1
Bis(2-ethylhexyl) phthalate	ND		9.5	4.8	ug/L		01/12/23 08:30	01/13/23 19:19	1
4-Bromophenyl phenyl ether	ND		9.5	0.19	ug/L		01/12/23 08:30	01/13/23 19:19	1
Butyl benzyl phthalate	ND		9.5	0.18	ug/L		01/12/23 08:30	01/13/23 19:19	1
4-Chloroaniline	ND	*+	9.5	3.2	ug/L		01/12/23 08:30	01/13/23 19:19	1
4-Chloro-3-methylphenol	ND		9.5	3.6	ug/L		01/12/23 08:30	01/13/23 19:19	1
2-Chloronaphthalene	ND		9.5	0.13	ug/L		01/12/23 08:30	01/13/23 19:19	1
2-Chlorophenol	ND		9.5	2.1	ug/L		01/12/23 08:30	01/13/23 19:19	1
4-Chlorophenyl phenyl ether	ND		9.5	1.9	ug/L		01/12/23 08:30	01/13/23 19:19	1
Dibenz[a,h]acridine	ND		9.5	0.95	ug/L		01/12/23 08:30	01/13/23 19:19	1
Dibenzofuran	**0.77**	**J**	9.5	0.16	ug/L		01/12/23 08:30	01/13/23 19:19	1
3,3'-Dichlorobenzidine	ND	*+	9.5	2.5	ug/L		01/12/23 08:30	01/13/23 19:19	1
2,4-Dichlorophenol	ND		9.5	2.9	ug/L		01/12/23 08:30	01/13/23 19:19	1
Diethyl phthalate	**0.91**	**J**	9.5	0.23	ug/L		01/12/23 08:30	01/13/23 19:19	1
2,4-Dimethylphenol	ND		9.5	3.3	ug/L		01/12/23 08:30	01/13/23 19:19	1
Dimethyl phthalate	ND		9.5	0.16	ug/L		01/12/23 08:30	01/13/23 19:19	1
Di-n-butyl phthalate	ND		9.5	2.6	ug/L		01/12/23 08:30	01/13/23 19:19	1
4,6-Dinitro-ortho-cresol	ND		9.5	1.5	ug/L		01/12/23 08:30	01/13/23 19:19	1
2,4-Dinitrophenol	ND		29	3.2	ug/L		01/12/23 08:30	01/13/23 19:19	1
2,4-Dinitrotoluene	ND		9.5	1.8	ug/L		01/12/23 08:30	01/13/23 19:19	1
2,6-Dinitrotoluene	ND		9.5	1.8	ug/L		01/12/23 08:30	01/13/23 19:19	1
Di-n-octyl phthalate	ND		9.5	0.16	ug/L		01/12/23 08:30	01/13/23 19:19	1
1,4-Dioxane	ND	*1	9.5	0.95	ug/L		01/12/23 08:30	01/13/23 19:19	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.5	0.95	ug/L		01/12/23 08:30	01/13/23 19:19	1
Hexachlorobenzene	ND		9.5	0.16	ug/L		01/12/23 08:30	01/13/23 19:19	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		01/12/23 08:30	01/13/23 19:19	1
Hexachloroethane	ND		9.5	4.0	ug/L		01/12/23 08:30	01/13/23 19:19	1
Indene	ND		9.5	0.95	ug/L		01/12/23 08:30	01/13/23 19:19	1
Isophorone	ND		9.5	0.13	ug/L		01/12/23 08:30	01/13/23 19:19	1
2-Methylphenol	ND		9.5	1.7	ug/L		01/12/23 08:30	01/13/23 19:19	1
3 & 4 Methylphenol	ND		19	0.37	ug/L		01/12/23 08:30	01/13/23 19:19	1
2-Nitroaniline	ND		9.5	2.1	ug/L		01/12/23 08:30	01/13/23 19:19	1
3-Nitroaniline	ND	*+	9.5	1.7	ug/L		01/12/23 08:30	01/13/23 19:19	1
4-Nitroaniline	ND		9.5	1.4	ug/L		01/12/23 08:30	01/13/23 19:19	1
Nitrobenzene	ND		9.5	0.12	ug/L		01/12/23 08:30	01/13/23 19:19	1
2-Nitrophenol	ND		9.5	5.0	ug/L		01/12/23 08:30	01/13/23 19:19	1
4-Nitrophenol	ND		9.5	2.0	ug/L		01/12/23 08:30	01/13/23 19:19	1
N-Nitrosodimethylamine	ND		9.5	3.3	ug/L		01/12/23 08:30	01/13/23 19:19	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231616-1

Client Sample ID: P57-ROX-011023
Date Collected: 01/10/23 13:40
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-10
Matrix: Water

Method: SW846 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	3.1	ug/L		01/12/23 08:30	01/13/23 19:19	1
N-Nitrosodiphenylamine	ND		9.5	0.17	ug/L		01/12/23 08:30	01/13/23 19:19	1
Pentachlorophenol	ND		19	1.3	ug/L		01/12/23 08:30	01/13/23 19:19	1
Phenol	**7.1**	**J**	9.5	2.5	ug/L		01/12/23 08:30	01/13/23 19:19	1
Pyridine	ND		9.5	3.0	ug/L		01/12/23 08:30	01/13/23 19:19	1
Quinoline	ND		9.5	4.3	ug/L		01/12/23 08:30	01/13/23 19:19	1
2,4,5-Trichlorophenol	ND		9.5	3.5	ug/L		01/12/23 08:30	01/13/23 19:19	1
2,4,6-Trichlorophenol	ND		9.5	3.3	ug/L		01/12/23 08:30	01/13/23 19:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*107*		*46 - 124*	*01/12/23 08:30*	*01/13/23 19:19*	*1*
2-Fluorophenol	*70*		*13 - 113*	*01/12/23 08:30*	*01/13/23 19:19*	*1*
Nitrobenzene-d5	*104*		*36 - 126*	*01/12/23 08:30*	*01/13/23 19:19*	*1*
Phenol-d5	*98*		*17 - 127*	*01/12/23 08:30*	*01/13/23 19:19*	*1*
Terphenyl-d14	*69*		*44 - 149*	*01/12/23 08:30*	*01/13/23 19:19*	*1*
2,4,6-Tribromophenol	*108*		*26 - 150*	*01/12/23 08:30*	*01/13/23 19:19*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.030	0.017	ug/L		01/19/23 10:05	01/20/23 09:28	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/19/23 10:05	01/20/23 09:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*182*	*S1+*	*51 - 149*	*01/19/23 10:05*	*01/20/23 09:28*	*1*

Definitions/Glossary

Client: AECOM Technical Services Inc. Job ID: 400-231616-1
Project/Site: ROXANA QUARTERLY GW

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds 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/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
S1+	Surrogate recovery exceeds control limits, high biased.

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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231616-1

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	(72-119)	(75-126)	(64-132)
400-231616-1	TB-ROX-011023-8260-A	97	106	94
400-231616-3	MW5-ROX-011023	100	105	95
400-231616-3 MS	MW5-ROX-011023	97	102	94
400-231616-3 MSD	MW5-ROX-011023	97	103	97
400-231616-4	TB-ROX-011023-8260-B	96	106	94
400-231616-6	MW22-ROX-011023-EB	96	107	92
400-231616-7	MW22-ROX-011023	98	100	95
400-231616-8	ROST4PZE-ROX-011023	95	101	95
400-231616-9	P74-ROX-011023	97	106	94
400-231616-10	P57-ROX-011023	99	101	95
LCS 400-608552/1002	Lab Control Sample	95	104	93
MB 400-608552/4	Method Blank	97	106	92

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	(46-124)	(13-113)	(36-126)	(17-127)	(44-149)	(26-150)
400-231616-3	MW5-ROX-011023	122	4 S1-	113	35	127	89
400-231616-3 MS	MW5-ROX-011023	121	36	124	77	119	104
400-231616-3 MSD	MW5-ROX-011023	109	25	118	80	114	107
400-231616-6	MW22-ROX-011023-EB	108	38	103	84	122	91
400-231616-7	MW22-ROX-011023	104	49	102	85	101	95
400-231616-8	ROST4PZE-ROX-011023	116	65	113	102	110	110
400-231616-9	P74-ROX-011023	122	44	116	96	114	102
400-231616-10	P57-ROX-011023	107	70	104	98	69	108
LCS 400-607999/2-A	Lab Control Sample	105	41	112	82	111	100
LCS 400-607999/4-A	Lab Control Sample	116	33	104	79	126	56
LCSD 400-607999/3-A	Lab Control Sample Dup	111	36	117	86	122	107
LCSD 400-607999/5-A	Lab Control Sample Dup	116	47	104	85	123	64
MB 400-607999/1-A	Method Blank	114	14	102	59	121	72

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 GW

Job ID: 400-231616-1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	NBZ	TPHL
Lab Sample ID	Client Sample ID	(15-122)	(19-130)	(33-138)
400-231616-3	MW5-ROX-011023	114	77	115
400-231616-3 MS	MW5-ROX-011023	108	45	99
400-231616-3 MSD	MW5-ROX-011023	109	65	101
400-231616-6	MW22-ROX-011023-EB	109	76	115
400-231616-6 - RE	MW22-ROX-011023-EB	86	94	107
400-231616-7	MW22-ROX-011023	108	79	104
400-231616-8	ROST4PZE-ROX-011023	82	88	91
400-231616-9	P74-ROX-011023	114	80	101
400-231616-10	P57-ROX-011023	107	74	66
LCS 400-607999/2-A	Lab Control Sample	102	70	104
LCSD 400-607999/3-A	Lab Control Sample Dup	104	66	99
MB 400-607999/1-A	Method Blank	110	74	118

Surrogate Legend

FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14

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)
400-231616-2	TB-ROX-011023-8011-A	112 p
400-231616-3	MW5-ROX-011023	115 p
400-231616-3 MS	MW5-ROX-011023	127 p
400-231616-3 MSD	MW5-ROX-011023	129 p
400-231616-5	TB-ROX-011023-8011-B	117 p
400-231616-6	MW22-ROX-011023-EB	117 p
400-231616-7	MW22-ROX-011023	117 p
400-231616-8	ROST4PZE-ROX-011023	236 p S1+
400-231616-9	P74-ROX-011023	119 p
400-231616-10	P57-ROX-011023	182 S1+
LCS 400-609095/2-A	Lab Control Sample	131
LCSD 400-609095/3-A	Lab Control Sample Dup	131
MB 400-609095/1-A	Method Blank	118

Surrogate Legend

BFB = 4-Bromofluorobenzene

Method Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231616-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	EET PEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	EET PEN
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	EET PEN
8011	EDB and DBCP in Water by Microextraction	EPA	EET PEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	EET PEN
5030B	Purge and Trap	SW846	EET PEN
8011	Microextraction	SW846	EET 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:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Client Sample ID: TB-ROX-011023-8260-A
Lab Sample ID: 400-231616-1
Date Collected: 01/10/23 12:00
Matrix: Water
Date Received: 01/11/23 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	608552	01/15/23 14:52	BPO	EET PEN

Client Sample ID: TB-ROX-011023-8011-A
Lab Sample ID: 400-231616-2
Date Collected: 01/10/23 12:00
Matrix: Water
Date Received: 01/11/23 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			34 mL	35 mL	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/19/23 20:50	DS	EET PEN

Client Sample ID: MW5-ROX-011023
Lab Sample ID: 400-231616-3
Date Collected: 01/10/23 09:25
Matrix: Water
Date Received: 01/11/23 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	608552	01/15/23 12:14	BPO	EET PEN
Total/NA	Prep	3520C			244.8 mL	1 mL	607999	01/12/23 08:30	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608382	01/13/23 16:47	S1B	EET PEN
Total/NA	Prep	3520C	RA		244.8 mL	1 mL	607999	01/12/23 08:30	KWS	EET PEN
Total/NA	Analysis	8270D	RA	1	0.4 mL	0.4 mL	610206	01/27/23 22:41	S1B	EET PEN
Total/NA	Prep	3520C			244.8 mL	1 mL	607999	01/12/23 08:30	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608329	01/13/23 16:01	KJA	EET PEN
Total/NA	Prep	8011			35 mL	35 mL	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/19/23 21:10	DS	EET PEN

Client Sample ID: TB-ROX-011023-8260-B
Lab Sample ID: 400-231616-4
Date Collected: 01/10/23 12:00
Matrix: Water
Date Received: 01/11/23 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	608552	01/15/23 15:19	BPO	EET PEN

Client Sample ID: TB-ROX-011023-8011-B
Lab Sample ID: 400-231616-5
Date Collected: 01/10/23 12:00
Matrix: Water
Date Received: 01/11/23 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			34.2 mL	35 mL	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/19/23 22:32	DS	EET PEN

Client Sample ID: MW22-ROX-011023-EB
Lab Sample ID: 400-231616-6
Date Collected: 01/10/23 09:25
Matrix: Water
Date Received: 01/11/23 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	608552	01/15/23 15:45	BPO	EET PEN

Client Sample ID: MW22-ROX-011023-EB

Lab Sample ID: 400-231616-6

Date Collected: 01/10/23 09:25

Matrix: Water

Date Received: 01/11/23 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			262 mL	1 mL	607999	01/12/23 08:30	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608382	01/13/23 17:52	S1B	EET PEN
Total/NA	Prep	3520C			262 mL	1 mL	607999	01/12/23 08:30	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608329	01/13/23 16:53	KJA	EET PEN
Total/NA	Prep	3520C			262 mL	1 mL	607999	01/12/23 08:30	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	610183	01/27/23 23:27	PP1	EET PEN
Total/NA	Prep	3520C	RE		264.6 mL	1 mL	611779	02/09/23 13:26	KWS	EET PEN
Total/NA	Analysis	8270D LL	RE	1	0.4 mL	0.4 mL	614365	02/28/23 17:30	PP1	EET PEN
Total/NA	Prep	8011			34.7 mL	35 mL	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/19/23 22:52	DS	EET PEN

Client Sample ID: MW22-ROX-011023

Lab Sample ID: 400-231616-7

Date Collected: 01/10/23 09:55

Matrix: Water

Date Received: 01/11/23 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		2	5 mL	5 mL	608552	01/15/23 12:40	BPO	EET PEN
Total/NA	Prep	3520C			257.8 mL	1 mL	607999	01/12/23 08:30	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608382	01/13/23 18:14	S1B	EET PEN
Total/NA	Prep	3520C			257.8 mL	1 mL	607999	01/12/23 08:30	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608329	01/13/23 17:10	KJA	EET PEN
Total/NA	Prep	3520C			257.8 mL	1 mL	607999	01/12/23 08:30	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	610183	01/27/23 23:44	PP1	EET PEN
Total/NA	Prep	8011			35.5 mL	35 mL	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/19/23 23:13	DS	EET PEN

Client Sample ID: ROST4PZE-ROX-011023

Lab Sample ID: 400-231616-8

Date Collected: 01/10/23 10:50

Matrix: Water

Date Received: 01/11/23 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	608552	01/15/23 16:38	BPO	EET PEN
Total/NA	Prep	3520C			264.2 mL	1 mL	607999	01/12/23 08:30	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608382	01/13/23 18:36	S1B	EET PEN
Total/NA	Prep	3520C			264.2 mL	1 mL	607999	01/12/23 08:30	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	610183	01/28/23 00:02	PP1	EET PEN
Total/NA	Prep	8011			35.8 mL	35 mL	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/19/23 23:33	DS	EET PEN

Client Sample ID: P74-ROX-011023

Lab Sample ID: 400-231616-9

Date Collected: 01/10/23 12:45

Matrix: Water

Date Received: 01/11/23 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	608552	01/15/23 17:04	BPO	EET PEN

Client Sample ID: P74-ROX-011023

Lab Sample ID: 400-231616-9

Date Collected: 01/10/23 12:45

Matrix: Water

Date Received: 01/11/23 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			260.6 mL	1 mL	607999	01/12/23 08:30	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608382	01/13/23 18:57	S1B	EET PEN
Total/NA	Prep	3520C			260.6 mL	1 mL	607999	01/12/23 08:30	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608329	01/13/23 17:44	KJA	EET PEN
Total/NA	Prep	3520C			260.6 mL	1 mL	607999	01/12/23 08:30	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	610183	01/28/23 00:19	PP1	EET PEN
Total/NA	Prep	8011			35.4 mL	35 mL	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/19/23 23:53	DS	EET PEN

Client Sample ID: P57-ROX-011023

Lab Sample ID: 400-231616-10

Date Collected: 01/10/23 13:40

Matrix: Water

Date Received: 01/11/23 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	608552	01/15/23 17:31	BPO	EET PEN
Total/NA	Prep	3520C			262.4 mL	1 mL	607999	01/12/23 08:30	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608382	01/13/23 19:19	S1B	EET PEN
Total/NA	Prep	3520C			262.4 mL	1 mL	607999	01/12/23 08:30	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608329	01/13/23 18:01	KJA	EET PEN
Total/NA	Prep	8011			34.7 mL	35 mL	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/20/23 09:28	DS	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-607999/1-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			250 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608161	01/12/23 14:11	S1B	EET PEN
Total/NA	Prep	3520C			250 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608245	01/12/23 16:09	PP1	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-608552/4

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	608552	01/15/23 11:21	BPO	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-609095/1-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	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/19/23 16:05	DS	EET PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231616-1

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-607999/2-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			250 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608161	01/12/23 15:18	S1B	EET PEN
Total/NA	Prep	3520C			250 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D LL		5	0.4 mL	0.4 mL	608245	01/12/23 16:26	PP1	EET PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-607999/4-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			250 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608161	01/12/23 14:33	S1B	EET PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-608552/1002
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	608552	01/15/23 10:19	BPO	EET PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-609095/2-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	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/19/23 16:25	DS	EET PEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-607999/3-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			250 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608161	01/12/23 15:40	S1B	EET PEN
Total/NA	Prep	3520C			250 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D LL		5	0.4 mL	0.4 mL	608245	01/12/23 16:43	PP1	EET PEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-607999/5-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			250 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608161	01/12/23 14:55	S1B	EET PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231616-1

Client Sample ID: Lab Control Sample Dup

Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCSD 400-609095/3-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	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/19/23 16:45	DS	EET PEN

Client Sample ID: MW5-ROX-011023

Date Collected: 01/10/23 09:25
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-3 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	Analysis	8260B		1	5 mL	5 mL	608552	01/15/23 13:07	BPO	EET PEN
Total/NA	Prep	3520C			244 mL	1 mL	607999	01/12/23 08:30	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608382	01/13/23 17:09	S1B	EET PEN
Total/NA	Prep	3520C			244 mL	1 mL	607999	01/12/23 08:30	KWS	EET PEN
Total/NA	Analysis	8270D LL		5	0.4 mL	0.4 mL	608329	01/13/23 16:19	KJA	EET PEN
Total/NA	Prep	8011			34.3 mL	35 mL	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/19/23 21:31	DS	EET PEN

Client Sample ID: MW5-ROX-011023

Date Collected: 01/10/23 09:25
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231616-3 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	608552	01/15/23 13:33	BPO	EET PEN
Total/NA	Prep	3520C			239.6 mL	1 mL	607999	01/12/23 08:30	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608382	01/13/23 17:31	S1B	EET PEN
Total/NA	Prep	3520C			239.6 mL	1 mL	607999	01/12/23 08:30	KWS	EET PEN
Total/NA	Analysis	8270D LL		5	0.4 mL	0.4 mL	608329	01/13/23 16:36	KJA	EET PEN
Total/NA	Prep	8011			35.4 mL	35 mL	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/19/23 21:51	DS	EET PEN

Laboratory References:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

GC/MS VOA

Analysis Batch: 608552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231616-1	TB-ROX-011023-8260-A	Total/NA	Water	8260B	
400-231616-3	MW5-ROX-011023	Total/NA	Water	8260B	
400-231616-4	TB-ROX-011023-8260-B	Total/NA	Water	8260B	
400-231616-6	MW22-ROX-011023-EB	Total/NA	Water	8260B	
400-231616-7	MW22-ROX-011023	Total/NA	Water	8260B	
400-231616-8	ROST4PZE-ROX-011023	Total/NA	Water	8260B	
400-231616-9	P74-ROX-011023	Total/NA	Water	8260B	
400-231616-10	P57-ROX-011023	Total/NA	Water	8260B	
MB 400-608552/4	Method Blank	Total/NA	Water	8260B	
LCS 400-608552/1002	Lab Control Sample	Total/NA	Water	8260B	
400-231616-3 MS	MW5-ROX-011023	Total/NA	Water	8260B	
400-231616-3 MSD	MW5-ROX-011023	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 607999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231616-3	MW5-ROX-011023	Total/NA	Water	3520C	
400-231616-3 - RA	MW5-ROX-011023	Total/NA	Water	3520C	
400-231616-6	MW22-ROX-011023-EB	Total/NA	Water	3520C	
400-231616-7	MW22-ROX-011023	Total/NA	Water	3520C	
400-231616-8	ROST4PZE-ROX-011023	Total/NA	Water	3520C	
400-231616-9	P74-ROX-011023	Total/NA	Water	3520C	
400-231616-10	P57-ROX-011023	Total/NA	Water	3520C	
MB 400-607999/1-A	Method Blank	Total/NA	Water	3520C	
LCS 400-607999/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 400-607999/4-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-607999/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
LCSD 400-607999/5-A	Lab Control Sample Dup	Total/NA	Water	3520C	
400-231616-3 MS	MW5-ROX-011023	Total/NA	Water	3520C	
400-231616-3 MSD	MW5-ROX-011023	Total/NA	Water	3520C	

Analysis Batch: 608161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-607999/1-A	Method Blank	Total/NA	Water	8270D	607999
LCS 400-607999/2-A	Lab Control Sample	Total/NA	Water	8270D	607999
LCS 400-607999/4-A	Lab Control Sample	Total/NA	Water	8270D	607999
LCSD 400-607999/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	607999
LCSD 400-607999/5-A	Lab Control Sample Dup	Total/NA	Water	8270D	607999

Analysis Batch: 608245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-607999/1-A	Method Blank	Total/NA	Water	8270D LL	607999
LCS 400-607999/2-A	Lab Control Sample	Total/NA	Water	8270D LL	607999
LCSD 400-607999/3-A	Lab Control Sample Dup	Total/NA	Water	8270D LL	607999

Analysis Batch: 608329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231616-3	MW5-ROX-011023	Total/NA	Water	8270D LL	607999
400-231616-6	MW22-ROX-011023-EB	Total/NA	Water	8270D LL	607999
400-231616-7	MW22-ROX-011023	Total/NA	Water	8270D LL	607999

GC/MS Semi VOA (Continued)

Analysis Batch: 608329 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231616-9	P74-ROX-011023	Total/NA	Water	8270D LL	607999
400-231616-10	P57-ROX-011023	Total/NA	Water	8270D LL	607999
400-231616-3 MS	MW5-ROX-011023	Total/NA	Water	8270D LL	607999
400-231616-3 MSD	MW5-ROX-011023	Total/NA	Water	8270D LL	607999

Analysis Batch: 608382

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231616-3	MW5-ROX-011023	Total/NA	Water	8270D	607999
400-231616-6	MW22-ROX-011023-EB	Total/NA	Water	8270D	607999
400-231616-7	MW22-ROX-011023	Total/NA	Water	8270D	607999
400-231616-8	ROST4PZE-ROX-011023	Total/NA	Water	8270D	607999
400-231616-9	P74-ROX-011023	Total/NA	Water	8270D	607999
400-231616-10	P57-ROX-011023	Total/NA	Water	8270D	607999
400-231616-3 MS	MW5-ROX-011023	Total/NA	Water	8270D	607999
400-231616-3 MSD	MW5-ROX-011023	Total/NA	Water	8270D	607999

Analysis Batch: 610183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231616-6	MW22-ROX-011023-EB	Total/NA	Water	8270D LL	607999
400-231616-7	MW22-ROX-011023	Total/NA	Water	8270D LL	607999
400-231616-8	ROST4PZE-ROX-011023	Total/NA	Water	8270D LL	607999
400-231616-9	P74-ROX-011023	Total/NA	Water	8270D LL	607999

Analysis Batch: 610206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231616-3 - RA	MW5-ROX-011023	Total/NA	Water	8270D	607999

Prep Batch: 611779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231616-6 - RE	MW22-ROX-011023-EB	Total/NA	Water	3520C	

Analysis Batch: 614365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231616-6 - RE	MW22-ROX-011023-EB	Total/NA	Water	8270D LL	611779

GC Semi VOA

Prep Batch: 609095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231616-2	TB-ROX-011023-8011-A	Total/NA	Water	8011	
400-231616-3	MW5-ROX-011023	Total/NA	Water	8011	
400-231616-5	TB-ROX-011023-8011-B	Total/NA	Water	8011	
400-231616-6	MW22-ROX-011023-EB	Total/NA	Water	8011	
400-231616-7	MW22-ROX-011023	Total/NA	Water	8011	
400-231616-8	ROST4PZE-ROX-011023	Total/NA	Water	8011	
400-231616-9	P74-ROX-011023	Total/NA	Water	8011	
400-231616-10	P57-ROX-011023	Total/NA	Water	8011	
MB 400-609095/1-A	Method Blank	Total/NA	Water	8011	
LCS 400-609095/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 400-609095/3-A	Lab Control Sample Dup	Total/NA	Water	8011	
400-231616-3 MS	MW5-ROX-011023	Total/NA	Water	8011	

GC Semi VOA (Continued)

Prep Batch: 609095 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231616-3 MSD	MW5-ROX-011023	Total/NA	Water	8011	

Analysis Batch: 609205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231616-2	TB-ROX-011023-8011-A	Total/NA	Water	8011	609095
400-231616-3	MW5-ROX-011023	Total/NA	Water	8011	609095
400-231616-5	TB-ROX-011023-8011-B	Total/NA	Water	8011	609095
400-231616-6	MW22-ROX-011023-EB	Total/NA	Water	8011	609095
400-231616-7	MW22-ROX-011023	Total/NA	Water	8011	609095
400-231616-8	ROST4PZE-ROX-011023	Total/NA	Water	8011	609095
400-231616-9	P74-ROX-011023	Total/NA	Water	8011	609095
400-231616-10	P57-ROX-011023	Total/NA	Water	8011	609095
MB 400-609095/1-A	Method Blank	Total/NA	Water	8011	609095
LCS 400-609095/2-A	Lab Control Sample	Total/NA	Water	8011	609095
LCSD 400-609095/3-A	Lab Control Sample Dup	Total/NA	Water	8011	609095
400-231616-3 MS	MW5-ROX-011023	Total/NA	Water	8011	609095
400-231616-3 MSD	MW5-ROX-011023	Total/NA	Water	8011	609095

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-608552/4
Matrix: Water
Analysis Batch: 608552

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			01/15/23 11:21	1
Acrolein	ND		20	3.3	ug/L			01/15/23 11:21	1
Acrylonitrile	ND		10	2.8	ug/L			01/15/23 11:21	1
Benzene	ND		1.0	0.13	ug/L			01/15/23 11:21	1
Bromobenzene	ND		1.0	0.54	ug/L			01/15/23 11:21	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/15/23 11:21	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/15/23 11:21	1
Bromoform	ND		5.0	0.25	ug/L			01/15/23 11:21	1
Bromomethane	ND		1.0	0.98	ug/L			01/15/23 11:21	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/15/23 11:21	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/15/23 11:21	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/15/23 11:21	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/15/23 11:21	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/15/23 11:21	1
Chloroethane	ND		1.0	0.76	ug/L			01/15/23 11:21	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/15/23 11:21	1
Chloroform	ND		1.0	1.0	ug/L			01/15/23 11:21	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/15/23 11:21	1
Chloromethane	ND		1.0	0.32	ug/L			01/15/23 11:21	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/15/23 11:21	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/15/23 11:21	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/15/23 11:21	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/15/23 11:21	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/15/23 11:21	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/15/23 11:21	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/15/23 11:21	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/15/23 11:21	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/15/23 11:21	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 11:21	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 11:21	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 11:21	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/15/23 11:21	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/15/23 11:21	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/15/23 11:21	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/15/23 11:21	1
2-Hexanone	ND		25	1.4	ug/L			01/15/23 11:21	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/15/23 11:21	1
Methylene bromide	ND		5.0	0.22	ug/L			01/15/23 11:21	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/15/23 11:21	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/15/23 11:21	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/15/23 11:21	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/15/23 11:21	1
Naphthalene	ND		5.0	3.0	ug/L			01/15/23 11:21	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/15/23 11:21	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/15/23 11:21	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/15/23 11:21	1
o-Xylene	ND		5.0	0.60	ug/L			01/15/23 11:21	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/15/23 11:21	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-608552/4
Matrix: Water
Analysis Batch: 608552

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			01/15/23 11:21	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			01/15/23 11:21	1
Styrene	ND		1.0	1.0	ug/L			01/15/23 11:21	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/15/23 11:21	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/15/23 11:21	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/15/23 11:21	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/15/23 11:21	1
Toluene	ND		1.0	0.41	ug/L			01/15/23 11:21	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/15/23 11:21	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/15/23 11:21	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/15/23 11:21	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/15/23 11:21	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/15/23 11:21	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/15/23 11:21	1
Trichloroethene	ND		1.0	0.15	ug/L			01/15/23 11:21	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/15/23 11:21	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/15/23 11:21	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/15/23 11:21	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/15/23 11:21	1
Vinyl acetate	ND		25	0.93	ug/L			01/15/23 11:21	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/15/23 11:21	1
Xylenes, Total	ND		10	1.6	ug/L			01/15/23 11:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*72 - 119*		*01/15/23 11:21*	*1*
Dibromofluoromethane	*106*		*75 - 126*		*01/15/23 11:21*	*1*
Toluene-d8 (Surr)	*92*		*64 - 132*		*01/15/23 11:21*	*1*

Lab Sample ID: LCS 400-608552/1002
Matrix: Water
Analysis Batch: 608552

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	200	241		ug/L		121	43 - 160
Acrolein	500	606		ug/L		121	38 - 160
Acrylonitrile	500	581		ug/L		116	64 - 142
Benzene	50.0	52.6		ug/L		105	70 - 130
Bromobenzene	50.0	48.9		ug/L		98	70 - 132
Bromochloromethane	50.0	53.7		ug/L		107	70 - 130
Bromodichloromethane	50.0	51.7		ug/L		103	67 - 133
Bromoform	50.0	48.2		ug/L		96	57 - 140
Bromomethane	50.0	53.5		ug/L		107	10 - 160
2-Butanone (MEK)	200	217		ug/L		108	61 - 145
Carbon disulfide	50.0	47.1		ug/L		94	61 - 137
Carbon tetrachloride	50.0	52.0		ug/L		104	61 - 137
Chlorobenzene	50.0	50.5		ug/L		101	70 - 130
Dibromochloromethane	50.0	49.3		ug/L		99	67 - 135
Chloroethane	50.0	50.3		ug/L		101	55 - 141

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-608552/1002
Matrix: Water
Analysis Batch: 608552

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	57.3		ug/L		115	10 - 160
Chloroform	50.0	52.4		ug/L		105	69 - 130
1-Chlorohexane	50.0	53.3		ug/L		107	69 - 130
Chloromethane	50.0	46.1		ug/L		92	58 - 137
cis-1,2-Dichloroethene	50.0	54.9		ug/L		110	68 - 130
cis-1,3-Dichloropropene	50.0	54.3		ug/L		109	69 - 132
1,2-Dichlorobenzene	50.0	50.4		ug/L		101	67 - 130
1,3-Dichlorobenzene	50.0	50.1		ug/L		100	70 - 130
1,4-Dichlorobenzene	50.0	49.8		ug/L		100	70 - 130
Dichlorodifluoromethane	50.0	36.1		ug/L		72	41 - 146
1,1-Dichloroethane	50.0	54.3		ug/L		109	70 - 130
1,2-Dichloroethane	50.0	53.4		ug/L		107	69 - 130
1,1-Dichloroethene	50.0	51.2		ug/L		102	63 - 134
1,2-Dichloropropane	50.0	54.6		ug/L		109	70 - 130
1,3-Dichloropropane	50.0	51.6		ug/L		103	70 - 130
2,2-Dichloropropane	50.0	50.6		ug/L		101	52 - 135
1,1-Dichloropropene	50.0	53.0		ug/L		106	70 - 130
Ethylbenzene	50.0	49.7		ug/L		99	70 - 130
Ethyl methacrylate	50.0	50.0		ug/L		100	68 - 130
Hexachlorobutadiene	50.0	47.8		ug/L		96	53 - 140
2-Hexanone	200	228		ug/L		114	65 - 137
Isopropy benzene	50.0	50.3		ug/L		101	70 - 130
Methylene bromide	50.0	56.0		ug/L		112	70 - 130
Methylene Chloride	50.0	52.6		ug/L		105	66 - 135
4-Methyl-2-pentanone (MIBK)	200	242		ug/L		121	69 - 138
Methyl tert-butyl ether	50.0	49.9		ug/L		100	66 - 130
m-Xylene & p-Xylene	50.0	49.1		ug/L		98	70 - 130
Naphthalene	50.0	51.0		ug/L		102	47 - 149
n-Butylbenzene	50.0	48.7		ug/L		97	67 - 130
N-Propylbenzene	50.0	52.1		ug/L		104	70 - 130
o-Chlorotoluene	50.0	47.8		ug/L		96	70 - 130
o-Xylene	50.0	49.3		ug/L		99	70 - 130
p-Chlorotoluene	50.0	49.2		ug/L		98	70 - 130
p-Isopropyltoluene	50.0	50.3		ug/L		101	65 - 130
sec-Butylbenzene	50.0	50.8		ug/L		102	66 - 130
Styrene	50.0	49.1		ug/L		98	70 - 130
tert-Butylbenzene	50.0	48.7		ug/L		97	64 - 139
1,1,1,2-Tetrachloroethane	50.0	49.4		ug/L		99	67 - 131
1,1,2,2-Tetrachloroethane	50.0	50.4		ug/L		101	70 - 131
Tetrachloroethene	50.0	49.9		ug/L		100	65 - 130
Toluene	50.0	48.3		ug/L		97	70 - 130
trans-1,2-Dichloroethene	50.0	51.4		ug/L		103	70 - 130
trans-1,3-Dichloropropene	50.0	49.7		ug/L		99	63 - 130
1,2,3-Trichlorobenzene	50.0	52.0		ug/L		104	60 - 138
1,2,4-Trichlorobenzene	50.0	51.0		ug/L		102	60 - 140
1,1,1-Trichloroethane	50.0	50.8		ug/L		102	68 - 130
1,1,2-Trichloroethane	50.0	50.7		ug/L		101	70 - 130
Trichloroethene	50.0	53.7		ug/L		107	70 - 130
Trichlorofluoromethane	50.0	55.7		ug/L		111	65 - 138

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-608552/1002
Matrix: Water
Analysis Batch: 608552

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	50.0	49.3		ug/L		99	70 - 130
1,2,4-Trimethy benzene	50.0	48.6		ug/L		97	70 - 130
1,3,5-Trimethy benzene	50.0	48.4		ug/L		97	69 - 130
Vinyl acetate	100	111		ug/L		111	26 - 160
Vinyl chloride	50.0	55.7		ug/L		111	59 - 136
Xylenes, Total	100	98.4		ug/L		98	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*95*		*72 - 119*
Dibromofluoromethane	*104*		*75 - 126*
Toluene-d8 (Surr)	*93*		*64 - 132*

Lab Sample ID: 400-231616-3 MS
Matrix: Water
Analysis Batch: 608552

Client Sample ID: MW5-ROX-011023
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	ND		200	207		ug/L		104	43 - 150
Acrolein	ND		500	523		ug/L		105	38 - 150
Acrylonitrile	ND		500	525		ug/L		105	62 - 149
Benzene	ND		50.0	47.7		ug/L		95	56 - 142
Bromobenzene	ND		50.0	45.5		ug/L		91	59 - 136
Bromochloromethane	ND		50.0	49.9		ug/L		100	64 - 140
Bromodichloromethane	ND		50.0	47.5		ug/L		95	59 - 143
Bromoform	ND		50.0	44.3		ug/L		89	50 - 140
Bromomethane	ND		50.0	45.0		ug/L		90	10 - 150
2-Butanone (MEK)	ND		200	195		ug/L		98	55 - 150
Carbon disulfide	ND		50.0	43.7		ug/L		87	48 - 150
Carbon tetrachloride	ND		50.0	45.9		ug/L		92	55 - 145
Chlorobenzene	ND		50.0	45.6		ug/L		91	64 - 130
Dibromochloromethane	ND		50.0	45.5		ug/L		91	56 - 143
Chloroethane	ND		50.0	39.8		ug/L		80	50 - 150
2-Chloroethyl vinyl ether	ND	F1	50.0	ND	F1	ug/L		0	10 - 150
Chloroform	ND		50.0	47.7		ug/L		95	60 - 141
1-Chlorohexane	ND		50.0	47.2		ug/L		94	56 - 136
Chloromethane	ND		50.0	42.6		ug/L		85	49 - 148
cis-1,2-Dichloroethene	ND		50.0	49.2		ug/L		98	59 - 143
cis-1,3-Dichloropropene	ND		50.0	48.4		ug/L		97	57 - 140
1,2-Dichlorobenzene	ND		50.0	46.4		ug/L		93	52 - 137
1,3-Dichlorobenzene	ND		50.0	45.6		ug/L		91	54 - 135
1,4-Dichlorobenzene	ND		50.0	45.4		ug/L		91	53 - 135
Dichlorodifluoromethane	ND		50.0	33.9		ug/L		68	16 - 150
1,1-Dichloroethane	ND		50.0	49.0		ug/L		98	61 - 144
1,2-Dichloroethane	ND		50.0	49.1		ug/L		98	60 - 141
1,1-Dichloroethene	ND		50.0	43.4		ug/L		87	54 - 147
1,2-Dichloropropane	ND		50.0	51.9		ug/L		104	66 - 137
1,3-Dichloropropane	ND		50.0	48.2		ug/L		96	66 - 133
2,2-Dichloropropane	ND		50.0	44.4		ug/L		89	42 - 144

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231616-3 MS
Matrix: Water
Analysis Batch: 608552

Client Sample ID: MW5-ROX-011023
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloropropene	ND		50.0	46.6		ug/L		93	65 - 136
Ethylbenzene	ND		50.0	44.4		ug/L		89	58 - 131
Ethyl methacrylate	ND		50.0	46.5		ug/L		93	64 - 130
Hexachlorobutadiene	ND		50.0	41.9		ug/L		84	31 - 149
2-Hexanone	ND		200	206		ug/L		103	65 - 140
Isopropy benzene	ND		50.0	44.7		ug/L		89	56 - 133
Methylene bromide	ND		50.0	51.7		ug/L		103	63 - 138
Methylene Chloride	ND		50.0	48.9		ug/L		98	60 - 146
4-Methyl-2-pentanone (MIBK)	ND		200	221		ug/L		110	63 - 146
Methyl tert-butyl ether	2.6		50.0	48.7		ug/L		92	59 - 137
m-Xylene & p-Xylene	ND		50.0	44.2		ug/L		88	57 - 130
Naphthalene	ND		50.0	46.8		ug/L		94	25 - 150
n-Butylbenzene	ND		50.0	43.9		ug/L		88	41 - 142
N-Propylbenzene	ND		50.0	45.8		ug/L		92	51 - 138
o-Chlorotoluene	ND		50.0	45.2		ug/L		90	53 - 134
o-Xylene	ND		50.0	43.9		ug/L		88	61 - 130
p-Chlorotoluene	ND		50.0	44.0		ug/L		88	54 - 133
p-Isopropyltoluene	ND		50.0	44.1		ug/L		88	48 - 139
sec-Butylbenzene	ND		50.0	45.0		ug/L		90	50 - 138
Styrene	ND		50.0	43.9		ug/L		88	58 - 131
tert-Butylbenzene	1.6		50.0	44.9		ug/L		87	54 - 146
1,1,1,2-Tetrachloroethane	ND		50.0	46.1		ug/L		92	59 - 137
1,1,2,2-Tetrachloroethane	ND		50.0	48.4		ug/L		97	66 - 135
Tetrachloroethene	ND		50.0	43.1		ug/L		86	52 - 133
Toluene	ND		50.0	44.2		ug/L		88	65 - 130
trans-1,2-Dichloroethene	ND		50.0	45.9		ug/L		92	61 - 143
trans-1,3-Dichloropropene	ND		50.0	45.4		ug/L		91	53 - 133
1,2,3-Trichlorobenzene	ND		50.0	46.4		ug/L		93	43 - 145
1,2,4-Trichlorobenzene	ND		50.0	46.5		ug/L		93	39 - 148
1,1,1-Trichloroethane	ND		50.0	45.3		ug/L		91	57 - 142
1,1,2-Trichloroethane	ND		50.0	47.0		ug/L		94	66 - 131
Trichloroethene	ND		50.0	47.4		ug/L		95	64 - 136
Trichlorofluoromethane	ND		50.0	51.7		ug/L		103	54 - 150
1,2,3-Trichloropropane	ND		50.0	47.3		ug/L		95	65 - 133
1,2,4-Trimethy benzene	ND		50.0	44.5		ug/L		89	50 - 139
1,3,5-Trimethy benzene	ND		50.0	43.5		ug/L		87	52 - 135
Vinyl acetate	ND		100	110		ug/L		110	26 - 150
Vinyl chloride	ND		50.0	52.2		ug/L		104	46 - 150
Xylenes, Total	ND		100	88.0		ug/L		88	59 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*97*		*72 - 119*
Dibromofluoromethane	*102*		*75 - 126*
Toluene-d8 (Surr)	*94*		*64 - 132*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231616-3 MSD
Matrix: Water
Analysis Batch: 608552

Client Sample ID: MW5-ROX-011023
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	211		ug/L		105	43 - 150	2	30
Acrolein	ND		500	536		ug/L		107	38 - 150	2	31
Acrylonitrile	ND		500	523		ug/L		105	62 - 149	0	30
Benzene	ND		50.0	48.8		ug/L		98	56 - 142	2	30
Bromobenzene	ND		50.0	45.7		ug/L		91	59 - 136	0	30
Bromochloromethane	ND		50.0	50.9		ug/L		102	64 - 140	2	30
Bromodichloromethane	ND		50.0	47.7		ug/L		95	59 - 143	0	30
Bromoform	ND		50.0	45.6		ug/L		91	50 - 140	3	30
Bromomethane	ND		50.0	46.6		ug/L		93	10 - 150	4	50
2-Butanone (MEK)	ND		200	200		ug/L		100	55 - 150	2	30
Carbon disulfide	ND		50.0	44.6		ug/L		89	48 - 150	2	30
Carbon tetrachloride	ND		50.0	46.1		ug/L		92	55 - 145	0	30
Chlorobenzene	ND		50.0	46.3		ug/L		93	64 - 130	2	30
Dibromochloromethane	ND		50.0	46.1		ug/L		92	56 - 143	1	30
Chloroethane	ND		50.0	49.3		ug/L		99	50 - 150	21	30
2-Chloroethyl vinyl ether	ND	F1	50.0	ND	F1	ug/L		0	10 - 150	NC	50
Chloroform	ND		50.0	48.4		ug/L		97	60 - 141	2	30
1-Chlorohexane	ND		50.0	47.8		ug/L		96	56 - 136	1	30
Chloromethane	ND		50.0	42.6		ug/L		85	49 - 148	0	31
cis-1,2-Dichloroethene	ND		50.0	50.0		ug/L		100	59 - 143	2	30
cis-1,3-Dichloropropene	ND		50.0	49.2		ug/L		98	57 - 140	2	30
1,2-Dichlorobenzene	ND		50.0	46.2		ug/L		92	52 - 137	0	30
1,3-Dichlorobenzene	ND		50.0	45.0		ug/L		90	54 - 135	1	30
1,4-Dichlorobenzene	ND		50.0	45.0		ug/L		90	53 - 135	1	30
Dichlorodifluoromethane	ND		50.0	34.0		ug/L		68	16 - 150	0	31
1,1-Dichloroethane	ND		50.0	49.9		ug/L		100	61 - 144	2	30
1,2-Dichloroethane	ND		50.0	49.1		ug/L		98	60 - 141	0	30
1,1-Dichloroethene	ND		50.0	45.1		ug/L		90	54 - 147	4	30
1,2-Dichloropropane	ND		50.0	51.8		ug/L		104	66 - 137	0	30
1,3-Dichloropropane	ND		50.0	48.9		ug/L		98	66 - 133	1	30
2,2-Dichloropropane	ND		50.0	45.1		ug/L		90	42 - 144	2	31
1,1-Dichloropropene	ND		50.0	47.5		ug/L		95	65 - 136	2	30
Ethylbenzene	ND		50.0	44.5		ug/L		89	58 - 131	0	30
Ethyl methacrylate	ND		50.0	48.5		ug/L		97	64 - 130	4	30
Hexachlorobutadiene	ND		50.0	42.2		ug/L		84	31 - 149	1	36
2-Hexanone	ND		200	207		ug/L		104	65 - 140	1	30
Isopropy benzene	ND		50.0	44.7		ug/L		89	56 - 133	0	30
Methylene bromide	ND		50.0	52.2		ug/L		104	63 - 138	1	30
Methylene Chloride	ND		50.0	48.9		ug/L		98	60 - 146	0	32
4-Methyl-2-pentanone (MIBK)	ND		200	222		ug/L		111	63 - 146	1	30
Methyl tert-butyl ether	2.6		50.0	49.2		ug/L		93	59 - 137	1	30
m-Xylene & p-Xylene	ND		50.0	43.7		ug/L		87	57 - 130	1	30
Naphthalene	ND		50.0	47.2		ug/L		94	25 - 150	1	30
n-Butylbenzene	ND		50.0	43.1		ug/L		86	41 - 142	2	31
N-Propylbenzene	ND		50.0	45.9		ug/L		92	51 - 138	0	30
o-Chlorotoluene	ND		50.0	44.3		ug/L		89	53 - 134	2	30
o-Xylene	ND		50.0	44.3		ug/L		89	61 - 130	1	30
p-Chlorotoluene	ND		50.0	42.9		ug/L		86	54 - 133	2	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231616-3 MSD
Matrix: Water
Analysis Batch: 608552

Client Sample ID: MW5-ROX-011023
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	44.2		ug/L		88	48 - 139	0	30
sec-Butylbenzene	ND		50.0	44.6		ug/L		89	50 - 138	1	30
Styrene	ND		50.0	44.2		ug/L		88	58 - 131	1	30
tert-Butylbenzene	1.6		50.0	45.1		ug/L		87	54 - 146	0	30
1,1,1,2-Tetrachloroethane	ND		50.0	46.4		ug/L		93	59 - 137	1	30
1,1,2,2-Tetrachloroethane	ND		50.0	49.4		ug/L		99	66 - 135	2	30
Tetrachloroethene	ND		50.0	43.4		ug/L		87	52 - 133	1	30
Toluene	ND		50.0	45.1		ug/L		90	65 - 130	2	30
trans-1,2-Dichloroethene	ND		50.0	47.4		ug/L		95	61 - 143	3	30
trans-1,3-Dichloropropene	ND		50.0	46.3		ug/L		93	53 - 133	2	30
1,2,3-Trichlorobenzene	ND		50.0	47.5		ug/L		95	43 - 145	2	30
1,2,4-Trichlorobenzene	ND		50.0	46.3		ug/L		93	39 - 148	0	30
1,1,1-Trichloroethane	ND		50.0	46.2		ug/L		92	57 - 142	2	30
1,1,2-Trichloroethane	ND		50.0	47.7		ug/L		95	66 - 131	1	30
Trichloroethene	ND		50.0	48.2		ug/L		96	64 - 136	2	30
Trichlorofluoromethane	ND		50.0	52.9		ug/L		106	54 - 150	2	30
1,2,3-Trichloropropane	ND		50.0	48.0		ug/L		96	65 - 133	1	30
1,2,4-Trimethy benzene	ND		50.0	43.3		ug/L		87	50 - 139	3	30
1,3,5-Trimethy benzene	ND		50.0	43.6		ug/L		87	52 - 135	0	30
Vinyl acetate	ND		100	107		ug/L		107	26 - 150	2	33
Vinyl chloride	ND		50.0	53.1		ug/L		106	46 - 150	2	30
Xylenes, Total	ND		100	88.0		ug/L		88	59 - 130	0	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*97*		*72 - 119*
Dibromofluoromethane	*103*		*75 - 126*
Toluene-d8 (Surr)	*97*		*64 - 132*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-607999/1-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 607999

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.8	ug/L		01/11/23 08:49	01/12/23 14:11	1
Benzenethiol	ND		10	1.7	ug/L		01/11/23 08:49	01/12/23 14:11	1
Benzoic acid	ND		30	7.3	ug/L		01/11/23 08:49	01/12/23 14:11	1
Benzyl alcohol	ND		10	2.0	ug/L		01/11/23 08:49	01/12/23 14:11	1
Bis(2-chloroethoxy)methane	ND		10	0.16	ug/L		01/11/23 08:49	01/12/23 14:11	1
Bis(2-chloroethyl)ether	ND		10	2.7	ug/L		01/11/23 08:49	01/12/23 14:11	1
bis (2-chloroisopropyl) ether	ND		10	0.16	ug/L		01/11/23 08:49	01/12/23 14:11	1
Bis(2-ethylhexyl) phthalate	ND		10	5.0	ug/L		01/11/23 08:49	01/12/23 14:11	1
4-Bromophenyl phenyl ether	ND		10	0.20	ug/L		01/11/23 08:49	01/12/23 14:11	1
Butyl benzyl phthalate	ND		10	0.19	ug/L		01/11/23 08:49	01/12/23 14:11	1
4-Chloroaniline	ND		10	3.4	ug/L		01/11/23 08:49	01/12/23 14:11	1
4-Chloro-3-methylphenol	ND		10	3.8	ug/L		01/11/23 08:49	01/12/23 14:11	1
2-Chloronaphthalene	ND		10	0.14	ug/L		01/11/23 08:49	01/12/23 14:11	1
2-Chlorophenol	ND		10	2.2	ug/L		01/11/23 08:49	01/12/23 14:11	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-607999/1-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 607999

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		01/11/23 08:49	01/12/23 14:11	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/11/23 08:49	01/12/23 14:11	1
Dibenzofuran	ND		10	0.17	ug/L		01/11/23 08:49	01/12/23 14:11	1
3,3'-Dichlorobenzidine	ND		10	2.6	ug/L		01/11/23 08:49	01/12/23 14:11	1
2,4-Dichlorophenol	ND		10	3.0	ug/L		01/11/23 08:49	01/12/23 14:11	1
Diethyl phthalate	ND		10	0.24	ug/L		01/11/23 08:49	01/12/23 14:11	1
2,4-Dimethylphenol	ND		10	3.5	ug/L		01/11/23 08:49	01/12/23 14:11	1
Dimethyl phthalate	ND		10	0.17	ug/L		01/11/23 08:49	01/12/23 14:11	1
Di-n-butyl phthalate	ND		10	2.7	ug/L		01/11/23 08:49	01/12/23 14:11	1
4,6-Dinitro-ortho-cresol	ND		10	1.6	ug/L		01/11/23 08:49	01/12/23 14:11	1
2,4-Dinitrophenol	ND		30	3.4	ug/L		01/11/23 08:49	01/12/23 14:11	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		01/11/23 08:49	01/12/23 14:11	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		01/11/23 08:49	01/12/23 14:11	1
Di-n-octyl phthalate	ND		10	0.17	ug/L		01/11/23 08:49	01/12/23 14:11	1
1,4-Dioxane	ND		10	1.0	ug/L		01/11/23 08:49	01/12/23 14:11	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/11/23 08:49	01/12/23 14:11	1
Hexachlorobenzene	ND		10	0.17	ug/L		01/11/23 08:49	01/12/23 14:11	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		01/11/23 08:49	01/12/23 14:11	1
Hexachloroethane	ND		10	4.2	ug/L		01/11/23 08:49	01/12/23 14:11	1
Indene	ND		10	1.0	ug/L		01/11/23 08:49	01/12/23 14:11	1
Isophorone	ND		10	0.14	ug/L		01/11/23 08:49	01/12/23 14:11	1
2-Methylphenol	ND		10	1.8	ug/L		01/11/23 08:49	01/12/23 14:11	1
3 & 4 Methylphenol	ND		20	0.39	ug/L		01/11/23 08:49	01/12/23 14:11	1
2-Nitroaniline	ND		10	2.2	ug/L		01/11/23 08:49	01/12/23 14:11	1
3-Nitroaniline	ND		10	1.8	ug/L		01/11/23 08:49	01/12/23 14:11	1
4-Nitroaniline	ND		10	1.5	ug/L		01/11/23 08:49	01/12/23 14:11	1
Nitrobenzene	ND		10	0.13	ug/L		01/11/23 08:49	01/12/23 14:11	1
2-Nitrophenol	ND		10	5.2	ug/L		01/11/23 08:49	01/12/23 14:11	1
4-Nitrophenol	ND		10	2.1	ug/L		01/11/23 08:49	01/12/23 14:11	1
N-Nitrosodimethylamine	ND		10	3.5	ug/L		01/11/23 08:49	01/12/23 14:11	1
N-Nitrosodi-n-propylamine	ND		10	3.3	ug/L		01/11/23 08:49	01/12/23 14:11	1
N-Nitrosodiphenylamine	ND		10	0.18	ug/L		01/11/23 08:49	01/12/23 14:11	1
Pentachlorophenol	ND		20	1.4	ug/L		01/11/23 08:49	01/12/23 14:11	1
Phenol	ND		10	2.6	ug/L		01/11/23 08:49	01/12/23 14:11	1
Pyridine	ND		10	3.2	ug/L		01/11/23 08:49	01/12/23 14:11	1
Quinoline	ND		10	4.5	ug/L		01/11/23 08:49	01/12/23 14:11	1
2,4,5-Trichlorophenol	ND		10	3.7	ug/L		01/11/23 08:49	01/12/23 14:11	1
2,4,6-Trichlorophenol	ND		10	3.5	ug/L		01/11/23 08:49	01/12/23 14:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*114*		*46 - 124*	*01/11/23 08:49*	*01/12/23 14:11*	*1*
2-Fluorophenol	*14*		*13 - 113*	*01/11/23 08:49*	*01/12/23 14:11*	*1*
Nitrobenzene-d5	*102*		*36 - 126*	*01/11/23 08:49*	*01/12/23 14:11*	*1*
Phenol-d5	*59*		*17 - 127*	*01/11/23 08:49*	*01/12/23 14:11*	*1*
Terphenyl-d14	*121*		*44 - 149*	*01/11/23 08:49*	*01/12/23 14:11*	*1*
2,4,6-Tribromophenol	*72*		*26 - 150*	*01/11/23 08:49*	*01/12/23 14:11*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-607999/2-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 607999

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aniline	120	135		ug/L		113	21 - 120
Benzoic acid	554	396		ug/L		72	10 - 144
Benzyl alcohol	120	119		ug/L		99	28 - 120
Bis(2-chloroethoxy)methane	120	121		ug/L		100	47 - 120
Bis(2-chloroethyl)ether	120	123		ug/L		102	44 - 120
bis (2-chloroisopropyl) ether	120	132		ug/L		110	33 - 121
Bis(2-ethylhexyl) phthalate	120	139		ug/L		116	52 - 147
4-Bromophenyl phenyl ether	120	115		ug/L		96	54 - 122
Butyl benzyl phthalate	120	135		ug/L		112	54 - 133
4-Chloroaniline	120	149	*+	ug/L		124	26 - 120
4-Chloro-3-methylphenol	120	125		ug/L		105	48 - 131
2-Chloronaphthalene	120	128		ug/L		107	52 - 121
2-Chlorophenol	120	79.4		ug/L		66	40 - 120
4-Chlorophenyl phenyl ether	120	130		ug/L		108	56 - 125
Dibenz[a,h]acridine	120	66.8		ug/L		56	31 - 150
Dibenzofuran	120	132		ug/L		110	56 - 122
3,3'-Dichlorobenzidine	160	257	*+	ug/L		161	36 - 132
2,4-Dichlorophenol	120	107		ug/L		89	49 - 120
Diethyl phthalate	120	132		ug/L		110	50 - 137
2,4-Dimethylphenol	120	121		ug/L		101	48 - 120
Dimethyl phthalate	120	130		ug/L		108	57 - 124
Di-n-butyl phthalate	120	141		ug/L		117	58 - 126
4,6-Dinitro-ortho-cresol	240	264		ug/L		110	23 - 148
2,4-Dinitrophenol	240	286		ug/L		119	10 - 150
2,4-Dinitrotoluene	120	137		ug/L		114	54 - 142
2,6-Dinitrotoluene	120	132		ug/L		110	55 - 130
Di-n-octyl phthalate	120	144		ug/L		120	57 - 138
1,4-Dioxane	120	43.3		ug/L		36	31 - 120
1,2-Diphenylhydrazine (as Azobenzene)	120	130		ug/L		108	45 - 124
Hexachlorobenzene	120	119		ug/L		99	52 - 129
Hexachlorocyclopentadiene	120	102		ug/L		85	10 - 134
Hexachloroethane	120	107		ug/L		89	20 - 120
Indene	120	115		ug/L		96	49 - 120
Isophorone	120	122		ug/L		102	48 - 120
2-Methylphenol	120	115		ug/L		95	46 - 124
3 & 4 Methylphenol	120	114		ug/L		95	45 - 120
2-Nitroaniline	120	145		ug/L		121	51 - 145
3-Nitroaniline	120	159	*+	ug/L		132	37 - 127
4-Nitroaniline	120	149		ug/L		124	36 - 137
Nitrobenzene	120	122		ug/L		101	45 - 120
2-Nitrophenol	120	106		ug/L		88	40 - 124
4-Nitrophenol	240	256		ug/L		107	23 - 146
N-Nitrosodimethylamine	120	125		ug/L		104	29 - 137
N-Nitrosodi-n-propylamine	120	126		ug/L		105	45 - 120
N-Nitrosodiphenylamine	119	119		ug/L		100	54 - 120
Pentachlorophenol	240	227		ug/L		95	31 - 130
Phenol	120	95.0		ug/L		79	11 - 120
Pyridine	240	196		ug/L		82	16 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-607999/2-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 607999

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Quinoline			120	69.7		ug/L		58	49 - 130		
2,4,5-Trichlorophenol			120	121		ug/L		101	51 - 136		
2,4,6-Trichlorophenol			120	117		ug/L		98	50 - 127		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*105*		*46 - 124*
2-Fluorophenol	*41*		*13 - 113*
Nitrobenzene-d5	*112*		*36 - 126*
Phenol-d5	*82*		*17 - 127*
Terphenyl-d14	*111*		*44 - 149*
2,4,6-Tribromophenol	*100*		*26 - 150*

Lab Sample ID: LCS 400-607999/4-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 607999

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzenethiol			120	6.47	J *-	ug/L		5	10 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*116*		*46 - 124*
2-Fluorophenol	*33*		*13 - 113*
Nitrobenzene-d5	*104*		*36 - 126*
Phenol-d5	*79*		*17 - 127*
Terphenyl-d14	*126*		*44 - 149*
2,4,6-Tribromophenol	*56*		*26 - 150*

Lab Sample ID: LCSD 400-607999/3-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 607999

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aniline			120	132		ug/L		110	21 - 120	2	30
Benzoic acid			554	498		ug/L		90	10 - 144	23	30
Benzyl alcohol			120	124		ug/L		103	28 - 120	4	30
Bis(2-chloroethoxy)methane			120	126		ug/L		105	47 - 120	5	30
Bis(2-chloroethyl)ether			120	132		ug/L		110	44 - 120	8	30
bis (2-chloroisopropyl) ether			120	138		ug/L		115	33 - 121	5	30
Bis(2-ethylhexyl) phthalate			120	151		ug/L		126	52 - 147	8	30
4-Bromophenyl phenyl ether			120	120		ug/L		100	54 - 122	4	30
Butyl benzyl phthalate			120	146		ug/L		122	54 - 133	8	30
4-Chloroaniline			120	152	*+	ug/L		127	26 - 120	2	30
4-Chloro-3-methylphenol			120	133		ug/L		111	48 - 131	6	30
2-Chloronaphthalene			120	133		ug/L		111	52 - 121	4	30
2-Chlorophenol			120	83.2		ug/L		69	40 - 120	5	30
4-Chlorophenyl phenyl ether			120	136		ug/L		114	56 - 125	5	30
Dibenz[a,h]acridine			120	72.7		ug/L		61	31 - 150	9	30
Dibenzofuran			120	140		ug/L		117	56 - 122	5	30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-607999/3-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 607999

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
3,3'-Dichlorobenzidine			160	259	*+	ug/L		162	36 - 132	1	30
2,4-Dichlorophenol			120	115		ug/L		96	49 - 120	7	30
Diethyl phthalate			120	140		ug/L		117	50 - 137	6	30
2,4-Dimethylphenol			120	126		ug/L		105	48 - 120	4	30
Dimethyl phthalate			120	137		ug/L		114	57 - 124	5	30
Di-n-butyl phthalate			120	148		ug/L		123	58 - 126	5	30
4,6-Dinitro-ortho-cresol			240	274		ug/L		114	23 - 148	4	30
2,4-Dinitrophenol			240	290		ug/L		121	10 - 150	1	30
2,4-Dinitrotoluene			120	144		ug/L		120	54 - 142	5	30
2,6-Dinitrotoluene			120	138		ug/L		115	55 - 130	5	30
Di-n-octyl phthalate			120	156		ug/L		130	57 - 138	8	30
1,4-Dioxane			120	81.7	*1	ug/L		68	31 - 120	61	30
1,2-Diphenylhydrazine (as Azobenzene)			120	138		ug/L		115	45 - 124	6	30
Hexachlorobenzene			120	125		ug/L		104	52 - 129	4	30
Hexachlorocyclopentadiene			120	102		ug/L		85	10 - 134	0	30
Hexachloroethane			120	105		ug/L		87	20 - 120	2	30
Indene			120	120		ug/L		100	49 - 120	5	30
Isophorone			120	127		ug/L		106	48 - 120	4	30
2-Methylphenol			120	124		ug/L		103	46 - 124	8	30
3 & 4 Methylphenol			120	120		ug/L		100	45 - 120	6	30
2-Nitroaniline			120	150		ug/L		125	51 - 145	3	30
3-Nitroaniline			120	162	*+	ug/L		135	37 - 127	2	30
4-Nitroaniline			120	151		ug/L		126	36 - 137	1	30
Nitrobenzene			120	126		ug/L		105	45 - 120	3	30
2-Nitrophenol			120	118		ug/L		98	40 - 124	11	30
4-Nitrophenol			240	263		ug/L		110	23 - 146	3	30
N-Nitrosodimethylamine			120	129		ug/L		108	29 - 137	3	30
N-Nitrosodi-n-propylamine			120	130		ug/L		109	45 - 120	3	30
N-Nitrosodiphenylamine			119	124		ug/L		104	54 - 120	4	30
Pentachlorophenol			240	239		ug/L		99	31 - 130	5	30
Phenol			120	99.4		ug/L		83	11 - 120	5	30
Pyridine			240	209		ug/L		87	16 - 120	7	30
Quinoline			120	72.6		ug/L		61	49 - 130	4	30
2,4,5-Trichlorophenol			120	124		ug/L		104	51 - 136	3	30
2,4,6-Trichlorophenol			120	126		ug/L		105	50 - 127	7	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*111*		*46 - 124*
2-Fluorophenol	*36*		*13 - 113*
Nitrobenzene-d5	*117*		*36 - 126*
Phenol-d5	*86*		*17 - 127*
Terphenyl-d14	*122*		*44 - 149*
2,4,6-Tribromophenol	*107*		*26 - 150*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-607999/5-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 607999

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzenethiol			120	6.95	J *-	ug/L		6	10 - 120	7	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*116*		*46 - 124*
2-Fluorophenol	*47*		*13 - 113*
Nitrobenzene-d5	*104*		*36 - 126*
Phenol-d5	*85*		*17 - 127*
Terphenyl-d14	*123*		*44 - 149*
2,4,6-Tribromophenol	*64*		*26 - 150*

Lab Sample ID: 400-231616-3 MS
Matrix: Water
Analysis Batch: 608382

Client Sample ID: MW5-ROX-011023
Prep Type: Total/NA
Prep Batch: 607999

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Aniline	ND		123	151	F1	ug/L		123	10 - 120
Benzoic acid	34		567	531		ug/L		87	10 - 149
Benzyl alcohol	ND		123	136		ug/L		110	33 - 120
Bis(2-chloroethoxy)methane	ND		123	131		ug/L		107	26 - 120
Bis(2-chloroethyl)ether	ND		123	123		ug/L		100	42 - 120
bis (2-chloroisopropyl) ether	ND		123	151	F1	ug/L		123	28 - 120
Bis(2-ethylhexyl) phthalate	ND		123	146		ug/L		119	39 - 120
4-Bromophenyl phenyl ether	ND		123	122		ug/L		99	40 - 120
Butyl benzyl phthalate	ND		123	145		ug/L		118	45 - 120
4-Chloroaniline	ND	*+	123	160	F1	ug/L		130	10 - 120
4-Chloro-3-methylphenol	ND		123	129		ug/L		105	34 - 120
2-Chloronaphthalene	ND		123	144		ug/L		117	39 - 120
2-Chlorophenol	ND		123	67.5		ug/L		55	25 - 120
4-Chlorophenyl phenyl ether	ND		123	137		ug/L		112	44 - 120
Dibenz[a,h]acridine	ND		123	66.9		ug/L		55	50 - 150
Dibenzofuran	ND		123	144		ug/L		117	25 - 130
3,3'-Dichlorobenzidine	ND	*+	164	222	F1	ug/L		136	10 - 120
2,4-Dichlorophenol	ND		123	96.2		ug/L		78	31 - 120
Diethyl phthalate	ND		123	143		ug/L		116	46 - 120
2,4-Dimethylphenol	ND		123	128		ug/L		104	21 - 120
Dimethyl phthalate	ND		123	143		ug/L		116	38 - 120
Di-n-butyl phthalate	ND		123	147		ug/L		119	49 - 120
4,6-Dinitro-ortho-cresol	ND		246	272		ug/L		111	25 - 120
2,4-Dinitrophenol	ND		246	304		ug/L		124	15 - 140
2,4-Dinitrotoluene	ND		123	150	F1	ug/L		122	53 - 120
2,6-Dinitrotoluene	ND		123	145		ug/L		118	43 - 120
Di-n-octyl phthalate	3.7	J	123	154	F1	ug/L		122	35 - 121
1,4-Dioxane	ND	*1	123	57.8	F1	ug/L		47	50 - 150
1,2-Diphenylhydrazine (as Azobenzene)	ND		123	149		ug/L		121	50 - 150
Hexachlorobenzene	ND		123	123		ug/L		100	38 - 122
Hexachlorocyclopentadiene	ND		123	108		ug/L		88	10 - 120
Hexachloroethane	ND		123	116		ug/L		94	10 - 150

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231616-3 MS
Matrix: Water
Analysis Batch: 608382

Client Sample ID: MW5-ROX-011023
Prep Type: Total/NA
Prep Batch: 607999

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Indene	ND		123	125		ug/L		102	50 - 150
Isophorone	ND		123	132		ug/L		107	42 - 120
2-Methylphenol	ND		123	111		ug/L		91	28 - 120
3 & 4 Methylphenol	ND		123	110		ug/L		90	31 - 120
2-Nitroaniline	ND		123	171	F1	ug/L		139	45 - 120
3-Nitroaniline	ND	*+	123	158		ug/L		129	10 - 130
4-Nitroaniline	ND		123	170	F1	ug/L		138	10 - 132
Nitrobenzene	ND		123	130		ug/L		106	39 - 120
2-Nitrophenol	ND		123	84.1		ug/L		68	33 - 120
4-Nitrophenol	ND		246	280		ug/L		114	10 - 120
N-Nitrosodimethylamine	ND		123	136		ug/L		111	10 - 139
N-Nitrosodi-n-propylamine	ND		123	140		ug/L		114	37 - 124
N-Nitrosodiphenylamine	ND		122	135		ug/L		111	10 - 150
Pentachlorophenol	8.2	J	246	260		ug/L		102	29 - 130
Phenol	ND		123	86.3		ug/L		70	10 - 150
Pyridine	ND		246	222		ug/L		90	10 - 120
Quinoline	ND		123	75.5		ug/L		62	51 - 120
2,4,5-Trichlorophenol	ND		123	123		ug/L		100	34 - 120
2,4,6-Trichlorophenol	ND		123	111		ug/L		90	33 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl	*121*		*46 - 124*
2-Fluorophenol	*36*		*13 - 113*
Nitrobenzene-d5	*124*		*36 - 126*
Phenol-d5	*77*		*17 - 127*
Terphenyl-d14	*119*		*44 - 149*
2,4,6-Tribromophenol	*104*		*26 - 150*

Lab Sample ID: 400-231616-3 MSD
Matrix: Water
Analysis Batch: 608382

Client Sample ID: MW5-ROX-011023
Prep Type: Total/NA
Prep Batch: 607999

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aniline	ND		125	161	F1	ug/L		129	10 - 120	6	63
Benzoic acid	34		578	603		ug/L		98	10 - 149	13	49
Benzyl alcohol	ND		125	137		ug/L		110	33 - 120	1	37
Bis(2-chloroethoxy)methane	ND		125	132		ug/L		105	26 - 120	0	70
Bis(2-chloroethyl)ether	ND		125	118		ug/L		94	42 - 120	4	42
bis (2-chloroisopropyl) ether	ND		125	148		ug/L		119	28 - 120	2	41
Bis(2-ethylhexyl) phthalate	ND		125	148		ug/L		118	39 - 120	2	35
4-Bromophenyl phenyl ether	ND		125	124		ug/L		99	40 - 120	1	30
Butyl benzyl phthalate	ND		125	146		ug/L		116	45 - 120	0	32
4-Chloroaniline	ND	*+	125	140		ug/L		112	10 - 120	14	94
4-Chloro-3-methylphenol	ND		125	142		ug/L		114	34 - 120	10	40
2-Chloronaphthalene	ND		125	140		ug/L		112	39 - 120	3	29
2-Chlorophenol	ND		125	72.1		ug/L		58	25 - 120	7	42
4-Chlorophenyl phenyl ether	ND		125	137		ug/L		110	44 - 120	0	27
Dibenz[a,h]acridine	ND		112	62.4		ug/L		55	50 - 150	7	40

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231616-3 MSD
Matrix: Water
Analysis Batch: 608382

Client Sample ID: MW5-ROX-011023
Prep Type: Total/NA
Prep Batch: 607999

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dibenzofuran	ND		125	143		ug/L		114	25 - 130	0	29
3,3'-Dichlorobenzidine	ND	*+	167	222	F1	ug/L		133	10 - 120	0	58
2,4-Dichlorophenol	ND		125	113		ug/L		90	31 - 120	16	43
Diethyl phthalate	ND		125	141		ug/L		112	46 - 120	1	40
2,4-Dimethylphenol	ND		125	134		ug/L		107	21 - 120	4	47
Dimethyl phthalate	ND		125	140		ug/L		112	38 - 120	2	36
Di-n-butyl phthalate	ND		125	148		ug/L		119	49 - 120	1	32
4,6-Dinitro-ortho-cresol	ND		250	298		ug/L		119	25 - 120	9	42
2,4-Dinitrophenol	ND		250	351		ug/L		140	15 - 140	14	36
2,4-Dinitrotoluene	ND		125	149		ug/L		119	53 - 120	1	28
2,6-Dinitrotoluene	ND		125	142		ug/L		113	43 - 120	2	28
Di-n-octyl phthalate	3.7	J	125	157	F1	ug/L		122	35 - 121	2	35
1,4-Dioxane	ND	*1	125	88.7	F2	ug/L		71	50 - 150	42	40
1,2-Diphenylhydrazine (as Azobenzene)	ND		125	145		ug/L		115	50 - 150	3	40
Hexachlorobenzene	ND		125	127		ug/L		101	38 - 122	3	33
Hexachlorocyclopentadiene	ND		125	127		ug/L		102	10 - 120	16	50
Hexachloroethane	ND		125	116		ug/L		93	10 - 150	0	41
Indene	ND		125	124		ug/L		99	50 - 150	1	40
Isophorone	ND		125	133		ug/L		106	42 - 120	1	33
2-Methylphenol	ND		125	127		ug/L		101	28 - 120	13	47
3 & 4 Methylphenol	ND		125	127		ug/L		101	31 - 120	14	47
2-Nitroaniline	ND		125	166	F1	ug/L		133	45 - 120	3	33
3-Nitroaniline	ND	*+	125	165	F1	ug/L		132	10 - 130	4	39
4-Nitroaniline	ND		125	174	F1	ug/L		139	10 - 132	2	50
Nitrobenzene	ND		125	132		ug/L		105	39 - 120	1	35
2-Nitrophenol	ND		125	111		ug/L		89	33 - 120	28	43
4-Nitrophenol	ND		250	303	F1	ug/L		121	10 - 120	8	82
N-Nitrosodimethylamine	ND		125	140		ug/L		112	10 - 139	3	62
N-Nitrosodi-n-propylamine	ND		125	142		ug/L		113	37 - 124	1	36
N-Nitrosodiphenylamine	ND		124	132		ug/L		106	10 - 150	2	34
Pentachlorophenol	8.2	J	250	283		ug/L		110	29 - 130	9	42
Phenol	ND		125	95.9		ug/L		77	10 - 150	10	52
Pyridine	ND		250	221		ug/L		88	10 - 120	0	55
Quinoline	ND		112	68.7		ug/L		61	51 - 120	9	40
2,4,5-Trichlorophenol	ND		125	131		ug/L		104	34 - 120	6	42
2,4,6-Trichlorophenol	ND		125	127		ug/L		102	33 - 120	13	44

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl	*109*		*46 - 124*
2-Fluorophenol	*25*		*13 - 113*
Nitrobenzene-d5	*118*		*36 - 126*
Phenol-d5	*80*		*17 - 127*
Terphenyl-d14	*114*		*44 - 149*
2,4,6-Tribromophenol	*107*		*26 - 150*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 400-607999/1-A
Matrix: Water
Analysis Batch: 608245

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 607999

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.032	ug/L		01/11/23 08:49	01/12/23 16:09	1
Acenaphthylene	ND		0.20	0.045	ug/L		01/11/23 08:49	01/12/23 16:09	1
Anthracene	ND		0.20	0.032	ug/L		01/11/23 08:49	01/12/23 16:09	1
Benzo[a]anthracene	ND		0.20	0.046	ug/L		01/11/23 08:49	01/12/23 16:09	1
Benzo[a]pyrene	0.153	J	0.20	0.042	ug/L		01/11/23 08:49	01/12/23 16:09	1
Benzo[b]fluoranthene	0.149	J	0.20	0.034	ug/L		01/11/23 08:49	01/12/23 16:09	1
Benzo[g,h,i]perylene	ND		0.20	0.13	ug/L		01/11/23 08:49	01/12/23 16:09	1
Benzo[k]fluoranthene	0.113	J	0.20	0.10	ug/L		01/11/23 08:49	01/12/23 16:09	1
Chrysene	ND		0.20	0.074	ug/L		01/11/23 08:49	01/12/23 16:09	1
Dibenz(a,h)anthracene	ND		0.20	0.050	ug/L		01/11/23 08:49	01/12/23 16:09	1
Fluoranthene	ND		0.20	0.068	ug/L		01/11/23 08:49	01/12/23 16:09	1
Fluorene	ND		0.20	0.11	ug/L		01/11/23 08:49	01/12/23 16:09	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.043	ug/L		01/11/23 08:49	01/12/23 16:09	1
1-Methylnaphthalene	ND		0.20	0.074	ug/L		01/11/23 08:49	01/12/23 16:09	1
2-Methylnaphthalene	ND		0.20	0.060	ug/L		01/11/23 08:49	01/12/23 16:09	1
Phenanthrene	ND		0.20	0.036	ug/L		01/11/23 08:49	01/12/23 16:09	1
Pyrene	ND		0.20	0.040	ug/L		01/11/23 08:49	01/12/23 16:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*110*		*15 - 122*	*01/11/23 08:49*	*01/12/23 16:09*	*1*
Nitrobenzene-d5	*74*		*19 - 130*	*01/11/23 08:49*	*01/12/23 16:09*	*1*
Terphenyl-d14	*118*		*33 - 138*	*01/11/23 08:49*	*01/12/23 16:09*	*1*

Lab Sample ID: LCS 400-607999/2-A
Matrix: Water
Analysis Batch: 608245

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 607999

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	120	123		ug/L		103	41 - 120
Acenaphthylene	120	125		ug/L		104	44 - 120
Anthracene	120	129		ug/L		107	49 - 120
Benzo[a]anthracene	120	127		ug/L		106	61 - 135
Benzo[a]pyrene	120	109		ug/L		91	52 - 120
Benzo[b]fluoranthene	120	105		ug/L		87	53 - 134
Benzo[g,h,i]perylene	120	115		ug/L		96	47 - 133
Benzo[k]fluoranthene	120	112		ug/L		93	57 - 134
Chrysene	120	120		ug/L		100	55 - 122
Dibenz(a,h)anthracene	120	116		ug/L		96	48 - 146
Fluoranthene	120	122		ug/L		101	54 - 128
Fluorene	120	121		ug/L		101	45 - 125
Indeno[1,2,3-cd]pyrene	120	120		ug/L		100	43 - 142
1-Methylnaphthalene	120	107		ug/L		89	41 - 120
2-Methylnaphthalene	120	103		ug/L		86	32 - 124
Phenanthrene	120	124		ug/L		103	48 - 120
Pyrene	120	125		ug/L		104	48 - 132

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*102*		*15 - 122*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCS 400-607999/2-A
Matrix: Water
Analysis Batch: 608245

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 607999

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5	70		19 - 130
Terphenyl-d14	104		33 - 138

Lab Sample ID: LCSD 400-607999/3-A
Matrix: Water
Analysis Batch: 608245

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 607999

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene			120	124		ug/L		104	41 - 120	1	56
Acenaphthylene			120	126		ug/L		105	44 - 120	1	56
Anthracene			120	127		ug/L		106	49 - 120	1	51
Benzo[a]anthracene			120	124		ug/L		103	61 - 135	2	49
Benzo[a]pyrene			120	109		ug/L		91	52 - 120	1	50
Benzo[b]fluoranthene			120	107		ug/L		89	53 - 134	2	54
Benzo[g,h,i]perylene			120	118		ug/L		98	47 - 133	2	50
Benzo[k]fluoranthene			120	110		ug/L		92	57 - 134	1	52
Chrysene			120	117		ug/L		98	55 - 122	3	50
Dibenz(a,h)anthracene			120	119		ug/L		99	48 - 146	3	50
Fluoranthene			120	122		ug/L		102	54 - 128	0	52
Fluorene			120	123		ug/L		103	45 - 125	2	56
Indeno[1,2,3-cd]pyrene			120	125		ug/L		104	43 - 142	4	51
1-Methylnaphthalene			120	103		ug/L		86	41 - 120	3	55
2-Methylnaphthalene			120	99.8		ug/L		83	32 - 124	3	57
Phenanthrene			120	124		ug/L		103	48 - 120	0	56
Pyrene			120	121		ug/L		101	48 - 132	4	52

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl	104		15 - 122
Nitrobenzene-d5	66		19 - 130
Terphenyl-d14	99		33 - 138

Lab Sample ID: 400-231616-3 MS
Matrix: Water
Analysis Batch: 608329

Client Sample ID: MW5-ROX-011023
Prep Type: Total/NA
Prep Batch: 607999

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	ND		123	129		ug/L		105	35 - 113
Acenaphthylene	ND		123	133		ug/L		108	41 - 118
Anthracene	ND		123	134		ug/L		109	45 - 122
Benzo[a]anthracene	ND		123	126		ug/L		103	55 - 133
Benzo[a]pyrene	ND		123	107		ug/L		87	50 - 108
Benzo[b]fluoranthene	ND		123	110		ug/L		89	50 - 128
Benzo[g,h,i]perylene	ND		123	114		ug/L		93	46 - 133
Benzo[k]fluoranthene	ND		123	109		ug/L		89	52 - 128
Chrysene	ND		123	124		ug/L		101	52 - 116
Dibenz(a,h)anthracene	ND		123	114		ug/L		93	52 - 143
Fluoranthene	ND		123	126		ug/L		103	32 - 150
Fluorene	ND		123	128		ug/L		104	15 - 150

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: 400-231616-3 MS
Matrix: Water
Analysis Batch: 608329

Client Sample ID: MW5-ROX-011023
Prep Type: Total/NA
Prep Batch: 607999

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Indeno[1,2,3-cd]pyrene	ND		123	118		ug/L		96	41 - 141
1-Methylnaphthalene	ND		123	107		ug/L		87	10 - 150
2-Methylnaphthalene	ND		123	102		ug/L		83	10 - 150
Phenanthrene	ND		123	129		ug/L		105	36 - 125
Pyrene	ND		123	122		ug/L		100	41 - 127

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl	*108*		*15 - 122*
Nitrobenzene-d5	*45*		*19 - 130*
Terphenyl-d14	*99*		*33 - 138*

Lab Sample ID: 400-231616-3 MSD
Matrix: Water
Analysis Batch: 608329

Client Sample ID: MW5-ROX-011023
Prep Type: Total/NA
Prep Batch: 607999

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene	ND		125	139		ug/L		111	35 - 113	7	49
Acenaphthylene	ND		125	138		ug/L		111	41 - 118	4	48
Anthracene	ND		125	137		ug/L		109	45 - 122	2	56
Benzo[a]anthracene	ND		125	135		ug/L		108	55 - 133	7	57
Benzo[a]pyrene	ND		125	118		ug/L		94	50 - 108	10	59
Benzo[b]fluoranthene	ND		125	115		ug/L		92	50 - 128	5	62
Benzo[g,h,i]perylene	ND		125	123		ug/L		98	46 - 133	8	58
Benzo[k]fluoranthene	ND		125	120		ug/L		96	52 - 128	10	58
Chrysene	ND		125	132		ug/L		105	52 - 116	6	59
Dibenz(a,h)anthracene	ND		125	122		ug/L		98	52 - 143	7	60
Fluoranthene	ND		125	134		ug/L		107	32 - 150	6	59
Fluorene	ND		125	137		ug/L		109	15 - 150	7	49
Indeno[1,2,3-cd]pyrene	ND		125	127		ug/L		102	41 - 141	7	58
1-Methylnaphthalene	ND		125	117		ug/L		93	10 - 150	9	66
2-Methylnaphthalene	ND		125	113		ug/L		90	10 - 150	10	66
Phenanthrene	ND		125	133		ug/L		106	36 - 125	3	69
Pyrene	ND		125	128		ug/L		102	41 - 127	4	58

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl	*109*		*15 - 122*
Nitrobenzene-d5	*65*		*19 - 130*
Terphenyl-d14	*101*		*33 - 138*

Method: 8011 - EDB and DBCP in Water by Microextraction

Lab Sample ID: MB 400-609095/1-A
Matrix: Water
Analysis Batch: 609205

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 609095

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND		0.030	0.017	ug/L		01/19/23 10:05	01/19/23 16:05	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/19/23 10:05	01/19/23 16:05	1

Method: 8011 - EDB and DBCP in Water by Microextraction (Continued)

Lab Sample ID: MB 400-609095/1-A
Matrix: Water
Analysis Batch: 609205

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 609095

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	118		51 - 149	01/19/23 10:05	01/19/23 16:05	1

Lab Sample ID: LCS 400-609095/2-A
Matrix: Water
Analysis Batch: 609205

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 609095

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,2-D bromo-3-Chloropropane			0.101	0.157	*+	ug/L		156	60 - 140		
1,2-D bromoethane			0.101	0.101		ug/L		100	60 - 140		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	131		51 - 149

Lab Sample ID: LCSD 400-609095/3-A
Matrix: Water
Analysis Batch: 609205

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 609095

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-D bromo-3-Chloropropane			0.101	0.155	*+	ug/L		154	60 - 140	1	30
1,2-D bromoethane			0.101	0.0966		ug/L		96	60 - 140	4	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	131		51 - 149

Lab Sample ID: 400-231616-3 MS
Matrix: Water
Analysis Batch: 609205

Client Sample ID: MW5-ROX-011023
Prep Type: Total/NA
Prep Batch: 609095

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
1,2-D bromo-3-Chloropropane	ND	*+ F1	0.103	0.159	F1	ug/L		155	10 - 150		
1,2-D bromoethane	ND		0.103	0.101		ug/L		98	39 - 150		

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene	127	p	51 - 149

Lab Sample ID: 400-231616-3 MSD
Matrix: Water
Analysis Batch: 609205

Client Sample ID: MW5-ROX-011023
Prep Type: Total/NA
Prep Batch: 609095

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-D bromo-3-Chloropropane	ND	*+ F1	0.0994	0.168	F1	ug/L		169	10 - 150	6	20
1,2-D bromoethane	ND		0.0996	0.106		ug/L		107	39 - 150	5	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene	129	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 (_____)

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
Melissa Remiger	25278	DATE: 1/10/2023
PO #	**GSAP Project ID**	PAGE: 1 of 2
60697537 – 3.1.2	USPC/00114/R/02	

SAMPLING COMPANY:	LOG CODE:	SITE ADDRESS: Street and City	State	AECOM Project / Task Number:
AECOM		900 South Central Ave; ROXANA	IL	Roxana Quarterly GW 60697537 – 3.1.2

ADDRESS:	EDF DELIVERABLE TO (Name, Company, Office Location):	PHONE NO.:	E-MAIL:	AECOM Other ID:
100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA	Melissa Remiger - please see special instructions	314-802-1207	melissa.remiger@aecom.com	

PROJECT CONTACT (Hardcopy or PDF Report to):	SAMPLER NAME(S) (Print):	LAB USE ONLY
Melissa Remiger, Mary Massa, Brett Howell	Mary Massa, Joe Mayer, Travis Jenkins	

TELEPHONE:	FAX:	Bill To Contact E-MAIL:
314-429-0100	314-429-0462	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 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT C°	Cooler #1	Cooler #2	Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :

Email reports to: melissa.remiger@aecom.com; mary.massa@aecom.com; brett.howell@aecom.com

- Please include "J" values on Reports.
- Please provide sample receipt upon login.
- Please send EQuiS EDDs to EDDSubmissions@aecomshell.com; loredana.filimon@aecom.com

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS
60697537 – 3.1.2

400-231616 COC

FIELD NOTES:

TEMPERATURE ON RECEIPT C°
0.0°C IR9
1.0°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	8011 EDB + DBCP	SVOC 8270	PAH 8270LL
	TB-ROX-011023-8260-A	1/10/2023	0000	Water	2					2	X			
	TB-ROX-011023-8011-A	1/10/2023	0000	Water	2					2		X		
	MW5-ROX-011023	1/10/2023	0925	Water	6			2		8	X	X	X	X
	MW5-ROX-011023-MS	1/10/2023	0925	Water	6			2		8	X	X	X	X
	MW5-ROX-011023-MSD	1/10/2023	0925	Water	6			2		8	X	X	X	X

1/10/23

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
MARY MASSA	FEDEX: 5564 3932 8568, 5564 3932 8579	1/10/2023	1600
Relinquished by: (Signature)	Received by: (Signature)	Date: 1/11-23	Time: 8:57
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Version: 13Oct22

CUSTODY SEALS: 1745812, 1745813, 1745814, 1745815

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 (_____)

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
Melissa Remiger	25278	DATE: 1/10/2023
PO #	**GSAP Project ID**	PAGE: 2 of 2
60697537 – 3.1.2	USPC/00114/R/02	

SAMPLING COMPANY:	LOG CODE:	SITE ADDRESS: Street and City	State	AECOM Project / Task Number:
AECOM		900 South Central Ave; ROXANA	IL	Roxana Quarterly GW 60697537 – 3.1.2

ADDRESS:	EDF DELIVERABLE TO (Name, Company, Office Location):	PHONE NO.:	E-MAIL:	AECOM Other ID:
100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA	Melissa Remiger - please see special instructions	314-802-1207	melissa.remiger@aecom.com	

PROJECT CONTACT (Hardcopy or PDF Report to):	SAMPLER NAME(S) (Print):	LAB USE ONLY
Melissa Remiger, Mary Massa, Brett Howell	T. Jones, S. Beadle	

TELEPHONE:	FAX:	Bill To Contact E-MAIL:
314-429-0100	314-429-0462	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 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT C°	Cooler #1	Cooler #2	Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :

Email reports to: melissa.remiger@aecom.com; mary.massa@aecom.com; brett.howell@aecom.com

- Please include "J" values on Reports.
- Please provide sample receipt upon login.
- Please send EQuiS EDDs to EDDSubmissions@aecomshell.com; loredana.filimon@aecom.com

- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ EDD NOT NEEDED
- ☑ RECEIPT VERIFICATION REQUESTED
- ☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS
60697537 – 3.1.2

FIELD NOTES:

TEMPERATURE ON RECEIPT C°
0.0°C IR9
1.0°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	8011 EDB + DBCP	SVOC 8270	PAH 8270LL
	TB-ROX-011023-8260-B	1/10/2023	0000	Water	2					2	X			
	TB-ROX-011023-8011-B	1/10/2023	0000	Water	2					2		X		
	MW22-ROX-011023-EB	1/10/2023	0925	Water	6			2		8	X	X	X	X
	MW22-ROX-011023	1/10/2023	0955	Water	6			2		8	X	X	X	X
	ROST4PZE-ROX-011023	1/10/2023	1050	Water	6			2		8	X	X	X	X
	P74-ROX-011023	1/10/2023	1245	Water	6			2		8	X	X	X	X
	P57-ROX-011023	1/10/2023	1340	Water	6			2		8	X	X	X	X

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Sam Beadle	FEDEX: See page 1	1/10/2023	1600
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
		1-11-23	8:57
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Version: 13Oct22

CUSTODY SEALS: See page 1

Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 400-231616-1

Login Number: 231616
List Number: 1
Creator: Whitley, Adrian

List Source: Eurofins 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.	N/A	
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	0.0, 1.0°C IR9
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.	N/A	
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.
Job ID: 400-231616-1
Project/Site: ROXANA QUARTERLY GW

Laboratory: Eurofins Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	06-30-23
ANAB	ISO/IEC 17025	L2471	02-22-26
Arkansas DEQ	State	88-0689	09-01-23
California	State	2510	06-30-23
Florida	NELAP	E81010	06-30-23
Georgia	State	E81010(FL)	06-30-23
Illinois	NELAP	200041	10-09-23
Kansas	NELAP	E-10253	10-31-23
Kentucky (UST)	State	53	06-30-23
Louisiana (All)	NELAP	30976	06-30-23
Louisiana (DW)	State	LA017	12-31-23
Maryland	State	233	09-30-23
Michigan	State	9912	06-30-23
North Carolina (WW/SW)	State	314	12-31-23
Oklahoma	NELAP	9810	08-31-23
Pennsylvania	NELAP	68-00467	01-31-24
South Carolina	State	96026	06-30-23
Tennessee	State	TN02907	06-30-23
Texas	NELAP	T104704286	09-30-23
US Fish & Wildlife	US Federal Programs	A22340	06-30-23
USDA	US Federal Programs	FLGNV23001	01-08-26
USDA	US Federal Programs	P330-21-00056	05-17-24
Virginia	NELAP	460166	06-14-23
West Virginia DEP	State	136	03-31-23

Roxana Groundwater Quarterly – 1st Quarter 2023 Data Review

Laboratory SDG: 400-231619-1-Rev.1

Data Reviewer: Andreia Vladimirescu

Peer Reviewer: Cheyana Cokley

Date Reviewed: 03/14/2023

Guidance: USEPA National Functional Guidelines for Organic Superfund Methods Data Review 2020

Sample Identification	Sample Identification
TB-ROX-011023-8260-BP	TB-ROX-011023-8011-BP
MW23-ROX-011023	

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 that several PAHs were detected in the method blank. Several SVOC LCS/LCSD recoveries, and/or SVOC LCS/LCSD RPDs, were outside evaluation criteria. The continuing calibration verification (CCV) for hexachlorocyclopentadiene was outside evaluation criteria, biased low. These issues are addressed further in the appropriate sections of this data review. The laboratory report was revised on February 10, 2023, to include missing ICV data associated with PAHs.

Three of 70 (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
MB 400-607999/1-A	PAHs	Benzo[a]pyrene	0.153 µg/L
MB 400-607999/1-A	PAHs	Benzo[b]fluoranthene	0.149 µg/L
MB 400-607999/1-A	PAHs	Benzo[k]fluoranthene	0.113 µg/L

Analytical data that was 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 400-607999/4-A/5-A	SVOCs	Benzenethiol	**5/6**	7	10-120/30
LCS/LCSD 400-607999/2-A/3-A	SVOCs	4-Chloroaniline	**124/127**	2	26-120/30
LCS/LCSD 400-607999/2-A/3-A	SVOCs	3,3'-Dichlorobenzidine	**161/162**	1	36-132/30
LCS/LCSD 400-607999/2-A/3-A	SVOCs	3-Nitroaniline	**132/135**	2	37-127/30
LCS/LCSD 400-607999/2-A	SVOCs	1,4-Dioxane	36/68	**61**	31-120/30
LCS/LCSD 400-609095/2-A/3-A	VOCs by 8011	1,2-Dibromo-3-Chloropropane	**156/154**	1	60-140/30

Analytical data that required qualification based on LCS/LCSD data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Professional judgment was used to qualify, however not reject, data associated with benzenethiol below evaluation criteria; benzenethiol has been identified as a poor performing analyte under Method 8270. Analytical data associated with LCS/LCSD RPD alone outside evaluation criteria did not require qualification.

Sample ID	Parameter	Analyte	Qualification
MW23-ROX-011023	SVOCs	Benzenethiol	**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 verification for hexachlorocyclopentadiene was outside evaluation criteria, biased low. Analytes are qualified as summarized in the following table.

Sample ID	Parameter	Analyte	Qualification
MW23-ROX-011023	SVOCs	Hexachlorocyclopentadiene	**UJ**

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Melissa Remiger
AECOM Technical Services Inc.
100 N. Broadway
20th Floor
St. Louis, Missouri 63102
Generated 1/25/2023 9:51:04 AM

JOB DESCRIPTION

ROXANA QUARTERLY GW

JOB NUMBER

400-231619-1

Eurofins Pensacola
3355 McLemore Drive
Pensacola FL 32514

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet all NELAP requirements for accredited parameters, unless otherwise noted, and relate only to the referenced samples. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval from the laboratory. For questions please contact the Project Manager at the e-mail address listed on this page, or the telephone number at the bottom of the page. Eurofins Environment Testing Southeast LLC, Pensacola Certifications and Approvals: Alabama (40150), Arizona (AZ0710), Arkansas (88-0689), Florida (E81010), Illinois (200041), Iowa (367), Kansas (E-10253), Kentucky UST (53), Louisiana (30748), Maryland (233), Massachusetts (M-FL094), Michigan (9912), New Hampshire (250510), New Jersey (FL006), North Carolina (314), Oklahoma (9810), Pennsylvania (68-00467), Rhode Island (LAO00307), South Carolina (96026), Tennessee (TN02907), Texas (T104704286-10-2), Virginia (00008), Washington (C2043), West Virginia (136), USDA Foreign Soil Permit (P330-08-00006).

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization

Generated
1/25/2023 9:51:04 AM

Authorized for release by
Leah Klingensmith, Senior Project Manager
Leah.Klingensmith@et.eurofinsus.com
(615)301-5038

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Job ID: 400-231619-1

Laboratory: Eurofins Pensacola

Narrative

Job Narrative
400-231619-1

Receipt
The samples were received on 1/11/2023 8:57 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.0°C and 1.0°C

GC/MS VOA
Method 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-011023-8260-BP (400-231619-1) and MW23-ROX-011023 (400-231619-3). The requested target analyte list includes 2-Chloroethyl vinyl ether, Acrolein and Acrylonitrile, which are acid-labile compounds 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 8270D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 400-607999 and analytical batch 400-608161 recovered outside control limits for the following analytes: 3,3'-Dichlorobenzidine, 3-Nitroaniline and 4-Chloroaniline. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 400-607999 and analytical batch 400-608161 recovered outside control limits for the following analytes: 1,4-Dioxane.

Method 8270D: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 400-607999 and analytical batch 400-608161 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 8270D: The continuing calibration verification (CCV) associated with batch 400-608382 recovered outside acceptance criteria, low biased, for Hexachlorocyclopentadiene. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8270D_LL: The method blank for preparation batch 400-607999 and analytical batch 400-608245 contained Benzo[b]fluoranthene, Benzo[k]fluoranthene and Benzo[a]pyrene 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.

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

GC Semi VOA
Method 8011: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 400-609095 and analytical batch 400-609205 recovered outside control limits for the following analytes: 1,2-Dibromo-3-Chloropropane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

Sample Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231619-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-231619-1	TB-ROX-011023-8260-BP	Water	01/10/23 12:00	01/11/23 08:57
400-231619-2	TB-ROX-011023-8011-BP	Water	01/10/23 12:00	01/11/23 08:57
400-231619-3	MW23-ROX-011023	Water	01/10/23 12:10	01/11/23 08:57

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231619-1

Client Sample ID: TB-ROX-011023-8260-BP — Lab Sample ID: 400-231619-1

No Detections.

Client Sample ID: TB-ROX-011023-8011-BP — Lab Sample ID: 400-231619-2

No Detections.

Client Sample ID: MW23-ROX-011023 — Lab Sample ID: 400-231619-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	0.32	J	1.0	0.22	ug/L	1		8260B	Total/NA
Acenaphthylene	0.10	J	0.21	0.046	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	0.12	J	0.21	0.062	ug/L	1		8270D LL	Total/NA
Diethyl phthalate	0.93	J	10	0.25	ug/L	1		8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231619-1

Client Sample ID: TB-ROX-011023-8260-BP
Date Collected: 01/10/23 12:00
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231619-1
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/15/23 14:26	1
Acrolein	ND		20	3.3	ug/L			01/15/23 14:26	1
Acrylonitrile	ND		10	2.8	ug/L			01/15/23 14:26	1
Benzene	ND		1.0	0.13	ug/L			01/15/23 14:26	1
Bromobenzene	ND		1.0	0.54	ug/L			01/15/23 14:26	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/15/23 14:26	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/15/23 14:26	1
Bromoform	ND		5.0	0.25	ug/L			01/15/23 14:26	1
Bromomethane	ND		1.0	0.98	ug/L			01/15/23 14:26	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/15/23 14:26	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/15/23 14:26	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/15/23 14:26	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/15/23 14:26	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/15/23 14:26	1
Chloroethane	ND		1.0	0.76	ug/L			01/15/23 14:26	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/15/23 14:26	1
Chloroform	ND		1.0	1.0	ug/L			01/15/23 14:26	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/15/23 14:26	1
Chloromethane	ND		1.0	0.32	ug/L			01/15/23 14:26	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/15/23 14:26	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/15/23 14:26	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/15/23 14:26	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/15/23 14:26	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/15/23 14:26	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/15/23 14:26	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/15/23 14:26	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/15/23 14:26	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/15/23 14:26	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 14:26	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 14:26	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 14:26	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/15/23 14:26	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/15/23 14:26	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/15/23 14:26	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/15/23 14:26	1
2-Hexanone	ND		25	1.4	ug/L			01/15/23 14:26	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/15/23 14:26	1
Methylene bromide	ND		5.0	0.22	ug/L			01/15/23 14:26	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/15/23 14:26	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/15/23 14:26	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/15/23 14:26	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/15/23 14:26	1
Naphthalene	ND		5.0	3.0	ug/L			01/15/23 14:26	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/15/23 14:26	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/15/23 14:26	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/15/23 14:26	1
o-Xylene	ND		5.0	0.60	ug/L			01/15/23 14:26	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/15/23 14:26	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/15/23 14:26	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231619-1

Client Sample ID: TB-ROX-011023-8260-BP
Date Collected: 01/10/23 12:00
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231619-1
Matrix: Water

Method: SW846 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			01/15/23 14:26	1
Styrene	ND		1.0	1.0	ug/L			01/15/23 14:26	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/15/23 14:26	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/15/23 14:26	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/15/23 14:26	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/15/23 14:26	1
Toluene	ND		1.0	0.41	ug/L			01/15/23 14:26	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/15/23 14:26	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/15/23 14:26	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/15/23 14:26	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/15/23 14:26	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/15/23 14:26	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/15/23 14:26	1
Trichloroethene	ND		1.0	0.15	ug/L			01/15/23 14:26	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/15/23 14:26	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/15/23 14:26	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/15/23 14:26	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/15/23 14:26	1
Vinyl acetate	ND		25	0.93	ug/L			01/15/23 14:26	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/15/23 14:26	1
Xylenes, Total	ND		10	1.6	ug/L			01/15/23 14:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*72 - 119*		*01/15/23 14:26*	*1*
Dibromofluoromethane	*106*		*75 - 126*		*01/15/23 14:26*	*1*
Toluene-d8 (Surr)	*93*		*64 - 132*		*01/15/23 14:26*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231619-1

Client Sample ID: TB-ROX-011023-8011-BP
Date Collected: 01/10/23 12:00
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231619-2
Matrix: Water

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.030	0.017	ug/L		01/19/23 10:05	01/20/23 09:49	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/19/23 10:05	01/20/23 09:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*125*	*p*	*51 - 149*	*01/19/23 10:05*	*01/20/23 09:49*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231619-1

Client Sample ID: MW23-ROX-011023
Date Collected: 01/10/23 12:10
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231619-3
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/15/23 16:11	1
Acrolein	ND		20	3.3	ug/L			01/15/23 16:11	1
Acrylonitrile	ND		10	2.8	ug/L			01/15/23 16:11	1
Benzene	ND		1.0	0.13	ug/L			01/15/23 16:11	1
Bromobenzene	ND		1.0	0.54	ug/L			01/15/23 16:11	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/15/23 16:11	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/15/23 16:11	1
Bromoform	ND		5.0	0.25	ug/L			01/15/23 16:11	1
Bromomethane	ND		1.0	0.98	ug/L			01/15/23 16:11	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/15/23 16:11	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/15/23 16:11	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/15/23 16:11	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/15/23 16:11	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/15/23 16:11	1
Chloroethane	ND		1.0	0.76	ug/L			01/15/23 16:11	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/15/23 16:11	1
Chloroform	ND		1.0	1.0	ug/L			01/15/23 16:11	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/15/23 16:11	1
Chloromethane	ND		1.0	0.32	ug/L			01/15/23 16:11	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/15/23 16:11	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/15/23 16:11	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/15/23 16:11	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/15/23 16:11	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/15/23 16:11	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/15/23 16:11	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/15/23 16:11	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/15/23 16:11	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/15/23 16:11	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 16:11	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 16:11	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 16:11	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/15/23 16:11	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/15/23 16:11	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/15/23 16:11	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/15/23 16:11	1
2-Hexanone	ND		25	1.4	ug/L			01/15/23 16:11	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/15/23 16:11	1
Methylene bromide	ND		5.0	0.22	ug/L			01/15/23 16:11	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/15/23 16:11	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/15/23 16:11	1
Methyl tert-butyl ether	**0.32**	**J**	1.0	0.22	ug/L			01/15/23 16:11	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/15/23 16:11	1
Naphthalene	ND		5.0	3.0	ug/L			01/15/23 16:11	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/15/23 16:11	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/15/23 16:11	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/15/23 16:11	1
o-Xylene	ND		5.0	0.60	ug/L			01/15/23 16:11	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/15/23 16:11	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/15/23 16:11	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231619-1

Client Sample ID: MW23-ROX-011023

Date Collected: 01/10/23 12:10
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231619-3

Matrix: Water

Method: SW846 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			01/15/23 16:11	1
Styrene	ND		1.0	1.0	ug/L			01/15/23 16:11	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/15/23 16:11	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/15/23 16:11	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/15/23 16:11	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/15/23 16:11	1
Toluene	ND		1.0	0.41	ug/L			01/15/23 16:11	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/15/23 16:11	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/15/23 16:11	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/15/23 16:11	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/15/23 16:11	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/15/23 16:11	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/15/23 16:11	1
Trichloroethene	ND		1.0	0.15	ug/L			01/15/23 16:11	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/15/23 16:11	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/15/23 16:11	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/15/23 16:11	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/15/23 16:11	1
Vinyl acetate	ND		25	0.93	ug/L			01/15/23 16:11	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/15/23 16:11	1
Xylenes, Total	ND		10	1.6	ug/L			01/15/23 16:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*72 - 119*		*01/15/23 16:11*	*1*
Dibromofluoromethane	*107*		*75 - 126*		*01/15/23 16:11*	*1*
Toluene-d8 (Surr)	*93*		*64 - 132*		*01/15/23 16:11*	*1*

Method: SW846 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	0.033	ug/L		01/12/23 08:30	01/13/23 18:18	1
Acenaphthylene	**0.10**	**J**	0.21	0.046	ug/L		01/12/23 08:30	01/13/23 18:18	1
Anthracene	ND		0.21	0.033	ug/L		01/12/23 08:30	01/13/23 18:18	1
Benzo[a]anthracene	ND		0.21	0.047	ug/L		01/12/23 08:30	01/13/23 18:18	1
Benzo[a]pyrene	ND		0.21	0.043	ug/L		01/12/23 08:30	01/13/23 18:18	1
Benzo[b]fluoranthene	ND		0.21	0.035	ug/L		01/12/23 08:30	01/13/23 18:18	1
Benzo[g,h,i]perylene	ND		0.21	0.13	ug/L		01/12/23 08:30	01/13/23 18:18	1
Benzo[k]fluoranthene	ND		0.21	0.10	ug/L		01/12/23 08:30	01/13/23 18:18	1
Chrysene	ND		0.21	0.076	ug/L		01/12/23 08:30	01/13/23 18:18	1
Dibenz(a,h)anthracene	ND		0 21	0 051	ug/L		01/12/23 08 30	01/13/23 18 18	1
Fluoranthene	ND		0.21	0.070	ug/L		01/12/23 08:30	01/13/23 18:18	1
Fluorene	ND		0.21	0.11	ug/L		01/12/23 08:30	01/13/23 18:18	1
Indeno[1,2,3-cd]pyrene	ND		0.21	0.044	ug/L		01/12/23 08:30	01/13/23 18:18	1
1-Methylnaphthalene	ND		0.21	0.076	ug/L		01/12/23 08:30	01/13/23 18:18	1
2-Methylnaphthalene	**0.12**	**J**	0.21	0.062	ug/L		01/12/23 08:30	01/13/23 18:18	1
Phenanthrene	ND		0.21	0.037	ug/L		01/12/23 08:30	01/13/23 18:18	1
Pyrene	ND		0.21	0.041	ug/L		01/12/23 08:30	01/13/23 18:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*113*		*15 - 122*	*01/12/23 08:30*	*01/13/23 18:18*	*1*
Nitrobenzene-d5	*79*		*19 - 130*	*01/12/23 08:30*	*01/13/23 18:18*	*1*

Client Sample ID: MW23-ROX-011023
Date Collected: 01/10/23 12:10
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231619-3
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*99*		*33 - 138*	*01/12/23 08:30*	*01/13/23 18:18*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.9	ug/L		01/12/23 08:30	01/13/23 19:40	1
Benzenethiol	ND	*- UJ	10	1.7	ug/L		01/12/23 08:30	01/13/23 19:40	1
Benzoic acid	ND		31	7.5	ug/L		01/12/23 08:30	01/13/23 19:40	1
Benzyl alcohol	ND		10	2.1	ug/L		01/12/23 08:30	01/13/23 19:40	1
Bis(2-chloroethoxy)methane	ND		10	0.16	ug/L		01/12/23 08:30	01/13/23 19:40	1
Bis(2-chloroethyl)ether	ND		10	2.8	ug/L		01/12/23 08:30	01/13/23 19:40	1
bis (2-chloroisopropyl) ether	ND		10	0.16	ug/L		01/12/23 08:30	01/13/23 19:40	1
Bis(2-ethylhexyl) phthalate	ND		10	5.1	ug/L		01/12/23 08:30	01/13/23 19:40	1
4-Bromophenyl phenyl ether	ND		10	0.21	ug/L		01/12/23 08:30	01/13/23 19:40	1
Butyl benzyl phthalate	ND		10	0.19	ug/L		01/12/23 08:30	01/13/23 19:40	1
4-Chloroaniline	ND	*+	10	3.5	ug/L		01/12/23 08:30	01/13/23 19:40	1
4-Chloro-3-methylphenol	ND		10	3.9	ug/L		01/12/23 08:30	01/13/23 19:40	1
2-Chloronaphthalene	ND		10	0.14	ug/L		01/12/23 08:30	01/13/23 19:40	1
2-Chlorophenol	ND		10	2.3	ug/L		01/12/23 08:30	01/13/23 19:40	1
4-Chlorophenyl phenyl ether	ND		10	2.1	ug/L		01/12/23 08:30	01/13/23 19:40	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/12/23 08:30	01/13/23 19:40	1
Dibenzofuran	ND		10	0.17	ug/L		01/12/23 08:30	01/13/23 19:40	1
3,3'-Dichlorobenzidine	ND	*+	10	2.7	ug/L		01/12/23 08:30	01/13/23 19:40	1
2,4-Dichlorophenol	ND		10	3.1	ug/L		01/12/23 08:30	01/13/23 19:40	1
Diethyl phthalate	**0.93**	**J**	10	0.25	ug/L		01/12/23 08:30	01/13/23 19:40	1
2,4-Dimethylphenol	ND		10	3.6	ug/L		01/12/23 08:30	01/13/23 19:40	1
Dimethyl phthalate	ND		10	0.17	ug/L		01/12/23 08:30	01/13/23 19:40	1
Di-n-butyl phthalate	ND		10	2.8	ug/L		01/12/23 08:30	01/13/23 19:40	1
4,6-Dinitro-ortho-cresol	ND		10	1.6	ug/L		01/12/23 08:30	01/13/23 19:40	1
2,4-Dinitrophenol	ND		31	3.5	ug/L		01/12/23 08:30	01/13/23 19:40	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		01/12/23 08:30	01/13/23 19:40	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		01/12/23 08:30	01/13/23 19:40	1
Di-n-octyl phthalate	ND		10	0.17	ug/L		01/12/23 08:30	01/13/23 19:40	1
1,4-Dioxane	ND	*1	10	1.0	ug/L		01/12/23 08:30	01/13/23 19:40	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/12/23 08:30	01/13/23 19:40	1
Hexachlorobenzene	ND		10	0.17	ug/L		01/12/23 08:30	01/13/23 19:40	1
Hexachlorocyclopentadiene	ND	UJ	21	2.7	ug/L		01/12/23 08:30	01/13/23 19:40	1
Hexachloroethane	ND		10	4.3	ug/L		01/12/23 08:30	01/13/23 19:40	1
Indene	ND		10	1.0	ug/L		01/12/23 08:30	01/13/23 19:40	1
Isophorone	ND		10	0.14	ug/L		01/12/23 08:30	01/13/23 19:40	1
2-Methylphenol	ND		10	1.8	ug/L		01/12/23 08:30	01/13/23 19:40	1
3 & 4 Methylphenol	ND		21	0.40	ug/L		01/12/23 08:30	01/13/23 19:40	1
2-Nitroaniline	ND		10	2.3	ug/L		01/12/23 08:30	01/13/23 19:40	1
3-Nitroaniline	ND	*+	10	1.8	ug/L		01/12/23 08:30	01/13/23 19:40	1
4-Nitroaniline	ND		10	1.5	ug/L		01/12/23 08:30	01/13/23 19:40	1
Nitrobenzene	ND		10	0.13	ug/L		01/12/23 08:30	01/13/23 19:40	1
2-Nitrophenol	ND		10	5.3	ug/L		01/12/23 08:30	01/13/23 19:40	1
4-Nitrophenol	ND		10	2.2	ug/L		01/12/23 08:30	01/13/23 19:40	1
N-Nitrosodimethylamine	ND		10	3.6	ug/L		01/12/23 08:30	01/13/23 19:40	1

Client Sample ID: MW23-ROX-011023

Date Collected: 01/10/23 12:10
Date Received: 01/11/23 08:57

Lab Sample ID: 400-231619-3

Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		10	3.4	ug/L		01/12/23 08:30	01/13/23 19:40	1
N-Nitrosodiphenylamine	ND		10	0.18	ug/L		01/12/23 08:30	01/13/23 19:40	1
Pentachlorophenol	ND		21	1.4	ug/L		01/12/23 08:30	01/13/23 19:40	1
Phenol	ND		10	2.7	ug/L		01/12/23 08:30	01/13/23 19:40	1
Pyridine	ND		10	3.3	ug/L		01/12/23 08:30	01/13/23 19:40	1
Quinoline	ND		10	4.6	ug/L		01/12/23 08:30	01/13/23 19:40	1
2,4,5-Trichlorophenol	ND		10	3.8	ug/L		01/12/23 08:30	01/13/23 19:40	1
2,4,6-Trichlorophenol	ND		10	3.6	ug/L		01/12/23 08:30	01/13/23 19:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*115*		*46 - 124*	*01/12/23 08:30*	*01/13/23 19:40*	*1*
2-Fluorophenol	*23*		*13 - 113*	*01/12/23 08:30*	*01/13/23 19:40*	*1*
Nitrobenzene-d5	*104*		*36 - 126*	*01/12/23 08:30*	*01/13/23 19:40*	*1*
Phenol-d5	*66*		*17 - 127*	*01/12/23 08:30*	*01/13/23 19:40*	*1*
Terphenyl-d14	*108*		*44 - 149*	*01/12/23 08:30*	*01/13/23 19:40*	*1*
2,4,6-Tribromophenol	*97*		*26 - 150*	*01/12/23 08:30*	*01/13/23 19:40*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.029	0.017	ug/L		01/19/23 10:05	01/20/23 10:09	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/19/23 10:05	01/20/23 10:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*124*	*p*	*51 - 149*	*01/19/23 10:05*	*01/20/23 10:09*	*1*

Definitions/Glossary

Client: AECOM Technical Services Inc. Job ID: 400-231619-1
Project/Site: ROXANA QUARTERLY GW

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
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds 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
*+	LCS and/or LCSD is outside acceptance limits, high biased.
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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231619-1

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	(72-119)	(75-126)	(64-132)
400-231619-1	TB-ROX-011023-8260-BP	98	106	93
400-231619-3	MW23-ROX-011023	96	107	93
LCS 400-608552/1002	Lab Control Sample	95	104	93
MB 400-608552/4	Method Blank	97	106	92

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	(46-124)	(13-113)	(36-126)	(17-127)	(44-149)	(26-150)
400-231619-3	MW23-ROX-011023	115	23	104	66	108	97
LCS 400-607999/2-A	Lab Control Sample	105	41	112	82	111	100
LCS 400-607999/4-A	Lab Control Sample	116	33	104	79	126	56
LCSD 400-607999/3-A	Lab Control Sample Dup	111	36	117	86	122	107
LCSD 400-607999/5-A	Lab Control Sample Dup	116	47	104	85	123	64
MB 400-607999/1-A	Method Blank	114	14	102	59	121	72

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)		
		FBP	NBZ	TPHL
Lab Sample ID	Client Sample ID	(15-122)	(19-130)	(33-138)
400-231619-3	MW23-ROX-011023	113	79	99
LCS 400-607999/2-A	Lab Control Sample	102	70	104
LCSD 400-607999/3-A	Lab Control Sample Dup	104	66	99
MB 400-607999/1-A	Method Blank	110	74	118

Surrogate Legend

FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14

Surrogate Summary

Client: AECOM Technical Services Inc.
Job ID: 400-231619-1
Project/Site: ROXANA QUARTERLY GW

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)								
400-231619-2	TB-ROX-011023-8011-BP	125 p								
400-231619-3	MW23-ROX-011023	124 p								
LCS 400-609095/2-A	Lab Control Sample	131								
LCSD 400-609095/3-A	Lab Control Sample Dup	131								
MB 400-609095/1-A	Method Blank	118								

Surrogate Legend

BFB = 4-Bromofluorobenzene

Method Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231619-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	EET PEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	EET PEN
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	EET PEN
8011	EDB and DBCP in Water by Microextraction	EPA	EET PEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	EET PEN
5030B	Purge and Trap	SW846	EET PEN
8011	Microextraction	SW846	EET 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:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231619-1

Client Sample ID: TB-ROX-011023-8260-BP
Lab Sample ID: 400-231619-1
Date Collected: 01/10/23 12:00
Matrix: Water
Date Received: 01/11/23 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	608552	01/15/23 14:26	BPO	EET PEN

Client Sample ID: TB-ROX-011023-8011-BP
Lab Sample ID: 400-231619-2
Date Collected: 01/10/23 12:00
Matrix: Water
Date Received: 01/11/23 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			34.7 mL	35 mL	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/20/23 09:49	DS	EET PEN

Client Sample ID: MW23-ROX-011023
Lab Sample ID: 400-231619-3
Date Collected: 01/10/23 12:10
Matrix: Water
Date Received: 01/11/23 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	608552	01/15/23 16:11	BPO	EET PEN
Total/NA	Prep	3520C			243.8 mL	1 mL	607999	01/12/23 08:30	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608382	01/13/23 19:40	S1B	EET PEN
Total/NA	Prep	3520C			243.8 mL	1 mL	607999	01/12/23 08:30	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608329	01/13/23 18:18	KJA	EET PEN
Total/NA	Prep	8011			35.6 mL	35 mL	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/20/23 10:09	DS	EET PEN

Client Sample ID: Method Blank
Lab Sample ID: MB 400-607999/1-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			250 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608161	01/12/23 14:11	S1B	EET PEN
Total/NA	Prep	3520C			250 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	608245	01/12/23 16:09	PP1	EET PEN

Client Sample ID: Method Blank
Lab Sample ID: MB 400-608552/4
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	608552	01/15/23 11:21	BPO	EET PEN

Client Sample ID: Method Blank
Lab Sample ID: MB 400-609095/1-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	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/19/23 16:05	DS	EET PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-607999/2-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			250 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608161	01/12/23 15:18	S1B	EET PEN
Total/NA	Prep	3520C			250 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D LL		5	0.4 mL	0.4 mL	608245	01/12/23 16:26	PP1	EET PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-607999/4-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			250 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608161	01/12/23 14:33	S1B	EET PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-608552/1002

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	608552	01/15/23 10:19	BPO	EET PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-609095/2-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	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/19/23 16:25	DS	EET PEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-607999/3-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			250 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608161	01/12/23 15:40	S1B	EET PEN
Total/NA	Prep	3520C			250 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D LL		5	0.4 mL	0.4 mL	608245	01/12/23 16:43	PP1	EET PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231619-1

Client Sample ID: Lab Control Sample Dup
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCSD 400-607999/5-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			250 mL	1 mL	607999	01/11/23 08:49	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	608161	01/12/23 14:55	S1B	EET PEN

Client Sample ID: Lab Control Sample Dup
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCSD 400-609095/3-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	609095	01/19/23 10:05	DS	EET PEN
Total/NA	Analysis	8011		1			609205	01/19/23 16:45	DS	EET PEN

Laboratory References:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

GC/MS VOA

Analysis Batch: 608552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231619-1	TB-ROX-011023-8260-BP	Total/NA	Water	8260B	
400-231619-3	MW23-ROX-011023	Total/NA	Water	8260B	
MB 400-608552/4	Method Blank	Total/NA	Water	8260B	
LCS 400-608552/1002	Lab Control Sample	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 607999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231619-3	MW23-ROX-011023	Total/NA	Water	3520C	
MB 400-607999/1-A	Method Blank	Total/NA	Water	3520C	
LCS 400-607999/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 400-607999/4-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-607999/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
LCSD 400-607999/5-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 608161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-607999/1-A	Method Blank	Total/NA	Water	8270D	607999
LCS 400-607999/2-A	Lab Control Sample	Total/NA	Water	8270D	607999
LCS 400-607999/4-A	Lab Control Sample	Total/NA	Water	8270D	607999
LCSD 400-607999/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	607999
LCSD 400-607999/5-A	Lab Control Sample Dup	Total/NA	Water	8270D	607999

Analysis Batch: 608245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-607999/1-A	Method Blank	Total/NA	Water	8270D LL	607999
LCS 400-607999/2-A	Lab Control Sample	Total/NA	Water	8270D LL	607999
LCSD 400-607999/3-A	Lab Control Sample Dup	Total/NA	Water	8270D LL	607999

Analysis Batch: 608329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231619-3	MW23-ROX-011023	Total/NA	Water	8270D LL	607999

Analysis Batch: 608382

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231619-3	MW23-ROX-011023	Total/NA	Water	8270D	607999

GC Semi VOA

Prep Batch: 609095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231619-2	TB-ROX-011023-8011-BP	Total/NA	Water	8011	
400-231619-3	MW23-ROX-011023	Total/NA	Water	8011	
MB 400-609095/1-A	Method Blank	Total/NA	Water	8011	
LCS 400-609095/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 400-609095/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 609205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231619-2	TB-ROX-011023-8011-BP	Total/NA	Water	8011	609095
400-231619-3	MW23-ROX-011023	Total/NA	Water	8011	609095

GC Semi VOA (Continued)

Analysis Batch: 609205 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-609095/1-A	Method Blank	Total/NA	Water	8011	609095
LCS 400-609095/2-A	Lab Control Sample	Total/NA	Water	8011	609095
LCSD 400-609095/3-A	Lab Control Sample Dup	Total/NA	Water	8011	609095

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-608552/4
Matrix: Water
Analysis Batch: 608552

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			01/15/23 11:21	1
Acrolein	ND		20	3.3	ug/L			01/15/23 11:21	1
Acrylonitrile	ND		10	2.8	ug/L			01/15/23 11:21	1
Benzene	ND		1.0	0.13	ug/L			01/15/23 11:21	1
Bromobenzene	ND		1.0	0.54	ug/L			01/15/23 11:21	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/15/23 11:21	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/15/23 11:21	1
Bromoform	ND		5.0	0.25	ug/L			01/15/23 11:21	1
Bromomethane	ND		1.0	0.98	ug/L			01/15/23 11:21	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/15/23 11:21	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/15/23 11:21	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/15/23 11:21	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/15/23 11:21	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/15/23 11:21	1
Chloroethane	ND		1.0	0.76	ug/L			01/15/23 11:21	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/15/23 11:21	1
Chloroform	ND		1.0	1.0	ug/L			01/15/23 11:21	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/15/23 11:21	1
Chloromethane	ND		1.0	0.32	ug/L			01/15/23 11:21	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/15/23 11:21	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/15/23 11:21	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/15/23 11:21	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/15/23 11:21	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/15/23 11:21	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/15/23 11:21	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/15/23 11:21	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/15/23 11:21	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/15/23 11:21	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 11:21	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 11:21	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/15/23 11:21	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/15/23 11:21	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/15/23 11:21	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/15/23 11:21	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/15/23 11:21	1
2-Hexanone	ND		25	1.4	ug/L			01/15/23 11:21	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/15/23 11:21	1
Methylene bromide	ND		5.0	0.22	ug/L			01/15/23 11:21	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/15/23 11:21	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/15/23 11:21	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/15/23 11:21	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/15/23 11:21	1
Naphthalene	ND		5.0	3.0	ug/L			01/15/23 11:21	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/15/23 11:21	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/15/23 11:21	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/15/23 11:21	1
o-Xylene	ND		5.0	0.60	ug/L			01/15/23 11:21	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/15/23 11:21	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-608552/4
Matrix: Water
Analysis Batch: 608552

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			01/15/23 11:21	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			01/15/23 11:21	1
Styrene	ND		1.0	1.0	ug/L			01/15/23 11:21	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/15/23 11:21	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/15/23 11:21	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/15/23 11:21	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/15/23 11:21	1
Toluene	ND		1.0	0.41	ug/L			01/15/23 11:21	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/15/23 11:21	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/15/23 11:21	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/15/23 11:21	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/15/23 11:21	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/15/23 11:21	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/15/23 11:21	1
Trichloroethene	ND		1.0	0.15	ug/L			01/15/23 11:21	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/15/23 11:21	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/15/23 11:21	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/15/23 11:21	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/15/23 11:21	1
Vinyl acetate	ND		25	0.93	ug/L			01/15/23 11:21	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/15/23 11:21	1
Xylenes, Total	ND		10	1.6	ug/L			01/15/23 11:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*72 - 119*		*01/15/23 11:21*	*1*
Dibromofluoromethane	*106*		*75 - 126*		*01/15/23 11:21*	*1*
Toluene-d8 (Surr)	*92*		*64 - 132*		*01/15/23 11:21*	*1*

Lab Sample ID: LCS 400-608552/1002
Matrix: Water
Analysis Batch: 608552

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	200	241		ug/L		121	43 - 160
Acrolein	500	606		ug/L		121	38 - 160
Acrylonitrile	500	581		ug/L		116	64 - 142
Benzene	50.0	52.6		ug/L		105	70 - 130
Bromobenzene	50.0	48.9		ug/L		98	70 - 132
Bromochloromethane	50.0	53.7		ug/L		107	70 - 130
Bromodichloromethane	50.0	51.7		ug/L		103	67 - 133
Bromoform	50.0	48.2		ug/L		96	57 - 140
Bromomethane	50.0	53.5		ug/L		107	10 - 160
2-Butanone (MEK)	200	217		ug/L		108	61 - 145
Carbon disulfide	50.0	47.1		ug/L		94	61 - 137
Carbon tetrachloride	50.0	52.0		ug/L		104	61 - 137
Chlorobenzene	50.0	50.5		ug/L		101	70 - 130
Dibromochloromethane	50.0	49.3		ug/L		99	67 - 135
Chloroethane	50.0	50.3		ug/L		101	55 - 141

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-608552/1002
Matrix: Water
Analysis Batch: 608552

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	57.3		ug/L		115	10 - 160
Chloroform	50.0	52.4		ug/L		105	69 - 130
1-Chlorohexane	50.0	53.3		ug/L		107	69 - 130
Chloromethane	50.0	46.1		ug/L		92	58 - 137
cis-1,2-Dichloroethene	50.0	54.9		ug/L		110	68 - 130
cis-1,3-Dichloropropene	50.0	54.3		ug/L		109	69 - 132
1,2-Dichlorobenzene	50.0	50.4		ug/L		101	67 - 130
1,3-Dichlorobenzene	50.0	50.1		ug/L		100	70 - 130
1,4-Dichlorobenzene	50.0	49.8		ug/L		100	70 - 130
Dichlorodifluoromethane	50.0	36.1		ug/L		72	41 - 146
1,1-Dichloroethane	50.0	54.3		ug/L		109	70 - 130
1,2-Dichloroethane	50.0	53.4		ug/L		107	69 - 130
1,1-Dichloroethene	50.0	51.2		ug/L		102	63 - 134
1,2-Dichloropropane	50.0	54.6		ug/L		109	70 - 130
1,3-Dichloropropane	50.0	51.6		ug/L		103	70 - 130
2,2-Dichloropropane	50.0	50.6		ug/L		101	52 - 135
1,1-Dichloropropene	50.0	53.0		ug/L		106	70 - 130
Ethylbenzene	50.0	49.7		ug/L		99	70 - 130
Ethyl methacrylate	50.0	50.0		ug/L		100	68 - 130
Hexachlorobutadiene	50.0	47.8		ug/L		96	53 - 140
2-Hexanone	200	228		ug/L		114	65 - 137
Isopropy benzene	50.0	50.3		ug/L		101	70 - 130
Methylene bromide	50.0	56.0		ug/L		112	70 - 130
Methylene Chloride	50.0	52.6		ug/L		105	66 - 135
4-Methyl-2-pentanone (MIBK)	200	242		ug/L		121	69 - 138
Methyl tert-butyl ether	50.0	49.9		ug/L		100	66 - 130
m-Xylene & p-Xylene	50.0	49.1		ug/L		98	70 - 130
Naphthalene	50.0	51.0		ug/L		102	47 - 149
n-Butylbenzene	50.0	48.7		ug/L		97	67 - 130
N-Propylbenzene	50.0	52.1		ug/L		104	70 - 130
o-Chlorotoluene	50.0	47.8		ug/L		96	70 - 130
o-Xylene	50.0	49.3		ug/L		99	70 - 130
p-Chlorotoluene	50.0	49.2		ug/L		98	70 - 130
p-Isopropyltoluene	50.0	50.3		ug/L		101	65 - 130
sec-Butylbenzene	50.0	50.8		ug/L		102	66 - 130
Styrene	50.0	49.1		ug/L		98	70 - 130
tert-Butylbenzene	50.0	48.7		ug/L		97	64 - 139
1,1,1,2-Tetrachloroethane	50.0	49.4		ug/L		99	67 - 131
1,1,2,2-Tetrachloroethane	50.0	50.4		ug/L		101	70 - 131
Tetrachloroethene	50.0	49.9		ug/L		100	65 - 130
Toluene	50.0	48.3		ug/L		97	70 - 130
trans-1,2-Dichloroethene	50.0	51.4		ug/L		103	70 - 130
trans-1,3-Dichloropropene	50.0	49.7		ug/L		99	63 - 130
1,2,3-Trichlorobenzene	50.0	52.0		ug/L		104	60 - 138
1,2,4-Trichlorobenzene	50.0	51.0		ug/L		102	60 - 140
1,1,1-Trichloroethane	50.0	50.8		ug/L		102	68 - 130
1,1,2-Trichloroethane	50.0	50.7		ug/L		101	70 - 130
Trichloroethene	50.0	53.7		ug/L		107	70 - 130
Trichlorofluoromethane	50.0	55.7		ug/L		111	65 - 138

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-608552/1002
Matrix: Water
Analysis Batch: 608552

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	50.0	49.3		ug/L		99	70 - 130
1,2,4-Trimethy benzene	50.0	48.6		ug/L		97	70 - 130
1,3,5-Trimethy benzene	50.0	48.4		ug/L		97	69 - 130
Vinyl acetate	100	111		ug/L		111	26 - 160
Vinyl chloride	50.0	55.7		ug/L		111	59 - 136
Xylenes, Total	100	98.4		ug/L		98	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*95*		*72 - 119*
Dibromofluoromethane	*104*		*75 - 126*
Toluene-d8 (Surr)	*93*		*64 - 132*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-607999/1-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 607999

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.8	ug/L		01/11/23 08:49	01/12/23 14:11	1
Benzenethiol	ND		10	1.7	ug/L		01/11/23 08:49	01/12/23 14:11	1
Benzoic acid	ND		30	7.3	ug/L		01/11/23 08:49	01/12/23 14:11	1
Benzyl alcohol	ND		10	2.0	ug/L		01/11/23 08:49	01/12/23 14:11	1
Bis(2-chloroethoxy)methane	ND		10	0.16	ug/L		01/11/23 08:49	01/12/23 14:11	1
Bis(2-chloroethyl)ether	ND		10	2.7	ug/L		01/11/23 08:49	01/12/23 14:11	1
bis (2-chloroisopropyl) ether	ND		10	0.16	ug/L		01/11/23 08:49	01/12/23 14:11	1
Bis(2-ethylhexyl) phthalate	ND		10	5.0	ug/L		01/11/23 08:49	01/12/23 14:11	1
4-Bromophenyl phenyl ether	ND		10	0.20	ug/L		01/11/23 08:49	01/12/23 14:11	1
Butyl benzyl phthalate	ND		10	0.19	ug/L		01/11/23 08:49	01/12/23 14:11	1
4-Chloroaniline	ND		10	3.4	ug/L		01/11/23 08:49	01/12/23 14:11	1
4-Chloro-3-methylphenol	ND		10	3.8	ug/L		01/11/23 08:49	01/12/23 14:11	1
2-Chloronaphthalene	ND		10	0.14	ug/L		01/11/23 08:49	01/12/23 14:11	1
2-Chlorophenol	ND		10	2.2	ug/L		01/11/23 08:49	01/12/23 14:11	1
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		01/11/23 08:49	01/12/23 14:11	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/11/23 08:49	01/12/23 14:11	1
Dibenzofuran	ND		10	0.17	ug/L		01/11/23 08:49	01/12/23 14:11	1
3,3'-Dichlorobenzidine	ND		10	2.6	ug/L		01/11/23 08:49	01/12/23 14:11	1
2,4-Dichlorophenol	ND		10	3.0	ug/L		01/11/23 08:49	01/12/23 14:11	1
Diethyl phthalate	ND		10	0.24	ug/L		01/11/23 08:49	01/12/23 14:11	1
2,4-Dimethylphenol	ND		10	3.5	ug/L		01/11/23 08:49	01/12/23 14:11	1
Dimethyl phthalate	ND		10	0.17	ug/L		01/11/23 08:49	01/12/23 14:11	1
Di-n-butyl phthalate	ND		10	2.7	ug/L		01/11/23 08:49	01/12/23 14:11	1
4,6-Dinitro-ortho-cresol	ND		10	1.6	ug/L		01/11/23 08:49	01/12/23 14:11	1
2,4-Dinitrophenol	ND		30	3.4	ug/L		01/11/23 08:49	01/12/23 14:11	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		01/11/23 08:49	01/12/23 14:11	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		01/11/23 08:49	01/12/23 14:11	1
Di-n-octyl phthalate	ND		10	0.17	ug/L		01/11/23 08:49	01/12/23 14:11	1
1,4-Dioxane	ND		10	1.0	ug/L		01/11/23 08:49	01/12/23 14:11	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-607999/1-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 607999

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/11/23 08:49	01/12/23 14:11	1
Hexachlorobenzene	ND		10	0.17	ug/L		01/11/23 08:49	01/12/23 14:11	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		01/11/23 08:49	01/12/23 14:11	1
Hexachloroethane	ND		10	4.2	ug/L		01/11/23 08:49	01/12/23 14:11	1
Indene	ND		10	1.0	ug/L		01/11/23 08:49	01/12/23 14:11	1
Isophorone	ND		10	0.14	ug/L		01/11/23 08:49	01/12/23 14:11	1
2-Methylphenol	ND		10	1.8	ug/L		01/11/23 08:49	01/12/23 14:11	1
3 & 4 Methylphenol	ND		20	0.39	ug/L		01/11/23 08:49	01/12/23 14:11	1
2-Nitroaniline	ND		10	2.2	ug/L		01/11/23 08:49	01/12/23 14:11	1
3-Nitroaniline	ND		10	1.8	ug/L		01/11/23 08:49	01/12/23 14:11	1
4-Nitroaniline	ND		10	1.5	ug/L		01/11/23 08:49	01/12/23 14:11	1
Nitrobenzene	ND		10	0.13	ug/L		01/11/23 08:49	01/12/23 14:11	1
2-Nitrophenol	ND		10	5.2	ug/L		01/11/23 08:49	01/12/23 14:11	1
4-Nitrophenol	ND		10	2.1	ug/L		01/11/23 08:49	01/12/23 14:11	1
N-Nitrosodimethylamine	ND		10	3.5	ug/L		01/11/23 08:49	01/12/23 14:11	1
N-Nitrosodi-n-propylamine	ND		10	3.3	ug/L		01/11/23 08:49	01/12/23 14:11	1
N-Nitrosodiphenylamine	ND		10	0.18	ug/L		01/11/23 08:49	01/12/23 14:11	1
Pentachlorophenol	ND		20	1.4	ug/L		01/11/23 08:49	01/12/23 14:11	1
Phenol	ND		10	2.6	ug/L		01/11/23 08:49	01/12/23 14:11	1
Pyridine	ND		10	3.2	ug/L		01/11/23 08:49	01/12/23 14:11	1
Quinoline	ND		10	4.5	ug/L		01/11/23 08:49	01/12/23 14:11	1
2,4,5-Trichlorophenol	ND		10	3.7	ug/L		01/11/23 08:49	01/12/23 14:11	1
2,4,6-Trichlorophenol	ND		10	3.5	ug/L		01/11/23 08:49	01/12/23 14:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*114*		*46 - 124*	*01/11/23 08:49*	*01/12/23 14:11*	*1*
2-Fluorophenol	*14*		*13 - 113*	*01/11/23 08:49*	*01/12/23 14:11*	*1*
Nitrobenzene-d5	*102*		*36 - 126*	*01/11/23 08:49*	*01/12/23 14:11*	*1*
Phenol-d5	*59*		*17 - 127*	*01/11/23 08:49*	*01/12/23 14:11*	*1*
Terphenyl-d14	*121*		*44 - 149*	*01/11/23 08:49*	*01/12/23 14:11*	*1*
2,4,6-Tribromophenol	*72*		*26 - 150*	*01/11/23 08:49*	*01/12/23 14:11*	*1*

Lab Sample ID: LCS 400-607999/2-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 607999

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aniline	120	135		ug/L		113	21 - 120
Benzoic acid	554	396		ug/L		72	10 - 144
Benzyl alcohol	120	119		ug/L		99	28 - 120
Bis(2-chloroethoxy)methane	120	121		ug/L		100	47 - 120
Bis(2-chloroethyl)ether	120	123		ug/L		102	44 - 120
bis (2-chloroisopropyl) ether	120	132		ug/L		110	33 - 121
Bis(2-ethylhexyl) phthalate	120	139		ug/L		116	52 - 147
4-Bromophenyl phenyl ether	120	115		ug/L		96	54 - 122
Butyl benzyl phthalate	120	135		ug/L		112	54 - 133
4-Chloroaniline	120	149	*+	ug/L		124	26 - 120
4-Chloro-3-methylphenol	120	125		ug/L		105	48 - 131

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-607999/2-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 607999

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Chloronaphthalene	120	128		ug/L		107	52 - 121
2-Chlorophenol	120	79.4		ug/L		66	40 - 120
4-Chlorophenyl phenyl ether	120	130		ug/L		108	56 - 125
Dibenz[a,h]acridine	120	66.8		ug/L		56	31 - 150
Dibenzofuran	120	132		ug/L		110	56 - 122
3,3'-Dichlorobenzidine	160	257	*+	ug/L		161	36 - 132
2,4-Dichlorophenol	120	107		ug/L		89	49 - 120
Diethyl phthalate	120	132		ug/L		110	50 - 137
2,4-Dimethylphenol	120	121		ug/L		101	48 - 120
Dimethyl phthalate	120	130		ug/L		108	57 - 124
Di-n-butyl phthalate	120	141		ug/L		117	58 - 126
4,6-Dinitro-ortho-cresol	240	264		ug/L		110	23 - 148
2,4-Dinitrophenol	240	286		ug/L		119	10 - 150
2,4-Dinitrotoluene	120	137		ug/L		114	54 - 142
2,6-Dinitrotoluene	120	132		ug/L		110	55 - 130
Di-n-octyl phthalate	120	144		ug/L		120	57 - 138
1,4-Dioxane	120	43.3		ug/L		36	31 - 120
1,2-Diphenylhydrazine (as Azobenzene)	120	130		ug/L		108	45 - 124
Hexachlorobenzene	120	119		ug/L		99	52 - 129
Hexachlorocyclopentadiene	120	102		ug/L		85	10 - 134
Hexachloroethane	120	107		ug/L		89	20 - 120
Indene	120	115		ug/L		96	49 - 120
Isophorone	120	122		ug/L		102	48 - 120
2-Methylphenol	120	115		ug/L		95	46 - 124
3 & 4 Methylphenol	120	114		ug/L		95	45 - 120
2-Nitroaniline	120	145		ug/L		121	51 - 145
3-Nitroaniline	120	159	*+	ug/L		132	37 - 127
4-Nitroaniline	120	149		ug/L		124	36 - 137
Nitrobenzene	120	122		ug/L		101	45 - 120
2-Nitrophenol	120	106		ug/L		88	40 - 124
4-Nitrophenol	240	256		ug/L		107	23 - 146
N-Nitrosodimethylamine	120	125		ug/L		104	29 - 137
N-Nitrosodi-n-propylamine	120	126		ug/L		105	45 - 120
N-Nitrosodiphenylamine	119	119		ug/L		100	54 - 120
Pentachlorophenol	240	227		ug/L		95	31 - 130
Phenol	120	95.0		ug/L		79	11 - 120
Pyridine	240	196		ug/L		82	16 - 120
Quinoline	120	69.7		ug/L		58	49 - 130
2,4,5-Trichlorophenol	120	121		ug/L		101	51 - 136
2,4,6-Trichlorophenol	120	117		ug/L		98	50 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*105*		*46 - 124*
2-Fluorophenol	*41*		*13 - 113*
Nitrobenzene-d5	*112*		*36 - 126*
Phenol-d5	*82*		*17 - 127*
Terphenyl-d14	*111*		*44 - 149*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-607999/2-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 607999

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*100*		*26 - 150*

Lab Sample ID: LCS 400-607999/4-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 607999

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzenethiol			120	6.47	J *-	ug/L		5	10 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*116*		*46 - 124*
2-Fluorophenol	*33*		*13 - 113*
Nitrobenzene-d5	*104*		*36 - 126*
Phenol-d5	*79*		*17 - 127*
Terphenyl-d14	*126*		*44 - 149*
2,4,6-Tribromophenol	*56*		*26 - 150*

Lab Sample ID: LCSD 400-607999/3-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 607999

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aniline			120	132		ug/L		110	21 - 120	2	30
Benzoic acid			554	498		ug/L		90	10 - 144	23	30
Benzyl alcohol			120	124		ug/L		103	28 - 120	4	30
Bis(2-chloroethoxy)methane			120	126		ug/L		105	47 - 120	5	30
Bis(2-chloroethyl)ether			120	132		ug/L		110	44 - 120	8	30
bis (2-chloroisopropyl) ether			120	138		ug/L		115	33 - 121	5	30
Bis(2-ethylhexyl) phthalate			120	151		ug/L		126	52 - 147	8	30
4-Bromophenyl phenyl ether			120	120		ug/L		100	54 - 122	4	30
Butyl benzyl phthalate			120	146		ug/L		122	54 - 133	8	30
4-Chloroaniline			120	152	*+	ug/L		127	26 - 120	2	30
4-Chloro-3-methylphenol			120	133		ug/L		111	48 - 131	6	30
2-Chloronaphthalene			120	133		ug/L		111	52 - 121	4	30
2-Chlorophenol			120	83.2		ug/L		69	40 - 120	5	30
4-Chlorophenyl phenyl ether			120	136		ug/L		114	56 - 125	5	30
Dibenz[a,h]acridine			120	72.7		ug/L		61	31 - 150	9	30
Dibenzofuran			120	140		ug/L		117	56 - 122	5	30
3,3'-Dichlorobenzidine			160	259	*+	ug/L		162	36 - 132	1	30
2,4-Dichlorophenol			120	115		ug/L		96	49 - 120	7	30
Diethyl phthalate			120	140		ug/L		117	50 - 137	6	30
2,4-Dimethylphenol			120	126		ug/L		105	48 - 120	4	30
Dimethyl phthalate			120	137		ug/L		114	57 - 124	5	30
Di-n-butyl phthalate			120	148		ug/L		123	58 - 126	5	30
4,6-Dinitro-ortho-cresol			240	274		ug/L		114	23 - 148	4	30
2,4-Dinitrophenol			240	290		ug/L		121	10 - 150	1	30
2,4-Dinitrotoluene			120	144		ug/L		120	54 - 142	5	30
2,6-Dinitrotoluene			120	138		ug/L		115	55 - 130	5	30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-607999/3-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 607999

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Di-n-octyl phthalate			120	156		ug/L		130	57 - 138	8	30
1,4-Dioxane			120	81.7	*1	ug/L		68	31 - 120	61	30
1,2-Diphenylhydrazine (as Azobenzene)			120	138		ug/L		115	45 - 124	6	30
Hexachlorobenzene			120	125		ug/L		104	52 - 129	4	30
Hexachlorocyclopentadiene			120	102		ug/L		85	10 - 134	0	30
Hexachloroethane			120	105		ug/L		87	20 - 120	2	30
Indene			120	120		ug/L		100	49 - 120	5	30
Isophorone			120	127		ug/L		106	48 - 120	4	30
2-Methylphenol			120	124		ug/L		103	46 - 124	8	30
3 & 4 Methylphenol			120	120		ug/L		100	45 - 120	6	30
2-Nitroaniline			120	150		ug/L		125	51 - 145	3	30
3-Nitroaniline			120	162	*+	ug/L		135	37 - 127	2	30
4-Nitroaniline			120	151		ug/L		126	36 - 137	1	30
Nitrobenzene			120	126		ug/L		105	45 - 120	3	30
2-Nitrophenol			120	118		ug/L		98	40 - 124	11	30
4-Nitrophenol			240	263		ug/L		110	23 - 146	3	30
N-Nitrosodimethylamine			120	129		ug/L		108	29 - 137	3	30
N-Nitrosodi-n-propylamine			120	130		ug/L		109	45 - 120	3	30
N-Nitrosodiphenylamine			119	124		ug/L		104	54 - 120	4	30
Pentachlorophenol			240	239		ug/L		99	31 - 130	5	30
Phenol			120	99.4		ug/L		83	11 - 120	5	30
Pyridine			240	209		ug/L		87	16 - 120	7	30
Quinoline			120	72.6		ug/L		61	49 - 130	4	30
2,4,5-Trichlorophenol			120	124		ug/L		104	51 - 136	3	30
2,4,6-Trichlorophenol			120	126		ug/L		105	50 - 127	7	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*111*		*46 - 124*
2-Fluorophenol	*36*		*13 - 113*
Nitrobenzene-d5	*117*		*36 - 126*
Phenol-d5	*86*		*17 - 127*
Terphenyl-d14	*122*		*44 - 149*
2,4,6-Tribromophenol	*107*		*26 - 150*

Lab Sample ID: LCSD 400-607999/5-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 607999

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzenethiol			120	6.95	J *-	ug/L		6	10 - 120	7	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*116*		*46 - 124*
2-Fluorophenol	*47*		*13 - 113*
Nitrobenzene-d5	*104*		*36 - 126*
Phenol-d5	*85*		*17 - 127*
Terphenyl-d14	*123*		*44 - 149*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-607999/5-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 607999

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*64*		*26 - 150*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 400-607999/1-A
Matrix: Water
Analysis Batch: 608245

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 607999

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.032	ug/L		01/11/23 08:49	01/12/23 16:09	1
Acenaphthylene	ND		0.20	0.045	ug/L		01/11/23 08:49	01/12/23 16:09	1
Anthracene	ND		0.20	0.032	ug/L		01/11/23 08:49	01/12/23 16:09	1
Benzo[a]anthracene	ND		0.20	0.046	ug/L		01/11/23 08:49	01/12/23 16:09	1
Benzo[a]pyrene	0.153	J	0.20	0.042	ug/L		01/11/23 08:49	01/12/23 16:09	1
Benzo[b]fluoranthene	0.149	J	0.20	0.034	ug/L		01/11/23 08:49	01/12/23 16:09	1
Benzo[g,h,i]perylene	ND		0.20	0.13	ug/L		01/11/23 08:49	01/12/23 16:09	1
Benzo[k]fluoranthene	0.113	J	0.20	0.10	ug/L		01/11/23 08:49	01/12/23 16:09	1
Chrysene	ND		0.20	0.074	ug/L		01/11/23 08:49	01/12/23 16:09	1
Dibenz(a,h)anthracene	ND		0.20	0.050	ug/L		01/11/23 08:49	01/12/23 16:09	1
Fluoranthene	ND		0.20	0.068	ug/L		01/11/23 08:49	01/12/23 16:09	1
Fluorene	ND		0.20	0.11	ug/L		01/11/23 08:49	01/12/23 16:09	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.043	ug/L		01/11/23 08:49	01/12/23 16:09	1
1-Methylnaphthalene	ND		0.20	0.074	ug/L		01/11/23 08:49	01/12/23 16:09	1
2-Methylnaphthalene	ND		0.20	0.060	ug/L		01/11/23 08:49	01/12/23 16:09	1
Phenanthrene	ND		0.20	0.036	ug/L		01/11/23 08:49	01/12/23 16:09	1
Pyrene	ND		0.20	0.040	ug/L		01/11/23 08:49	01/12/23 16:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*110*		*15 - 122*	*01/11/23 08:49*	*01/12/23 16:09*	*1*
Nitrobenzene-d5	*74*		*19 - 130*	*01/11/23 08:49*	*01/12/23 16:09*	*1*
Terphenyl-d14	*118*		*33 - 138*	*01/11/23 08:49*	*01/12/23 16:09*	*1*

Lab Sample ID: LCS 400-607999/2-A
Matrix: Water
Analysis Batch: 608245

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 607999

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	120	123		ug/L		103	41 - 120
Acenaphthylene	120	125		ug/L		104	44 - 120
Anthracene	120	129		ug/L		107	49 - 120
Benzo[a]anthracene	120	127		ug/L		106	61 - 135
Benzo[a]pyrene	120	109		ug/L		91	52 - 120
Benzo[b]fluoranthene	120	105		ug/L		87	53 - 134
Benzo[g,h,i]perylene	120	115		ug/L		96	47 - 133
Benzo[k]fluoranthene	120	112		ug/L		93	57 - 134
Chrysene	120	120		ug/L		100	55 - 122
Dibenz(a,h)anthracene	120	116		ug/L		96	48 - 146
Fluoranthene	120	122		ug/L		101	54 - 128

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCS 400-607999/2-A
Matrix: Water
Analysis Batch: 608245

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 607999

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluorene	120	121		ug/L		101	45 - 125
Indeno[1,2,3-cd]pyrene	120	120		ug/L		100	43 - 142
1-Methylnaphthalene	120	107		ug/L		89	41 - 120
2-Methylnaphthalene	120	103		ug/L		86	32 - 124
Phenanthrene	120	124		ug/L		103	48 - 120
Pyrene	120	125		ug/L		104	48 - 132

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*102*		*15 - 122*
Nitrobenzene-d5	*70*		*19 - 130*
Terphenyl-d14	*104*		*33 - 138*

Lab Sample ID: LCSD 400-607999/3-A
Matrix: Water
Analysis Batch: 608245

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 607999

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene	120	124		ug/L		104	41 - 120	1	56
Acenaphthylene	120	126		ug/L		105	44 - 120	1	56
Anthracene	120	127		ug/L		106	49 - 120	1	51
Benzo[a]anthracene	120	124		ug/L		103	61 - 135	2	49
Benzo[a]pyrene	120	109		ug/L		91	52 - 120	1	50
Benzo[b]fluoranthene	120	107		ug/L		89	53 - 134	2	54
Benzo[g,h,i]perylene	120	118		ug/L		98	47 - 133	2	50
Benzo[k]fluoranthene	120	110		ug/L		92	57 - 134	1	52
Chrysene	120	117		ug/L		98	55 - 122	3	50
Dibenz(a,h)anthracene	120	119		ug/L		99	48 - 146	3	50
Fluoranthene	120	122		ug/L		102	54 - 128	0	52
Fluorene	120	123		ug/L		103	45 - 125	2	56
Indeno[1,2,3-cd]pyrene	120	125		ug/L		104	43 - 142	4	51
1-Methylnaphthalene	120	103		ug/L		86	41 - 120	3	55
2-Methylnaphthalene	120	99.8		ug/L		83	32 - 124	3	57
Phenanthrene	120	124		ug/L		103	48 - 120	0	56
Pyrene	120	121		ug/L		101	48 - 132	4	52

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*104*		*15 - 122*
Nitrobenzene-d5	*66*		*19 - 130*
Terphenyl-d14	*99*		*33 - 138*

Method: 8011 - EDB and DBCP in Water by Microextraction

Lab Sample ID: MB 400-609095/1-A
Matrix: Water
Analysis Batch: 609205

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 609095

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND		0.030	0.017	ug/L		01/19/23 10:05	01/19/23 16:05	1

Method: 8011 - EDB and DBCP in Water by Microextraction (Continued)

Lab Sample ID: MB 400-609095/1-A
Matrix: Water
Analysis Batch: 609205

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 609095

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/19/23 10:05	01/19/23 16:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*118*		*51 - 149*	*01/19/23 10:05*	*01/19/23 16:05*	*1*

Lab Sample ID: LCS 400-609095/2-A
Matrix: Water
Analysis Batch: 609205

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 609095

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,2-D bromo-3-Chloropropane			0.101	0.157	*+	ug/L		156	60 - 140		
1,2-D bromoethane			0.101	0.101		ug/L		100	60 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*131*		*51 - 149*

Lab Sample ID: LCSD 400-609095/3-A
Matrix: Water
Analysis Batch: 609205

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 609095

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-D bromo-3-Chloropropane			0.101	0.155	*+	ug/L		154	60 - 140	1	30
1,2-D bromoethane			0.101	0.0966		ug/L		96	60 - 140	4	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*131*		*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 (_____)

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
Melissa Remiger	25278	DATE: 1/10/2023
PO #	GSAP Project ID	PAGE: 1 of 1
60697537 – 3.1.2	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 60697537 – 3.1.2
ADDRESS: 100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA
EDF DELIVERABLE TO (Name, Company, Office Location): Melissa Remiger - please see special instructions
PHONE NO.: 314-802-1207
E-MAIL: melissa.remiger@aecom.com
AECOM Other ID:
PROJECT CONTACT (Hardcopy or PDF Report to): Melissa Remiger, Mary Massa, Brett Howell
SAMPLER NAME(S) (Print): Mary Massa, Joe Mayer, Travis Jenkins
LAB USE ONLY
TELEPHONE: 314-429-0100
FAX: 314-429-0462
Bill To Contact E-MAIL: 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 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) __EDD_____
TEMPERATURE ON RECEIPT C°: Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
Email reports to: melissa.remiger@aecom.com; mary.massa@aecom.com; brett.howell@aecom.com
☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

Please include "J" values on Reports.
Please provide sample receipt upon login.
Please send EQuiS EDDs to EDDSubmissions@aecomshell.com; loredana.filimon@aecom.com

REQUESTED ANALYSIS 60697537 – 3.1.2

FIELD NOTES:

TEMPERATURE ON RECEIPT C°: 9.0°C #9

Container PID Readings or Laboratory Notes:

400-231619 COC

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VOC 8260	8011 EDB + DBCP	SVOC 8270	PAH 8270LL
	TB-ROX-011023-8260-BP	1/10/2023	0000	Water	2					2	X			
	TB-ROX-011023-8011-BP	1/10/2023	0000	Water	2					2		X		
	MW23-ROX-011023	1/10/2023	1210	Water	6			2		8	X	X	X	X

MM 1/10/23

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
MARY MASSA	FEDEX: 5564 3932 8568, 5564 3932 8579	1/10/2023	1600
	W	1-11-23	8:57

Version: 13Oct22

CUSTODY SEALS: 1745812, 1745813, 1745814, 1745815

1/25/2023

Login Sample Receipt Checklist

Client: AECOM Technical Services Inc. Job Number: 400-231619-1

Login Number: 231619 **List Source: Eurofins Pensacola**
List Number: 1
Creator: Whitley, Adrian

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.	N/A	
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	0.0, 1.0°C IR9
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.	N/A	
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. Job ID: 400-231619-1
Project/Site: ROXANA QUARTERLY GW

Laboratory: Eurofins Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	06-30-23
ANAB	ISO/IEC 17025	L2471	02-23-23
Arkansas DEQ	State	88-0689	09-01-23
California	State	2510	06-30-23
Florida	NELAP	E81010	06-30-23
Georgia	State	E81010(FL)	06-30-23
Illinois	NELAP	200041	10-09-23
Kansas	NELAP	E-10253	10-31-23
Kentucky (UST)	State	53	06-30-23
Kentucky (WW)	State	KY98030	12-31-22 *
Louisiana (All)	NELAP	30976	06-30-23
Louisiana (DW)	State	LA017	12-31-23
Maryland	State	233	09-30-23
Michigan	State	9912	06-30-23
North Carolina (WW/SW)	State	314	12-31-23
Oklahoma	NELAP	9810	08-31-23
Pennsylvania	NELAP	68-00467	01-31-23
South Carolina	State	96026	06-30-23
Tennessee	State	TN02907	06-30-23
Texas	NELAP	T104704286	09-30-23
US Fish & Wildlife	US Federal Programs	A22340	06-30-23
USDA	US Federal Programs	P330-21-00056	05-17-24
Virginia	NELAP	460166	06-14-23
West Virginia DEP	State	136	03-31-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

1.0 VALIDATION OF VOC DATA – SDG 400-231703-1-R2

This section describes the validation for eight investigative groundwater samples, three field duplicates and two trip blanks which were prepared by USEPA SW-846 Method 5030B and analyzed for Volatile Organic Compounds (VOCs) by USEPA SW-846 Method 8260B. The samples were analyzed by TestAmerica Laboratories, Inc. of Pensacola, Florida, and submitted as part of the sample delivery group (SDG) 400-231703-1. The samples included as part of this validation are listed below.

Sample Identification	Sample Identification
TB-ROX-011123-8260-A	TB-ROX-011123-8260-B
MW3-ROX-011123	T12-ROX-011123
MW6C-ROX-011123	T12-ROX-011123-DUP
MW6A-ROX-011123	P59-ROX-011123
MW6D-ROX-011123	P59-ROX-011123-DUP
MW6B-ROX-011123	P93B-ROX-011123
W6B-ROX-011123-DUP	--

Evaluation of the analytical data followed procedures outlined in the USEPA Contract Laboratory National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2020).

Criteria evaluated included the following method performance criteria:

- Data package completeness
- Laboratory case narrative/cooler receipt form
- Holding times and sample preservation
- GC/MS instrument performance
- Initial calibration (ICAL)
- Calibration verification (CV)
- Blank samples
- Laboratory control spike (LCS) samples
- Surrogate spike recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) samples
- Internal standards
- Field duplicate results
- Target compound identification and quantification
- Overall data assessment

1.1 Data Package Completeness

The data package was reviewed to make certain it contained the data contractually required in the deliverable. This included checking the data package for the results against the analyses requested on the chain-of custody, along with requested QC documentation for the respective methods.

1.2 Laboratory Case Narrative/Cooler Receipt Form

The laboratory case narrative indicated that MS/MSD recoveries for several VOCs, and MS/MSD RPDs, were outside evaluation criteria in sample MW3-ROX-011123. VOCs in several samples were diluted to bring target analytes into the calibration range of the instrument, consequently, sample P93B-ROX-011123 was non-detect. These issues are addressed further in the appropriate sections of this data review.

Three of 70 (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 issues.

1.3 Holding Times and Sample Preservation

Review of the sample collection and analysis dates involved comparing the sample chain-of-custody, the summary forms and the raw data forms for accuracy, consistency, and holding time compliance. The samples were in good condition and were received and maintained at temperatures of ≤ 6ºC and samples were preserved at a pH < 2.0. Additionally, samples were analyzed within the analysis holding time (14 days).

1.4 GC/MS Instrument Performance

GC/MS instrument performance checks were performed to ensure mass resolution, identification, and instrument sensitivity. Criteria for evaluation of instrument performance included possible transcription/calculation errors, adherence to instrument tuning frequency requirements, mass assignments, and ion abundance criteria. Instrument performance check samples were evaluated against criteria established in USEPA SW-846 Method 8260B.

Based on the summary forms, the ion abundance criteria were within evaluation criteria for all masses. No qualifications to the data were required based on instrument performance criteria.

1.5 Initial Calibration (ICAL)

An ICAL was established to assess whether the instrument was capable of producing acceptable qualitative and quantitative data for volatiles analyses. Validated samples included in SDG 400-231703-1 were analyzed using instrument Brutus. The ICAL for instrument Brutus was established on 12/16/2022. At least five standard concentrations were used to establish the ICAL curves as required by Method 8260B.

The ICAL response factors (RFs) were reviewed and were greater than 0.10 for chloromethane, 0.10 for 1,1-dichloroethane, 0.10 for bromoform, 0.30 for chlorobenzene, and 0.30 for 1,1,2,2-tetrachloroethane. No qualification of data was required.

Review of the initial calibration summary forms indicated %RSDs were ≤ 30% for calibration check compounds (CCCs) [1,1-dichloroethene, toluene, chloroform, ethylbenzene, 1,2-dichloropropane, and vinyl chloride], and ≤ 15% for non-CCCs.

An initial calibration verification (ICV) was analyzed following the initial calibration. Percent difference (%D) values from comparing ICV RF to the average ICAL RFs were within the laboratory quality control criteria.

A recalculation of the %RSDs and RFs for a compound associated with each internal standard was performed from the raw data and no errors in calculation were noted.

1.6 Calibration Verification (CV)

Review of CV summary forms indicated RFs met the evaluation criteria of greater than 0.10 for chloromethane, 0.10 for 1,1-dichloroethane, 0.10 for bromoform, 0.30 for chlorobenzene, and 0.30 for 1,1,2,2-tetrachloroethane. No qualification of data was required.

Percent differences or percent drifts (%D) met the evaluation criteria of ≤ 20% for target analytes.

Recalculations of the RFs and %Ds for select target compounds were completed for each CV, and no errors in calculation were noted.

1.7 Blank Samples

The purpose of the method blank samples is to evaluate the existence and magnitude of contamination problems emanating from laboratory activities. Method blank samples were analyzed with each analytical batch as required by Method 8260B. The purpose of trip blank samples is to evaluate the existence and magnitude of contamination emanating from field and transport activities. No compounds were detected in the blanks.

1.8 Laboratory Control Spike (LCS) Samples

Laboratory control samples were analyzed with each analytical batch to assess the accuracy of the analytical process. LCS data were within evaluation

Approximately 10% of spiking compound recoveries for the LCS were recalculated and verified using the LCS summary forms, and no calculation or transcription errors were noted.

1.9 Surrogate Spike Recoveries

Surrogate compounds were used to evaluate the overall laboratory sample preparation efficiency on a per sample basis. All surrogate recoveries were within the method acceptance criteria for the validated samples. Approximately 10% of the samples were recalculated, and no calculation or transcription errors were noted.

1.10 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

MS/MSD samples are analyzed to assess potential matrix effects. Sample MW3-ROX-011123 was spiked and analyzed for VOCs. MS/MSD data were within evaluation criteria with the exception summarized in the following table.

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
MW3-ROX-011123 MS/MSD	VOCs	Acetone	98/**151**	**42**	43-150/30
MW3-ROX-011123 MS/MSD	VOCs	2-Chloroethyl vinyl ether	14/**7**	**67**	10-150/50

Analytical data that required qualification based on MS/MSD data are included in the table below. Analytical data reported as non-detect and associated with MS/MSD recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Professional judgement was used to qualify; however, not reject the compound 2-chloroethyl vinyl ether due to acceptable LCS recoveries for this compound and to the acid reactive nature of 2-chloroethyl vinyl ether.

Sample ID	Parameter	Analyte	Qualification
MW3-ROX-011123	VOCs	2-Chloroethyl vinyl ether	**UJ**

Approximately 10% of the recoveries were recalculated, and no calculation or transcription errors were noted.

1.11 Internal Standards

Internal standard (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during each analytical run. IS areas must be within -50% to +100%, and the IS retention times must be within 30 seconds of the IS continuing calibration retention time. IS areas and retention times for the validated samples in this SDG were within evaluation criteria.

The summary forms versus the raw data were verified and no transcription errors were noted.

1.12 Field Duplicate Results

Field duplicates are used to assess the field precision. Samples MW6B-ROX-011123/ MW6B-ROX-011123-DUP; T12-ROX-011123/T12-ROX-011123-DUP and P59-ROX-011123/P59-ROX-011123-DUP were the field duplicate samples in this data set.
Field duplicate results were within the evaluation criteria of $\leq$ 25% relative percent difference (RPD) when both results are $\geq$ 5x the quantitation limit (QL) or $\leq$ 2x the QL when one or both results is <5x.

1.13 Target Compound Identification and Quantification

For validation of the compound identification, method specified compound identification criteria were reviewed in approximately 10% of the samples. No anomalies were noted with the identification of the target compounds in the samples.

For the validation of compound quantitation, approximately 10% of the detected target compounds were recalculated from the raw data, and no calculation errors were noted. Additionally, VOCs in sample P93B-ROX-011123 were qualified as estimated non-detect due to sample dilution and historical detections.

Sample ID	Parameter	Analyte	Qualification
P93B-ROX-011123	VOCs	All non-detects	**UJ**

1.14 Overall Data Assessment

Based on the criteria outlined, it is recommended that the results for these analyses are accepted for their intended use. Acceptable levels of accuracy and precision based on the method performance criteria were achieved for this SDG.

1.0 VALIDATION OF SVOC DATA – SDG 400-231703-1-R2

This section describes the validation for eight investigative groundwater samples and three field duplicates which were prepared by USEPA SW-846 Method 3520C and analyzed for Semi-Volatile Organic Compounds (SVOCs) by USEPA SW-846 Method 8270D and for Polycyclic Aromatic Hydrocarbons (PAHs) by USEPA SW-846 Method 8270D Low Level. Samples were analyzed by TestAmerica Laboratories, Inc. of Pensacola, Florida, and submitted as part of sample delivery group (SDG) 400-231703-1. Samples included as part of this validation are listed below:

Sample Identification	Sample Identification
MW3-ROX-011123	T12-ROX-011123
MW6C-ROX-011123	T12-ROX-011123-DUP
MW6A-ROX-011123	P59-ROX-011123
MW6D-ROX-011123	P59-ROX-011123-DUP
MW6B-ROX-011123	P93B-ROX-011123
MW6B-ROX-011123-DUP	--

Evaluation of the analytical data followed procedures outlined in the USEPA Contract Laboratory National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2020).

Criteria evaluated included the following method performance criteria:

- Data package completeness
- Laboratory case narrative/cooler receipt form
- Holding times and sample preservation
- GC/MS instrument performance
- Initial calibration (ICAL)
- Calibration verification (CV)
- Blank samples
- Laboratory control sample (LCS)
- Surrogate spike recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) samples
- Internal standard areas
- Field duplicate results
- Target compound identification and quantitation
- Overall data assessment

1.1 Data Package Completeness

The data package was reviewed to make certain it contained the data contractually required in the deliverable. This included checking the data package for the results against the analyses requested on the chain-of custody, along with requested QC documentation for the respective methods.

1.2 Laboratory Case Narrative/Cooler Receipt Form

The laboratory case narrative indicated that several PAHs in samples MW3-ROX-011123, MW6B-ROX-011123, MW6C-ROX-011123, and MW6D-ROX-011123 were re-analyzed outside holding time criteria. Several PAHs in samples MW6B-ROX-011123-DUP and P59-ROX-011123-DUP were re-extracted outside holding time criteria. Benzo[b]fluoranthene was detected in the method blank. Several SVOC LCS/LCSD recoveries were outside evaluation criteria. Several SVOC and PAH surrogate recoveries were outside criteria in several investigative and quality control samples. Results for phenol in field duplicate pair MW6B-ROX-011123/MW6B-ROX-011123-DUP had a difference in results greater than two times (2X) the reporting level. Several PAHs and SVOCs in field duplicate pair P59-ROX-011123/P59-ROX-011123-DUP RPDs were above evaluation criteria, or the difference in results were greater than two times (2X) the reporting level. The continuing calibration verification (CCV) for benzo[k]fluoranthene was outside evaluation criteria, biased low. The initial calibration verification (ICV) for acenaphthylene, fluorene, and pyrene was outside evaluation criteria, biased high. These issues are addressed further in the appropriate sections of this data review. The laboratory report was revised on March 3, 2023, to correct 8270 data. The laboratory report was revised on March 23,2023 to include a missing PAH method blank.

No issues were indicated in the cooler receipt form.

1.3 Holding Times and Sample Preservation

Review of the sample collection and analysis dates involved comparing the chain-of-custody, the summary forms and the raw data forms for accuracy, consistency, and holding time compliance. The samples were in good condition and were received and maintained at temperatures of ≤ 6°C and were extracted within seven days of collection and analyzed within 40 days of extraction with the exception of several PAHs in samples MW3-ROX-011123, MW6B-ROX-011123, MW6C-ROX-011123, and MW6D-ROX-011123 were re-analyzed of the initial extract 1 day outside holding time criteria (40 days) to confirm PAH detections in the original extract. Several PAHs in samples MW6B-ROX-011123-DUP and P59-ROX-011123-DUP were re-extracted 15 days outside holding time criteria (7 days), and then re-analyzed for confirmation. Both sets of data are reported. With regard to initial PAH data, the laboratory issued a Corrective Action Report (CAR) stating that through confirmation analyses, many previous detections were not confirmed and were therefore deemed laboratory contamination. Based on professional judgement, the results from the re-analysis were used for the purposes of this report. Data requiring qualification is summarized in the following table. Benzo[b]fluoranthene in sample P59-ROX-011123-DUP-RE is further qualified due to method blank contamination in Section 1.4 of this data validation.

Sample ID	Parameter	Analyte	Qualification
MW3-ROX-011123 – RA	PAHs	Benzo[b]fluoranthene	**UJ**
MW6C-ROX-011123 – RA	PAHs	Benzo[b]fluoranthene	**UJ**
MW6D-ROX-011123 – RA	PAHs	Acenaphthylene	**UJ**
MW6D-ROX-011123 – RA	PAHs	Benzo[b]fluoranthene	**UJ**
MW6B-ROX-011123 – RA	PAHs	Acenaphthylene	**UJ**
MW6B-ROX-011123 – RA	PAHs	Benzo[a]anthracene	**J**
MW6B-ROX-011123 – RA	PAHs	Benzo[b]fluoranthene	**J**
MW6B-ROX-011123 – RA	PAHs	Benzo[k]fluoranthene	**UJ**
MW6B-ROX-011123 – RA	PAHs	Chrysene	**J**
MW6B-ROX-011123 – RA	PAHs	Dibenz(a,h)anthracene	**J**

Sample ID	Parameter	Analyte	Qualification
MW6B-ROX-011123 – RA	PAHs	Pyrene	J
MW6B-ROX-011123-DUP – RE	PAHs	Benzo[b]fluoranthene	UJ
P59-ROX-011123-DUP – RE	PAHs	Benzo[b]fluoranthene	J
P59-ROX-011123-DUP – RE	PAHs	Chrysene	UJ
P59-ROX-011123-DUP – RE	PAHs	Fluoranthene	J
P59-ROX-011123-DUP – RE	PAHs	1-Methylnaphthalene	J
P59-ROX-011123-DUP – RE	PAHs	2-Methylnaphthalene	J
P59-ROX-011123-DUP – RE	PAHs	Phenanthrene	J
P59-ROX-011123-DUP – RE	PAHs	Pyrene	J

1.4 GC/MS Instrument Performance

GC/MS instrument performance checks were performed to ensure mass resolution, identification, and instrument sensitivity. Criteria for evaluation of instrument performance included possible transcription/calculation errors, adherence to instrument tuning frequency requirements, mass assignments, and ion abundance criteria. Instrument performance check samples were evaluated against the laboratory tuning criteria established in Method 8270D.

Based on the raw data, the ion abundance criteria were within evaluation criteria for all masses, therefore; no qualification of the data was required. The raw data forms were checked against the summary forms and no calculation or transcription errors were noted.

1.5 Initial Calibration (ICAL)

An ICAL was established to assess whether the instrument was capable of producing acceptable qualitative and quantitative data for semi-volatile analysis. SVOC samples as part of SDG 400-231703-1 were analyzed using instruments Marianne and Woodstock. PAH samples were analyzed using instrument Lucy and was established on 01/20/2023-01/25/2023 The ICAL for instruments Marianne and Woodstock were established on 11/28/2022-10/01/2023. The ICALs for instruments Chuck and Marianne were established prior to sample analysis and using at least five concentration standards to establish the initial calibration curve as required by Method 8270D and 8270D Low Level. An average response factor (RF) was determined for each target compound, and the RFs were reviewed and verified as greater than the minimum RF as specified in Method 8270D.

Review of the initial calibration summary forms for SVOCs and PAHs indicated target compounds had percent relative standard deviations (%RSDs) $\leq$ the maximum RSD of $\leq$ 20% specified in Method 8270D. Linear regression or quadratic equations were applied to data for select target analytes and the resulting correlation coefficients (r) were greater than 0.990.

An initial calibration verification (ICV) was analyzed following the initial calibration. Percent difference (%D) values from comparing ICV RF to the average ICAL RFs were within the Method 8270D quality control criteria with the following exceptions:

CV (Date/Time)	Compound	%D
ICV 400-609362/12 01/20/2023 19:14	Acenaphthylene	20.9
	Fluorene	21.5
	Pyrene	23.1
ICV 400-609874/12 01/25/2023 19:41	Dibenz(a,h)anthracene	26.8

Recalculations of the RFs and %RSD for one compound per internal standard were performed, and no errors in calculation were noted.

1.6 Calibration Verification (CV)

Review of continuing calibration summary forms for SVOCs and PAHs indicated all RFs met the evaluation criteria of greater than the method specified minimum RF for all target compounds. In addition, %Ds met the evaluation criteria of $\leq$ 20% specified in Method 8270D with the exceptions summarized in the table below.

CV (Date/Time)	Compound	%D
CCVIS 400-609136/3 01/19/2023 13:46	Aniline	**23.1**
	N-Nitrosodi-n-propylamine	**20.9**
	2-Nitrophenol	**21.0**
	2,4-Dichlorophenol	**27.1**
	4-Chloro-3-methylphenol	**29.9**
	Hexachlorocyclopentadiene	**27.7**
	2,4,6-Trichlorophenol	**27.1**
	2,4,5-Trichlorophenol	**28.9**
	2-Chloronaphthalene	**23.6**
	Dimethyl phthalate	**20.7**
	2,6-Dinitrotoluene	**29.7**
	2,4-Dinitrotoluene	**40.5**
	Dibenzofuran	**31.1**
	Diethyl phthalate	**25.2**
	4-Chlorophenyl phenyl ether	**31.2**
	Hexachlorobenzene	**26.0**
	Di-n-butyl phthalate	**23.7**
	Butyl benzyl phthalate	**41.3**
	Bis(2-ethylhexyl) phthalate	**25.1**
CCVIS 400-609585/3 01/23/2023 15:43	Fluoranthene	**26.4**
Associated samples: MW3-ROX-011123; MW6C-ROX-011123; MW6A-ROX-011123; MW6D-ROX-011123; MW6B-ROX-011123; MW6B-ROX-011123-DUP; T12-ROX-011123; T12-ROX-011123-DUP; P59-ROX-011123; P59-ROX-011123-DUP; P93B-ROX-011123		

Analytical data that required qualification based on CV %D data are included in the table below. Analytical data reported as non-detect and associated with CV results above evaluation criteria, indicating a possible high bias, did not require qualification. Equipment blanks are quality control samples and do not require qualification.

Sample ID	Parameter	Analyte	Qualification
MW6D-ROX-011123	PAHs	Acenaphthylene	**J**
MW6B-ROX-011123	PAHs	Acenaphthylene	**J**
MW6B-ROX-011123	PAHs	Pyrene	**J**
T12-ROX-011123	PAHs	Fluorene	**J**
T12-ROX-011123-DUP	PAHs	Acenaphthylene	**J**

Sample ID	Parameter	Analyte	Qualification
T12-ROX-011123-DUP	PAHs	Pyrene	J
T12-ROX-011123-DUP	PAHs	Fluorene	J
P59-ROX-011123	PAHs	Pyrene	J
P59-ROX-011123	PAHs	Fluorene	J
P59-ROX-011123-DUP	PAHs	Pyrene	J

Recalculations of the RFs and %RSD for one compound per internal standard were performed, and no errors in calculation were noted.

1.7 Blank Samples

The purpose of method blank samples is to evaluate the existence and magnitude of contamination problems emanating from laboratory activities. Method blank samples were prepared with each preparation batch as required by Method 8270D LL. Target compounds in the method blank were reported as non-detect with the exceptions summarized in the table below. Target compounds were reported as non-detect.

Blank ID	Parameter	Analyte	Concentration /Amount
MB 400-610934/1-A	PAHs	Benzo[b]fluoranthene	0.0607 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.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
P59-ROX-011123-DUP -RE	PAHs	Benzo[b]fluoranthene	-	U

1.8 Laboratory Control Spike (LCS) Samples

Laboratory control samples (LCS) and laboratory control sample duplicates (LCSD) were analyzed with each analytical batch to assess the accuracy of the analytical process. LCS/LCSD recoveries and LCS/LCSD RPDs were within evaluation criteria with the exceptions summarized in the table below.

LCS/LCSD ID	Parameter	Analyte	LCS/ LCSD Recovery	RPD	LCS/LCSD/RPD Criteria
LCS/LCSD 400-608912/7-A/8-A	SVOCs	Benzenethiol	**6/8**	18	10-120/30
LCS 400-608912/2-A	SVOCs	3,3'-Dichlorobenzidine	**155**	NC	36-132

Analytical data that required qualification based on LCS/LCSD data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Professional judgment was used to qualify, however not reject, data associated with benzenethiol below evaluation criteria; benzenethiol has been identified as a poor performing analyte under Method 8270.

Sample ID	Parameter	Analyte	Qualification
MW3-ROX-011123	SVOCs	Benzenethiol	**UJ**
MW6C-ROX-011123	SVOCs	Benzenethiol	**UJ**
MW6A-ROX-011123	SVOCs	Benzenethiol	**UJ**
MW6D-ROX-011123	SVOCs	Benzenethiol	**UJ**
MW6B-ROX-011123	SVOCs	Benzenethiol	**UJ**
MW6B-ROX-011123-DUP	SVOCs	Benzenethiol	**UJ**
T12-ROX-011123	SVOCs	Benzenethiol	**UJ**
T12-ROX-011123-DUP	SVOCs	Benzenethiol	**UJ**
P59-ROX-011123	SVOCs	Benzenethiol	**UJ**
P59-ROX-011123-DUP	SVOCs	Benzenethiol	**UJ**
P93B-ROX-011123	SVOCs	Benzenethiol	**UJ**

Approximately 10% of the laboratory control spike recoveries were recalculated, and the summary forms versus the raw data were verified. No calculation or transcription errors were noted.

1.9 Surrogate Spike Recoveries

Surrogate compounds were used to evaluate the overall laboratory sample preparation efficiency on a per-sample basis. Surrogate recoveries were within the method acceptance criteria for the validated samples with the exceptions summarized in the following table.

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
T12-ROX-011123	SVOCs	2-Fluorophenol	**2**	13-113
T12-ROX-011123	SVOCs	Phenol-d5	**15**	13-113
T12-ROX-011123-DUP	SVOCs	2-Fluorophenol	**5**	13-113
P59-ROX-011123-DUP	SVOCs	2-Fluorobiphenyl	**34**	46-124
P59-ROX-011123-DUP	SVOCs	2-Fluorophenol	**1**	13-113
P59-ROX-011123-DUP	SVOCs	Nitrobenzene-d5	**33**	36-126
P59-ROX-011123-DUP	SVOCs	Phenol-d5	**9**	17-127
MB 400-608912/1-A	SVOCs	2-Fluorophenol	**11**	13-113
P59-ROX-011123-DUP	PAHs	Terphenyl-d14	**28**	33-138

Qualifications due to surrogate recoveries were not required if only one of three base/neutral PAH surrogate recoveries were outside evaluation criteria. Qualifications due to surrogate recoveries were not required if only one of three base/neutral and/or acid surrogate recoveries were outside evaluation criteria. Method blanks are quality control samples and do not require qualification.

Sample ID	Parameter	Analyte	Qualification
T12-ROX-011123	SVOCs	Benzoic acid	**UJ**
T12-ROX-011123	SVOCs	Benzyl alcohol	**UJ**
T12-ROX-011123	SVOCs	4-Chloro-3-methylphenol	**UJ**
T12-ROX-011123	SVOCs	2-Chlorophenol	**UJ**
T12-ROX-011123	SVOCs	2,4-Dichlorophenol	**UJ**
T12-ROX-011123	SVOCs	2,4-Dimethylphenol	**J**

Sample ID	Parameter	Analyte	Qualification
T12-ROX-011123	SVOCs	2-Methyl-4,6-dinitrophenol	UJ
T12-ROX-011123	SVOCs	2,4-Dinitrophenol	UJ
T12-ROX-011123	SVOCs	2-Methylphenol	UJ
T12-ROX-011123	SVOCs	3 & 4 Methylphenol	UJ
T12-ROX-011123	SVOCs	2-Nitrophenol	UJ
T12-ROX-011123	SVOCs	4-Nitrophenol	UJ
T12-ROX-011123	SVOCs	Pentachlorophenol	UJ
T12-ROX-011123	SVOCs	Phenol	J
T12-ROX-011123	SVOCs	2,4,5-Trichlorophenol	UJ
T12-ROX-011123	SVOCs	2,4,6-Trichlorophenol	UJ
P59-ROX-011123-DUP	SVOCs	All detects	J
P59-ROX-011123-DUP	SVOCs	All non-detects	UJ

Approximately 10% of the sample recoveries were recalculated and no calculation or transcription errors were noted.

1.10 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

MS/MSD samples are analyzed to assess potential matrix effects. No samples have been spiked for SVOCs and PAHs.

Approximately 10% of the recoveries were recalculated, and no calculation or transcription errors were noted.

1.11 Internal Standards

Internal standard (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during each analytical run. Following Method 8270C, the IS areas for the samples and CVs must be within –50% to +100% and retention times must be within 30 seconds of the IS area and retention time of the midpoint of the ICAL or the CCV on days when the ICAL does not precede the samples.

The IS areas for the CVs and the validated samples in this SDG were within evaluation criteria. No qualification of data was required. The summary forms versus the raw data were verified and no transcription errors were noted.

1.12 Field Duplicate Results

Field duplicates are used to assess the field precision. Samples in table below were the field duplicate samples in this data set.

Field ID	Field Duplicate ID
MW6B-ROX-011123	MW6B-ROX-011123-DUP
T12-ROX-011123	T12-ROX-011123-DUP
P59-ROX-011123	P59-ROX-011123-DUP

Field duplicate results were within the evaluation criteria of $\leq$ 25% relative percent difference (RPD) when both results are $\geq$ 5x the quantitation limit (QL) or $\leq$ 2x the QL when one or both results is <5x QL with the exceptions summarized in the following table.

Field ID	Field Duplicate ID	Parameter	Analyte	RPD	Qualification
T12-ROX-011123	T12-ROX-011123-DUP	SVOCs	Phenol	**>2X RL**	**J**
P59-ROX-011123	P59-ROX-011123-DUP	PAHs	Phenanthrene	**>2X RL**	**J/J**
P59-ROX-011123	P59-ROX-011123-DUP	PAHs	1-Methylnaphthalene	**102**	**J/J**
P59-ROX-011123	P59-ROX-011123-DUP	PAHs	2-Methylnaphthalene	**96**	**J/J**
P59-ROX-011123	P59-ROX-011123-DUP	SVOCs	Phenol	**>2X RL**	**J**

1.13 Target Compound Identification and Quantification

For validation of the compound identification, method specified compound identification criteria were reviewed in approximately 10% of the samples. No anomalies were noted with the identification of the target compounds in the samples.

For the validation of compound quantitation, 10% of the samples were recalculated from the raw data, and no calculation errors were noted. Additionally, the reporting limits (RLs) were verified to determine if RLs were adjusted for dilutions. No qualification of the data was required and review of the data indicated the correct RLs were reported.

1.14 Overall Data Assessment

Based on the criteria outlined, it is recommended that the results for these analyses are accepted for their intended use. Acceptable levels of accuracy and precision based on the method performance criteria were achieved for this SDG.

1.0 VALIDATION OF DBCP AND EDB DATA – SDG 400-231703-1-R2

This section describes the validation for eight investigative groundwater samples, three field duplicate samples and two trip blanks that were prepared and analyzed for 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by USEPA SW-846 Method 8011. The samples were analyzed by Test America Laboratories, Inc. of Pensacola, Florida, and submitted as part of the sample delivery group (SDG) 400-231703-1. The samples included as part of this validation are listed below.

Sample Identification	Sample Identification
TB-ROX-011123-8011A	TB-ROX-011123-8011-B
MW3-ROX-011123	T12-ROX-011123
MW6C-ROX-011123	T12-ROX-011123-DUP
MW6A-ROX-011123	P59-ROX-011123
MW6D-ROX-011123	P59-ROX-011123-DUP
MW6B-ROX-011123	P93B-ROX-011123
MW6B-ROX-011123-DUP	--

Evaluation of the analytical data followed procedures outlined in the USEPA Contract Laboratory National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2020).

Criteria evaluated included the following method performance criteria:

- Data package completeness
- Laboratory case narrative/cooler receipt form
- Holding times and sample preservation
- Initial calibration (ICAL)
- Calibration verification (CV)
- Blank samples
- Laboratory control spike (LCS) samples
- Surrogate spike recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) samples
- Field duplicate results
- Target compound identification and quantification
- Overall data assessment

1.1 Data Package Completeness

The data package was reviewed to make certain it contained the data contractually required in the deliverable. This included checking the data package for the results against the analyses requested on the chain-of custody, along with requested QC documentation for the respective methods.

1.2 Laboratory Case Narrative/Cooler Receipt Form

The laboratory case narrative did not indicate any quality control issues.

No issues were indicated in the cooler receipt form.

1.3 Holding Times and Sample Preservation

Review of the sample collection and analysis dates involved comparing the sample chain-of-custody, the summary forms, and the raw data forms for accuracy, consistency, and holding time compliance. The samples were received in good condition and were received and maintained at temperatures of ≤ 6ºC. In addition, the samples were analyzed within 14 days of collection. No qualifications to the data were required based on holding times and sample preservation.

1.4 Initial Calibration

An ICAL was established to assess whether the instrument was capable of producing acceptable qualitative and quantitative data for EDB/DBCP analyses. Validated samples included in SDG 400-231703-1 were analyzed using instrument Toto. The ICAL for instrument Toto was established on 12/22/2022. At least five standard concentrations were used to establish the ICAL curve as required by Method 8011.

Review of the ICAL summary forms indicated percent relative standard deviations (%RSDs) were ≤ 15% for target compounds or were determined using linear regression and correlation coefficients (r^2) were greater than 0.990. A recalculation of the %RSDs was performed from the raw data and no errors in calculation were noted.

Review of the summary forms indicated that an initial calibration verification (ICV) was performed following the initial calibration. Review of ICV summary forms indicated percent differences (%Ds) were within the evaluation criterion of ≤ 30% for both target compounds. No qualification of data was required.

Summary forms and raw data are provided for the primary column only since all target compounds were reported as non-detect in the samples and did not require confirmation.

1.5 Calibration Verification (CV)

Review of the CV summary forms indicated that all CVs were performed before the start of sample analysis, every ten sample injections, and at the end of sample analysis. %Ds met the evaluation criteria of ≤ 15% for both target compounds with the exceptions summarized in the table below.

CV (Date/Time)	Compound	%D
400-609810/24-A 01/25/2023 20:16	1,2-Dibromo-3-chloropropane	**15.7**

The results for the validated samples were non-detect and were associated with a positive %D, indicating a potential high bias; therefore, qualification of data was not required.

Summary forms and raw data are provided for the primary column only since all target compounds were reported as non-detect in the samples and did not require confirmation.

Recalculations of the %D for one target compound was completed for the CV, and no errors in calculation were noted.

1.6 Blank Samples

The purpose of the method blank samples is to evaluate the existence and magnitude of contamination problems emanating from laboratory activities. Method blank samples were analyzed with each analytical batch as required by USEPA SW-846 Method 8011. Also, trip blanks were analyzed to evaluate the existence and magnitude of contamination problems emanating from sample shipment to the laboratory. Target compounds were reported as non-detect in all blanks. No qualification of data was required.

1.7 Laboratory Control Spike (LCS) Samples

Laboratory control samples were analyzed with each analytical batch to assess the accuracy of the analytical process. LCS data were within the evaluation criteria. No qualification of data was required.

Approximately 10% of spiking compound recoveries for the LCS were recalculated and verified using the LCS summary forms, and no calculation or transcription errors were noted.

1.8 Surrogate Spike Recoveries

Surrogate compounds were used to evaluate the overall laboratory sample preparation efficiency on a per sample basis. Surrogate recoveries were within the method acceptance criteria for the validated samples. No qualification of data was required.

Approximately 10% of the recoveries were recalculated and no calculation or transcription errors were noted.

1.9 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

MS/MSD samples are analyzed to assess potential matrix effects. Sample MW14-ROX-011322 was spiked and analyzed for Method 8011. MS/MSD data were within evaluation criteria.

1.10 Field Duplicate Results

Field duplicates are used to assess the field precision. Samples MW6B-ROX-011123/ MW6B-ROX-011123-DUP; T12-ROX-011123/T12-ROX-011123-DUP and P59-ROX-011123/P59-ROX-011123-DUP were the field duplicate samples in this data set.
Target compounds were not detected in either sample of both field duplicate pairs. Field duplicate precision was deemed acceptable.

1.11 Target Compound Identification and Quantification

For validation of the compound identification, chromatograms were reviewed to verify the major peaks were identified, and the relative retention time was no greater than 0.06 minutes different from the associated CV retention times. Target compounds were not detected in any of the investigative groundwater samples in this data set.

For the validation of compound quantitation, the LCS results were recalculated from the raw data since all target compounds were non-detect, and no calculation errors were noted. Additionally, the reporting limits (RLs) were verified to determine if RLs were adjusted for dilutions when applicable.

1.12 Overall Data Assessment

Based on the criteria outlined, it is recommended that the results reported for these analyses are accepted for their intended use. Acceptable levels of accuracy and precision based on the method performance criteria were achieved for this SDG.

Roxana Groundwater Quarterly – 1st Quarter 2023 Data Review

Laboratory SDG: 400-231703-1-Rev.2

Data Reviewer: Andreia Vladimirescu

Peer Reviewer: Cheyana Cokley

Date Reviewed: 03/14/2023

Guidance: USEPA National Functional Guidelines for Organic Superfund Methods Data Review 2020

Sample Identification	Sample Identification
TB-ROX-011123-8260-A	TB-ROX-011123-8011A
MW3-ROX-011123	MW6C-ROX-011123
MW6A-ROX-011123	MW6D-ROX-011123
MW6B-ROX-011123	MW6B-ROX-011123-DUP
TB-ROX-011123-8260-B	TB-ROX-011123-8011-B
T12-ROX-011123	T12-ROX-011123-DUP
P59-ROX-011123	P59-ROX-011123-DUP
P93B-ROX-011123	

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 that several PAHs in samples MW3-ROX-011123, MW6B-ROX-011123, MW6C-ROX-011123, and MW6D-ROX-011123 were re-analyzed outside holding time criteria. Several PAHs in samples MW6B-ROX-011123-DUP and P59-ROX-011123-DUP were re-extracted outside holding time criteria. Benzo[b]fluoranthene was detected in the method blank. Several SVOC LCS/LCSD recoveries were outside evaluation criteria. Several SVOC and PAH surrogate recoveries were outside criteria in several investigative and quality control samples. MS/MSD recoveries for several VOCs, and MS/MSD RPDs, were outside evaluation criteria in sample MW3-ROX-011123. Results for phenol in field duplicate pair MW6B-ROX-011123/MW6B-ROX-011123-DUP had a difference in results greater than two times (2X) the reporting level. Several PAHs and SVOCs in field duplicate pair P59-ROX-011123/ P59-ROX-011123-DUP RPDs were above evaluation criteria, or the difference in results were greater than two times (2X) the reporting level. VOCs in several samples were diluted to bring target analytes into the calibration range of the instrument. The continuing calibration verification (CCV) for benzo[k]fluoranthene was outside evaluation criteria, biased low. The initial calibration verification (ICV) for acenaphthylene, fluorene, and pyrene was outside evaluation criteria, biased high. The laboratory report was revised on March 3, 2023, to correct Method 8270 SVOC data. The laboratory report was revised on March 23, 2023, to include a missing Method 8270LL PAH method blank.

Three of 70 (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?

No, several PAHs in samples MW3-ROX-011123, MW6B-ROX-011123, MW6C-ROX-011123, and MW6D-ROX-011123 were re-analyzed one (1) day outside holding time criteria (40 days); several PAHs in samples MW6B-ROX-011123-DUP and P59-ROX-011123-DUP were re-extracted 15 days outside holding time criteria (7 days) and then re-analyzed for confirmation, due to initial analysis results that were not consistent with historical data. Both sets of data are reported. With regard to initial PAH data, the laboratory issued a Corrective Action Report (CAR) stating that through confirmation analyses, many previous detections were not confirmed and were therefore deemed laboratory contamination. Based on professional judgement, the results from the re-analysis were used for the purposes of this report. Data requiring qualification is summarized in the following table. Benzo[b]fluoranthene in sample P59-ROX-011123-DUP is further qualified in Section 4.0 of this data review due to method blank contamination.

Sample ID	Parameter	Analyte	Qualification
MW3-ROX-011123 – RA	PAHs	Benzo[b]fluoranthene	**UJ**
MW6C-ROX-011123 – RA	PAHs	Benzo[b]fluoranthene	**UJ**
MW6D-ROX-011123 – RA	PAHs	Acenaphthylene	**UJ**
MW6D-ROX-011123 – RA	PAHs	Benzo[b]fluoranthene	**UJ**
MW6B-ROX-011123 – RA	PAHs	Acenaphthylene	**UJ**
MW6B-ROX-011123 – RA	PAHs	Benzo[a]anthracene	**J**
MW6B-ROX-011123 – RA	PAHs	Benzo[b]fluoranthene	**J**
MW6B-ROX-011123 – RA	PAHs	Benzo[k]fluoranthene	**UJ**
MW6B-ROX-011123 – RA	PAHs	Chrysene	**J**
MW6B-ROX-011123 – RA	PAHs	Dibenz(a,h)anthracene	**J**
MW6B-ROX-011123 – RA	PAHs	Pyrene	**J**
MW6B-ROX-011123-DUP – RE	PAHs	Benzo[b]fluoranthene	**UJ**
P59-ROX-011123-DUP – RE	PAHs	Benzo[b]fluoranthene	**J**
P59-ROX-011123-DUP – RE	PAHs	Chrysene	**UJ**
P59-ROX-011123-DUP – RE	PAHs	Fluoranthene	**J**
P59-ROX-011123-DUP – RE	PAHs	1-Methylnaphthalene	**J**
P59-ROX-011123-DUP – RE	PAHs	2-Methylnaphthalene	**J**
P59-ROX-011123-DUP – RE	PAHs	Phenanthrene	**J**
P59-ROX-011123-DUP – RE	PAHs	Pyrene	**J**

4.0 Blank Contamination

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

Yes

Blank ID	Parameter	Analyte	Concentration /Amount
MB 400-610934/1-A	PAHs	Benzo[b]fluoranthene	0.0607 µg/L

Data requiring qualification is summarized in the following table. 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
P59-ROX-011123-DUP – RE	PAHs	Benzo[b]fluoranthene	-	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 400-608912/7-A/8-A	SVOCs	Benzenethiol	**6/8**	18	10-120/30
LCS 400-608912/2-A	SVOCs	3,3'-Dichlorobenzidine	**155**	NC	36-132

Analytical data that required qualification based on LCS/LCSD data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Professional judgment was used to qualify, however not reject, data associated with benzenethiol below evaluation criteria; benzenethiol has been identified as a poor performing analyte under Method 8270.

Sample ID	Parameter	Analyte	Qualification
MW3-ROX-011123	SVOCs	Benzenethiol	UJ
MW6C-ROX-011123	SVOCs	Benzenethiol	UJ
MW6A-ROX-011123	SVOCs	Benzenethiol	UJ
MW6D-ROX-011123	SVOCs	Benzenethiol	UJ
MW6B-ROX-011123	SVOCs	Benzenethiol	UJ
MW6B-ROX-011123-DUP	SVOCs	Benzenethiol	UJ
T12-ROX-011123	SVOCs	Benzenethiol	UJ
T12-ROX-011123-DUP	SVOCs	Benzenethiol	UJ
P59-ROX-011123	SVOCs	Benzenethiol	UJ
P59-ROX-011123-DUP	SVOCs	Benzenethiol	UJ
P93B-ROX-011123	SVOCs	Benzenethiol	UJ

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
T12-ROX-011123	SVOCs	2-Fluorophenol	**2**	13-113
T12-ROX-011123	SVOCs	Phenol-d5	**15**	13-113
T12-ROX-011123-DUP	SVOCs	2-Fluorophenol	**5**	13-113
P59-ROX-011123-DUP	SVOCs	2-Fluorobiphenyl	**34**	46-124

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
P59-ROX-011123-DUP	SVOCs	2-Fluorophenol	**1**	13-113
P59-ROX-011123-DUP	SVOCs	Nitrobenzene-d5	**33**	36-126
P59-ROX-011123-DUP	SVOCs	Phenol-d5	**9**	17-127
MB 400-608912/1-A	SVOCs	2-Fluorophenol	**11**	13-113
P59-ROX-011123-DUP	PAHs	Terphenyl-d14	**28**	33-138

Analytical data that required qualification based on surrogate data are included in the table below. Qualifications due to surrogate recoveries were not required if only one of three base/neutral and/or acid surrogate recoveries were outside evaluation criteria. Method blanks are quality control samples and do not require qualification.

Sample ID	Parameter	Analyte	Qualification
T12-ROX-011123	SVOCs	Benzoic acid	**UJ**
T12-ROX-011123	SVOCs	Benzyl alcohol	**UJ**
T12-ROX-011123	SVOCs	4-Chloro-3-methylphenol	**UJ**
T12-ROX-011123	SVOCs	2-Chlorophenol	**UJ**
T12-ROX-011123	SVOCs	2,4-Dichlorophenol	**UJ**
T12-ROX-011123	SVOCs	2,4-Dimethylphenol	**J**
T12-ROX-011123	SVOCs	2-Methyl-4,6-dinitrophenol	**UJ**
T12-ROX-011123	SVOCs	2,4-Dinitrophenol	**UJ**
T12-ROX-011123	SVOCs	2-Methylphenol	**UJ**
T12-ROX-011123	SVOCs	3 & 4 Methylphenol	**UJ**
T12-ROX-011123	SVOCs	2-Nitrophenol	**UJ**
T12-ROX-011123	SVOCs	4-Nitrophenol	**UJ**
T12-ROX-011123	SVOCs	Pentachlorophenol	**UJ**
T12-ROX-011123	SVOCs	Phenol	**J**
T12-ROX-011123	SVOCs	2,4,5-Trichlorophenol	**UJ**
T12-ROX-011123	SVOCs	2,4,6-Trichlorophenol	**UJ**
P59-ROX-011123-DUP	SVOCs	All detects	**J**
P59-ROX-011123-DUP	SVOCs	All non-detects	**UJ**

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

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

Yes, although not requested, sample MW3-ROX-011123 was spiked and analyzed for VOCs.

Were MS/MSD recoveries within evaluation criteria?

No

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
MW3-ROX-011123 MS/MSD	VOCs	Acetone	98/**151**	**42**	43-150/30
MW3-ROX-011123 MS/MSD	VOCs	2-Chloroethyl vinyl ether	14/**7**	**67**	10-150/50

Analytical data that required qualification based on MS/MSD data are included in the table below. Analytical data reported as non-detect and associated with MS/MSD recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Professional judgement was used to qualify; however, not reject the compound 2-chloroethyl vinyl ether due to acceptable LCS recoveries for this compound and to the acid reactive nature of 2-chloroethyl vinyl ether.

Sample ID	Parameter	Analyte	Qualification
MW3-ROX-011123	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
MW6B-ROX-011123	MW6B-ROX-011123-DUP
T12-ROX-011123	T12-ROX-011123-DUP
P59-ROX-011123	P59-ROX-011123-DUP

Were field duplicates within evaluation criteria?

No. Phenol in samples T12-ROX-011123 and P59-ROX-011123-DUP were previously qualified in Section 6.0 of this data review due surrogate recoveries outside evaluation criteria; no further qualification is required.

Field ID	Field Duplicate ID	Parameter	Analyte	RPD	Qualification
T12-ROX-011123	T12-ROX-011123-DUP	SVOCs	Phenol	**>2X RL**	**J**
P59-ROX-011123	P59-ROX-011123-DUP	PAHs	Phenanthrene	**>2X RL**	**J/J**
P59-ROX-011123	P59-ROX-011123-DUP	PAHs	1-Methylnaphthalene	**102**	**J/J**
P59-ROX-011123	P59-ROX-011123-DUP	PAHs	2-Methylnaphthalene	**96**	**J/J**
P59-ROX-011123	P59-ROX-011123-DUP	SVOCs	Phenol	**>2X RL**	**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 to bring benzene into

calibration range of the instrument, except for non-detect VOCs in sample P93B-ROX-011123. VOCs were non-detect at a dilution factor of 1000X, with raised reporting limits of between 1,000 and 25,000 µg/L. Due to historical detections, please see Section 12.0 of this data review for additional qualifications.

12.0 Additional Qualifications

Were additional qualifications applied?

Yes, the initial calibration verification for acenaphthylene, fluorene, and pyrene was outside evaluation criteria, biased high. The continuing calibration verification for benzo(k)fluoranthene was outside evaluation criteria, biased low. MW6B-ROX-011123-RA was previously qualified in Section 3.0 of this data review due to holding time exceedances. No further qualification is required. Analytes are qualified as summarized in the following table.

Sample ID	Parameter	Analyte	Qualification
MW6D-ROX-011123	PAHs	Acenaphthylene	**J**
MW6B-ROX-011123	PAHs	Acenaphthylene	**J**
MW6B-ROX-011123	PAHs	Pyrene	**J**
T12-ROX-011123	PAHs	Fluorene	**J**
T12-ROX-011123-DUP	PAHs	Acenaphthylene	**J**
T12-ROX-011123-DUP	PAHs	Pyrene	**J**
T12-ROX-011123-DUP	PAHs	Fluorene	**J**
P59-ROX-011123	PAHs	Pyrene	**J**
P59-ROX-011123	PAHs	Fluorene	**J**
P59-ROX-011123-DUP	PAHs	Pyrene	**J**

Additionally, VOCs in sample P93B-ROX-011123 were qualified as estimated non-detect due to sample dilution and historical detections.

Sample ID	Parameter	Analyte	Qualification
P93B-ROX-011123	VOCs	All non-detects	**UJ**

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ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

ROXANA QUARTERLY GW

JOB NUMBER

400-231703-1

Eurofins Pensacola
3355 McLemore Drive
Pensacola FL 32514

See page two for job notes and contact information.

my EOL

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization

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Job ID: 400-231703-1

Laboratory: Eurofins Pensacola

Narrative

Job Narrative
400-231703-1

Comments
Revised Report
Report revised to correct 8270LL method blank linking for MB400-610934.
Supersedes report dated 3-3-2023.

Revised Report
Report revised to correct 8270 data.
Supersedes report dated 1-27-2023.

The 8270 data for this job was reviewed when it was determined the original results did not match historical data. Confirmation analyses of the initial extract and in some instances analysis of re-extracted samples were performed. The results of these re-analyses confirm in some cases and are reported again in the revision. The difference in a result that does not confirm is most likely due to trace level contamination. The result with the highest confidence level is currently reported when all results are in hold. In instances where a confirmation analysis was performed outside of holding time both the initial and out of hold results are reported.

Receipt
The samples were received on 1/12/2023 8:48 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.0°C and 0.0°C

GC/MS VOA
Method 8260B: The following samples were diluted to bring the concentration of target analytes within the calibration range: T12-ROX-011123 (400-231703-11), T12-ROX-011123-DUP (400-231703-12), P59-ROX-011123 (400-231703-13), P59-ROX-011123-DUP (400-231703-14) and P93B-ROX-011123 (400-231703-15). Elevated reporting limits (RLs) are provided.

Method 8260B: The matrix spike duplicate (MSD) recoveries for analytical batch 400-608580 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8260B: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for analytical batch 400-608580 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected.

Method 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-011123-8260-A (400-231703-1), MW3-ROX-011123 (400-231703-3), MW6C-ROX-011123 (400-231703-4), MW6A-ROX-011123 (400-231703-5), MW6D-ROX-011123 (400-231703-6), MW6B-ROX-011123 (400-231703-7), MW6B-ROX-011123-DUP (400-231703-8), TB-ROX-011123-8260-B (400-231703-9), T12-ROX-011123 (400-231703-11), T12-ROX-011123-DUP (400-231703-12), P59-ROX-011123 (400-231703-13), P59-ROX-011123-DUP (400-231703-14) and P93B-ROX-011123 (400-231703-15). 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 8270D: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 400-608912 and analytical batch 400-609136 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 8270D: The laboratory control sample (LCS) for preparation batch 400-608912 and analytical batch 400-609136 recovered outside control limits for the following analytes: 3,3'-Dichlorobenzidine. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method 8270D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 400-608912 and analytical batch

Job ID: 400-231703-1 (Continued)

Laboratory: Eurofins Pensacola (Continued)

400-609136 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8270D: Surrogate recovery for the following samples were outside control limits: T12-ROX-011123 (400-231703-11) and P59-ROX-011123-DUP (400-231703-14). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 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-011123-DUP (400-231703-12) and (MB 400-608912/1-A). These results have been reported and qualified.

Method 8270D LL: The continuing calibration verification (CCV) associated with batch 400-609585 recovered above the upper control limit for Fluoranthene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 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: P59-ROX-011123-DUP (400-231703-14). These results have been reported and qualified.

Method 8270D LL: The initial calibration verification (ICV) analyzed in batch 400-609874 was outside method criteria for the following analyte(s): Dibenz(a,h)anthracene and Indeno[1,2,3-cd]pyrene. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated. A confirmation ICV was reanalyzed and are within limits therefore the data are reported.

Method 8270D LL: The initial calibration verification (ICV) analyzed in batch 400-609362 was outside method criteria for the following analyte(s): Acenaphthylene, Fluorene and Pyrene. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D LL: The following sample was diluted due to the nature of the sample matrix: P59-ROX-011123-DUP (400-231703-14). Elevated reporting limits (RLs) are provided.

Method 8270D LL: Reanalysis or re-extraction of the following samples were performed outside of the analytical holding time to confirm PAH detections in the original extract: MW3-ROX-011123 (400-231703-3), MW6C-ROX-011123 (400-231703-4), MW6D-ROX-011123 (400-231703-6), MW6B-ROX-011123 (400-231703-7) and MW6B-ROX-011123-DUP (400-231703-8).

Method 8270D LL: The method blank for preparation batch 400-610934 and analytical batch 400-614365 contained Benzo[b]fluoranthene 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.

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

GC Semi VOA

Method 8011: The continuing calibration verification (CCV) associated with batch 400-609918 recovered above the upper control limit for 1,2-Dibromo-3-Chloropropane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8011: The continuing calibration verification (CCV) associated with batch 400-609918 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.

Method 8011: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 400-609810.

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

Job ID: 400-231703-1 (Continued)

Laboratory: Eurofins Pensacola (Continued)

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 GW

Job ID: 400-231703-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-231703-1	TB-ROX-011123-8260-A	Water	01/11/23 12:00	01/12/23 08:48
400-231703-2	TB-ROX-011123-8011A	Water	01/11/23 12:00	01/12/23 08:48
400-231703-3	MW3-ROX-011123	Water	01/11/23 09:25	01/12/23 08:48
400-231703-4	MW6C-ROX-011123	Water	01/11/23 10:25	01/12/23 08:48
400-231703-5	MW6A-ROX-011123	Water	01/11/23 11:20	01/12/23 08:48
400-231703-6	MW6D-ROX-011123	Water	01/11/23 13:25	01/12/23 08:48
400-231703-7	MW6B-ROX-011123	Water	01/11/23 14:10	01/12/23 08:48
400-231703-8	MW6B-ROX-011123-DUP	Water	01/11/23 14:10	01/12/23 08:48
400-231703-9	TB-ROX-011123-8260-B	Water	01/11/23 12:00	01/12/23 08:48
400-231703-10	TB-ROX-011123-8011-B	Water	01/11/23 12:00	01/12/23 08:48
400-231703-11	T12-ROX-011123	Water	01/11/23 09:50	01/12/23 08:48
400-231703-12	T12-ROX-011123-DUP	Water	01/11/23 09:50	01/12/23 08:48
400-231703-13	P59-ROX-011123	Water	01/11/23 11:05	01/12/23 08:48
400-231703-14	P59-ROX-011123-DUP	Water	01/11/23 11:05	01/12/23 08:48
400-231703-15	P93B-ROX-011123	Water	01/11/23 12:40	01/12/23 08:48

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: TB-ROX-011123-8260-A — Lab Sample ID: 400-231703-1

No Detections.

Client Sample ID: TB-ROX-011123-8011A — Lab Sample ID: 400-231703-2

No Detections.

Client Sample ID: MW3-ROX-011123 — Lab Sample ID: 400-231703-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.61	J	1.0	0.13	ug/L	1		8260B	Total/NA
Methyl tert-butyl ether	1.7		1.0	0.22	ug/L	1		8260B	Total/NA
Benzo[b]fluoranthene	0.066	J	0.20	0.034	ug/L	1		8270D LL	Total/NA

Client Sample ID: MW6C-ROX-011123 — Lab Sample ID: 400-231703-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	0.33	J	1.0	0.22	ug/L	1		8260B	Total/NA
Benzo[b]fluoranthene	0.044	J	0.20	0.035	ug/L	1		8270D LL	Total/NA

Client Sample ID: MW6A-ROX-011123 — Lab Sample ID: 400-231703-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	0.61	J	1.0	0.22	ug/L	1		8260B	Total/NA

Client Sample ID: MW6D-ROX-011123 — Lab Sample ID: 400-231703-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.054	J J	0.21	0.046	ug/L	1		8270D LL	Total/NA
Benzo[b]fluoranthene	0.050	J	0.21	0.035	ug/L	1		8270D LL	Total/NA

Client Sample ID: MW6B-ROX-011123 — Lab Sample ID: 400-231703-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	0.45	J	1.0	0.22	ug/L	1		8260B	Total/NA
Acenaphthylene	0.062	J J	0.21	0.048	ug/L	1		8270D LL	Total/NA
Benzo[a]anthracene	0.17	J	0.21	0.049	ug/L	1		8270D LL	Total/NA
Benzo[b]fluoranthene	0.28		0.21	0.036	ug/L	1		8270D LL	Total/NA
Benzo[k]fluoranthene	0.25		0.21	0.11	ug/L	1		8270D LL	Total/NA
Chrysene	0.16	J	0.21	0.079	ug/L	1		8270D LL	Total/NA
Dibenz(a,h)anthracene	0.11	J	0.21	0.054	ug/L	1		8270D LL	Total/NA
Pyrene	0.17	J J	0.21	0.043	ug/L	1		8270D LL	Total/NA
Benzo[a]anthracene - RA	0.15	J H J	0.21	0.049	ug/L	1		8270D LL	Total/NA
Benzo[b]fluoranthene - RA	0.096	J H J	0.21	0.036	ug/L	1		8270D LL	Total/NA
Chrysene - RA	0.11	J H J	0.21	0.079	ug/L	1		8270D LL	Total/NA
Dibenz(a,h)anthracene - RA	0.092	J H J	0.21	0.054	ug/L	1		8270D LL	Total/NA
Pyrene - RA	0.10	J H J	0.21	0.043	ug/L	1		8270D LL	Total/NA

Client Sample ID: MW6B-ROX-011123-DUP — Lab Sample ID: 400-231703-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	0.46	J	1.0	0.22	ug/L	1		8260B	Total/NA
Benzo[b]fluoranthene	0.036	J	0.21	0.036	ug/L	1		8270D LL	Total/NA

Client Sample ID: TB-ROX-011123-8260-B — Lab Sample ID: 400-231703-9

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Pensacola

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: TB-ROX-011123-8011-B — Lab Sample ID: 400-231703-10

No Detections.

Client Sample ID: T12-ROX-011123 — Lab Sample ID: 400-231703-11

Analyte	Result	Qualifier		RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2100			10	1.3	ug/L	10		8260B	Total/NA
Ethylbenzene	26			10	5.0	ug/L	10		8260B	Total/NA
Isopropy benzene	6.9	J		10	5.3	ug/L	10		8260B	Total/NA
m-Xylene & p-Xylene	110			50	6.3	ug/L	10		8260B	Total/NA
Naphthalene	70			50	30	ug/L	10		8260B	Total/NA
N-Propylbenzene	9.0	J		10	6.9	ug/L	10		8260B	Total/NA
o-Xylene	7.9	J		50	6.0	ug/L	10		8260B	Total/NA
Toluene	53			10	4.1	ug/L	10		8260B	Total/NA
1,2,4-Trimethy benzene	19			10	8.2	ug/L	10		8260B	Total/NA
1,3,5-Trimethy benzene	22			10	5.6	ug/L	10		8260B	Total/NA
Xylenes, Total	120			100	16	ug/L	10		8260B	Total/NA
Acenaphthene	0.32			0.19	0.030	ug/L	1		8270D LL	Total/NA
Fluorene	0.37		J	0.19	0.10	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene	22			0.19	0.071	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	32			0.19	0.057	ug/L	1		8270D LL	Total/NA
Phenanthrene	0.45			0.19	0.034	ug/L	1		8270D LL	Total/NA
2,4-Dimethylphenol	3.9	J	J	9.5	3.3	ug/L	1		8270D	Total/NA
Indene	5.4	J		9.5	0.95	ug/L	1		8270D	Total/NA
Phenol	23		J	9.5	2.5	ug/L	1		8270D	Total/NA

Client Sample ID: T12-ROX-011123-DUP — Lab Sample ID: 400-231703-12

Analyte	Result	Qualifier		RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2100			10	1.3	ug/L	10		8260B	Total/NA
Ethylbenzene	25			10	5.0	ug/L	10		8260B	Total/NA
Isopropy benzene	6.8	J		10	5.3	ug/L	10		8260B	Total/NA
m-Xylene & p-Xylene	110			50	6.3	ug/L	10		8260B	Total/NA
Naphthalene	58			50	30	ug/L	10		8260B	Total/NA
N-Propylbenzene	8.8	J		10	6.9	ug/L	10		8260B	Total/NA
o-Xylene	7.6	J		50	6.0	ug/L	10		8260B	Total/NA
Toluene	53			10	4.1	ug/L	10		8260B	Total/NA
1,2,4-Trimethy benzene	18			10	8.2	ug/L	10		8260B	Total/NA
1,3,5-Trimethy benzene	22			10	5.6	ug/L	10		8260B	Total/NA
Xylenes, Total	120			100	16	ug/L	10		8260B	Total/NA
Acenaphthene	0.26		J	0.19	0.031	ug/L	1		8270D LL	Total/NA
Acenaphthylene	0.11	J		0.19	0.043	ug/L	1		8270D LL	Total/NA
Fluorene	0.34		J	0.19	0.11	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene	22			0.19	0.071	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	31			0.19	0.057	ug/L	1		8270D LL	Total/NA
Phenanthrene	0.48			0.19	0.034	ug/L	1		8270D LL	Total/NA
Pyrene	0.051	J	J	0.19	0.038	ug/L	1		8270D LL	Total/NA
2,4-Dimethylphenol	4.2	J		9.5	3.3	ug/L	1		8270D	Total/NA
3 & 4 Methylphenol	0.87	J		19	0.37	ug/L	1		8270D	Total/NA
Phenol	56		J	9.5	2.5	ug/L	1		8270D	Total/NA

Client Sample ID: P59-ROX-011123 — Lab Sample ID: 400-231703-13

Analyte	Result	Qualifier		RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2500			20	2.6	ug/L	20		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Pensacola

Client Sample ID: P59-ROX-011123 (Continued) — Lab Sample ID: 400-231703-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	160		20	10	ug/L	20		8260B	Total/NA
Isopropy benzene	45		20	11	ug/L	20		8260B	Total/NA
m-Xylene & p-Xylene	150		100	13	ug/L	20		8260B	Total/NA
Naphthalene	120		100	60	ug/L	20		8260B	Total/NA
N-Propylbenzene	73		20	14	ug/L	20		8260B	Total/NA
Toluene	100		20	8.2	ug/L	20		8260B	Total/NA
1,2,4-Trimethy benzene	51		20	16	ug/L	20		8260B	Total/NA
1,3,5-Trimethy benzene	39		20	11	ug/L	20		8260B	Total/NA
Xylenes, Total	160	J	200	32	ug/L	20		8260B	Total/NA
Acenaphthene	0.44		0.19	0.031	ug/L	1		8270D LL	Total/NA
Fluorene	0.36	J	0.19	0.11	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene	12	J	0.19	0.072	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	15	J	0.19	0.058	ug/L	1		8270D LL	Total/NA
Phenanthrene	0.92	J	0.19	0.035	ug/L	1		8270D LL	Total/NA
Pyrene	0.37	J	0.19	0.039	ug/L	1		8270D LL	Total/NA
3 & 4 Methylphenol	1.2	J	19	0.38	ug/L	1		8270D	Total/NA
Phenol	35	J	9.7	2.5	ug/L	1		8270D	Total/NA

Client Sample ID: P59-ROX-011123-DUP — Lab Sample ID: 400-231703-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2700		20	2.6	ug/L	20		8260B	Total/NA
Ethylbenzene	170		20	10	ug/L	20		8260B	Total/NA
Isopropy benzene	49		20	11	ug/L	20		8260B	Total/NA
m-Xylene & p-Xylene	170		100	13	ug/L	20		8260B	Total/NA
Naphthalene	130		100	60	ug/L	20		8260B	Total/NA
N-Propylbenzene	76		20	14	ug/L	20		8260B	Total/NA
Toluene	110		20	8.2	ug/L	20		8260B	Total/NA
1,2,4-Trimethy benzene	58		20	16	ug/L	20		8260B	Total/NA
1,3,5-Trimethy benzene	40		20	11	ug/L	20		8260B	Total/NA
Xylenes, Total	170	J	200	32	ug/L	20		8260B	Total/NA
Benzo[b]fluoranthene	0.075	J	0.19	0.033	ug/L	1		8270D LL	Total/NA
Chrysene	0.092	J	0.19	0.071	ug/L	1		8270D LL	Total/NA
Fluoranthene	0.089	J	0.19	0.065	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene	3.9	J	0.19	0.071	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	5.3	J	0.19	0.058	ug/L	1		8270D LL	Total/NA
Phenanthrene	0.37	J	0.19	0.035	ug/L	1		8270D LL	Total/NA
Pyrene	0.19	J	0.19	0.038	ug/L	1		8270D LL	Total/NA
Benzo[b]fluoranthene - RE	0.18	J H B UJ	0.38	0.065	ug/L	2		8270D LL	Total/NA
Fluoranthene - RE	0.22	J H J	0.38	0.13	ug/L	2		8270D LL	Total/NA
1-Methylnaphthalene - RE	12	H J	0.38	0.14	ug/L	2		8270D LL	Total/NA
2-Methylnaphthalene - RE	16	H J	0.38	0.12	ug/L	2		8270D LL	Total/NA
Phenanthrene - RE	0.76	H J	0.38	0.069	ug/L	2		8270D LL	Total/NA
Pyrene - RE	0.40	H J	0.38	0.077	ug/L	2		8270D LL	Total/NA
Hexachlorobenzene	3.6	J J	9.6	0.16	ug/L	1		8270D	Total/NA
Phenol	2.5	J J	9.6	2.5	ug/L	1		8270D	Total/NA

Client Sample ID: P93B-ROX-011123 — Lab Sample ID: 400-231703-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene - DL	1400000		5000	650	ug/L	5000		8260B	Total/NA
2,4-Dimethylphenol	4.5	J	9.6	3.4	ug/L	1		8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: P93B-ROX-011123 (Continued)

Lab Sample ID: 400-231703-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
3 & 4 Methylphenol	1.4	J	19	0.37	ug/L	1		8270D	Total/NA
Phenol	310		9.6	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 GW

Job ID: 400-231703-1

Client Sample ID: TB-ROX-011123-8260-A
Date Collected: 01/11/23 12:00
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-1
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/16/23 08:22	1
Acrolein	ND		20	3.3	ug/L			01/16/23 08:22	1
Acrylonitrile	ND		10	2.8	ug/L			01/16/23 08:22	1
Benzene	ND		1.0	0.13	ug/L			01/16/23 08:22	1
Bromobenzene	ND		1.0	0.54	ug/L			01/16/23 08:22	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/16/23 08:22	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/16/23 08:22	1
Bromoform	ND		5.0	0.25	ug/L			01/16/23 08:22	1
Bromomethane	ND		1.0	0.98	ug/L			01/16/23 08:22	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/16/23 08:22	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/16/23 08:22	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/16/23 08:22	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/16/23 08:22	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/16/23 08:22	1
Chloroethane	ND		1.0	0.76	ug/L			01/16/23 08:22	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/16/23 08:22	1
Chloroform	ND		1.0	1.0	ug/L			01/16/23 08:22	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/16/23 08:22	1
Chloromethane	ND		1.0	0.32	ug/L			01/16/23 08:22	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/16/23 08:22	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/16/23 08:22	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/16/23 08:22	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/16/23 08:22	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/16/23 08:22	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/16/23 08:22	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/16/23 08:22	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/16/23 08:22	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/16/23 08:22	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 08:22	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 08:22	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 08:22	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/16/23 08:22	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/16/23 08:22	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/16/23 08:22	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/16/23 08:22	1
2-Hexanone	ND		25	1.4	ug/L			01/16/23 08:22	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/16/23 08:22	1
Methylene bromide	ND		5.0	0.22	ug/L			01/16/23 08:22	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/16/23 08:22	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/16/23 08:22	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/16/23 08:22	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/16/23 08:22	1
Naphthalene	ND		5.0	3.0	ug/L			01/16/23 08:22	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/16/23 08:22	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/16/23 08:22	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/16/23 08:22	1
o-Xylene	ND		5.0	0.60	ug/L			01/16/23 08:22	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/16/23 08:22	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/16/23 08:22	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: TB-ROX-011123-8260-A
Date Collected: 01/11/23 12:00
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-1
Matrix: Water

Method: SW846 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			01/16/23 08:22	1
Styrene	ND		1.0	1.0	ug/L			01/16/23 08:22	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/16/23 08:22	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/16/23 08:22	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/16/23 08:22	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/16/23 08:22	1
Toluene	ND		1.0	0.41	ug/L			01/16/23 08:22	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/16/23 08:22	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/16/23 08:22	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/16/23 08:22	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/16/23 08:22	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/16/23 08:22	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/16/23 08:22	1
Trichloroethene	ND		1.0	0.15	ug/L			01/16/23 08:22	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/16/23 08:22	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/16/23 08:22	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/16/23 08:22	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/16/23 08:22	1
Vinyl acetate	ND		25	0.93	ug/L			01/16/23 08:22	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/16/23 08:22	1
Xylenes, Total	ND		10	1.6	ug/L			01/16/23 08:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*72 - 119*		*01/16/23 08:22*	*1*
Dibromofluoromethane	*100*		*75 - 126*		*01/16/23 08:22*	*1*
Toluene-d8 (Surr)	*94*		*64 - 132*		*01/16/23 08:22*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: TB-ROX-011123-8011A
Date Collected: 01/11/23 12:00
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-2
Matrix: Water

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND		0.029	0.017	ug/L		01/25/23 10:27	01/25/23 21:37	1
1,2-D bromoethane	ND		0.019	0.015	ug/L		01/25/23 10:27	01/25/23 21:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*106*	*p*	*51 - 149*	*01/25/23 10:27*	*01/25/23 21:37*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: MW3-ROX-011123
Date Collected: 01/11/23 09:25
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-3
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	F1 F2	25	10	ug/L			01/16/23 08:44	1
Acrolein	ND		20	3.3	ug/L			01/16/23 08:44	1
Acrylonitrile	ND		10	2.8	ug/L			01/16/23 08:44	1
Benzene	**0.61**	**J**	1.0	0.13	ug/L			01/16/23 08:44	1
Bromobenzene	ND		1.0	0.54	ug/L			01/16/23 08:44	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/16/23 08:44	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/16/23 08:44	1
Bromoform	ND		5.0	0.25	ug/L			01/16/23 08:44	1
Bromomethane	ND		1.0	0.98	ug/L			01/16/23 08:44	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/16/23 08:44	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/16/23 08:44	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/16/23 08:44	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/16/23 08:44	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/16/23 08:44	1
Chloroethane	ND		1.0	0.76	ug/L			01/16/23 08:44	1
2-Chloroethyl vinyl ether	ND	F1 F2 UJ	5.0	2.0	ug/L			01/16/23 08:44	1
Chloroform	ND		1.0	1.0	ug/L			01/16/23 08:44	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/16/23 08:44	1
Chloromethane	ND		1.0	0.32	ug/L			01/16/23 08:44	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/16/23 08:44	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/16/23 08:44	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/16/23 08:44	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/16/23 08:44	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/16/23 08:44	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/16/23 08:44	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/16/23 08:44	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/16/23 08:44	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/16/23 08:44	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 08:44	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 08:44	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 08:44	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/16/23 08:44	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/16/23 08:44	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/16/23 08:44	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/16/23 08:44	1
2-Hexanone	ND		25	1.4	ug/L			01/16/23 08:44	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/16/23 08:44	1
Methylene bromide	ND		5.0	0.22	ug/L			01/16/23 08:44	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/16/23 08:44	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/16/23 08:44	1
Methyl tert-butyl ether	**1.7**		1.0	0.22	ug/L			01/16/23 08:44	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/16/23 08:44	1
Naphthalene	ND		5.0	3.0	ug/L			01/16/23 08:44	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/16/23 08:44	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/16/23 08:44	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/16/23 08:44	1
o-Xylene	ND		5.0	0.60	ug/L			01/16/23 08:44	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/16/23 08:44	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/16/23 08:44	1

Client Sample ID: MW3-ROX-011123
Date Collected: 01/11/23 09:25
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-3
Matrix: Water

Method: SW846 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			01/16/23 08:44	1
Styrene	ND		1.0	1.0	ug/L			01/16/23 08:44	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/16/23 08:44	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/16/23 08:44	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/16/23 08:44	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/16/23 08:44	1
Toluene	ND		1.0	0.41	ug/L			01/16/23 08:44	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/16/23 08:44	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/16/23 08:44	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/16/23 08:44	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/16/23 08:44	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/16/23 08:44	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/16/23 08:44	1
Trichloroethene	ND		1.0	0.15	ug/L			01/16/23 08:44	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/16/23 08:44	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/16/23 08:44	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/16/23 08:44	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/16/23 08:44	1
Vinyl acetate	ND		25	0.93	ug/L			01/16/23 08:44	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/16/23 08:44	1
Xylenes, Total	ND		10	1.6	ug/L			01/16/23 08:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*72 - 119*		*01/16/23 08:44*	*1*
Dibromofluoromethane	*102*		*75 - 126*		*01/16/23 08:44*	*1*
Toluene-d8 (Surr)	*93*		*64 - 132*		*01/16/23 08:44*	*1*

Method: SW846 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	0.032	ug/L		01/18/23 09:38	01/21/23 04:57	1
Acenaphthylene	ND		0.20	0.045	ug/L		01/18/23 09:38	01/21/23 04:57	1
Anthracene	ND		0.20	0.032	ug/L		01/18/23 09:38	01/21/23 04:57	1
Benzo[a]anthracene	ND		0.20	0.046	ug/L		01/18/23 09:38	01/21/23 04:57	1
Benzo[a]pyrene	ND		0.20	0.042	ug/L		01/18/23 09:38	01/21/23 04:57	1
Benzo[b]fluoranthene	**0.066**	**J**	0.20	0.034	ug/L		01/18/23 09:38	01/21/23 04:57	1
Benzo[g,h,i]perylene	ND		0.20	0.13	ug/L		01/18/23 09:38	01/21/23 04:57	1
Benzo[k]fluoranthene	ND		0.20	0.10	ug/L		01/18/23 09:38	01/21/23 04:57	1
Chrysene	ND		0.20	0.074	ug/L		01/18/23 09:38	01/21/23 04:57	1
Dibenz(a,h)anthracene	ND		0.20	0.050	ug/L		01/18/23 09:38	01/21/23 04:57	1
Fluoranthene	ND		0.20	0.068	ug/L		01/18/23 09:38	01/21/23 04:57	1
Fluorene	ND		0.20	0.11	ug/L		01/18/23 09:38	01/21/23 04:57	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.043	ug/L		01/18/23 09:38	01/21/23 04:57	1
1-Methylnaphthalene	ND		0.20	0.074	ug/L		01/18/23 09:38	01/21/23 04:57	1
2-Methylnaphthalene	ND		0.20	0.060	ug/L		01/18/23 09:38	01/21/23 04:57	1
Phenanthrene	ND		0.20	0.036	ug/L		01/18/23 09:38	01/21/23 04:57	1
Pyrene	ND		0.20	0.040	ug/L		01/18/23 09:38	01/21/23 04:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*88*		*15 - 122*	*01/18/23 09:38*	*01/21/23 04:57*	*1*
Nitrobenzene-d5	*86*		*19 - 130*	*01/18/23 09:38*	*01/21/23 04:57*	*1*

Client Sample ID: MW3-ROX-011123

Date Collected: 01/11/23 09:25
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-3

Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*84*		*33 - 138*	*01/18/23 09:38*	*01/21/23 04:57*	*1*

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND	H UJ	0.20	0.034	ug/L		01/18/23 09:38	02/28/23 19:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*85*		*15 - 122*	*01/18/23 09:38*	*02/28/23 19:31*	*1*
Nitrobenzene-d5	*85*		*19 - 130*	*01/18/23 09:38*	*02/28/23 19:31*	*1*
Terphenyl-d14	*74*		*33 - 138*	*01/18/23 09:38*	*02/28/23 19:31*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.8	ug/L		01/18/23 09:38	01/19/23 19:40	1
Benzenethiol	ND	*- UJ	10	1.7	ug/L		01/18/23 09:38	01/19/23 19:40	1
Benzoic acid	ND		30	7.3	ug/L		01/18/23 09:38	01/19/23 19:40	1
Benzyl alcohol	ND		10	2.0	ug/L		01/18/23 09:38	01/19/23 19:40	1
Bis(2-chloroethoxy)methane	ND		10	0.16	ug/L		01/18/23 09:38	01/19/23 19:40	1
Bis(2-chloroethyl)ether	ND		10	2.7	ug/L		01/18/23 09:38	01/19/23 19:40	1
bis (2-chloroisopropyl) ether	ND		10	0.16	ug/L		01/18/23 09:38	01/19/23 19:40	1
Bis(2-ethylhexyl) phthalate	ND		10	5.0	ug/L		01/18/23 09:38	01/19/23 19:40	1
4-Bromophenyl phenyl ether	ND		10	0.20	ug/L		01/18/23 09:38	01/19/23 19:40	1
Butyl benzyl phthalate	ND		10	0.19	ug/L		01/18/23 09:38	01/19/23 19:40	1
4-Chloroaniline	ND		10	3.4	ug/L		01/18/23 09:38	01/19/23 19:40	1
4-Chloro-3-methylphenol	ND		10	3.8	ug/L		01/18/23 09:38	01/19/23 19:40	1
2-Chloronaphthalene	ND		10	0.14	ug/L		01/18/23 09:38	01/19/23 19:40	1
2-Chlorophenol	ND		10	2.2	ug/L		01/18/23 09:38	01/19/23 19:40	1
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		01/18/23 09:38	01/19/23 19:40	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 19:40	1
Dibenzofuran	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 19:40	1
3,3'-Dichlorobenzidine	ND	*+	10	2.6	ug/L		01/18/23 09:38	01/19/23 19:40	1
2,4-Dichlorophenol	ND		10	3.0	ug/L		01/18/23 09:38	01/19/23 19:40	1
Diethyl phthalate	ND		10	0.24	ug/L		01/18/23 09:38	01/19/23 19:40	1
2,4-Dimethylphenol	ND		10	3.5	ug/L		01/18/23 09:38	01/19/23 19:40	1
Dimethyl phthalate	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 19:40	1
Di-n-butyl phthalate	ND		10	2.7	ug/L		01/18/23 09:38	01/19/23 19:40	1
4,6-Dinitro-ortho-cresol	ND		10	1.6	ug/L		01/18/23 09:38	01/19/23 19:40	1
2,4-Dinitrophenol	ND		30	3.4	ug/L		01/18/23 09:38	01/19/23 19:40	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		01/18/23 09:38	01/19/23 19:40	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		01/18/23 09:38	01/19/23 19:40	1
Di-n-octyl phthalate	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 19:40	1
1,4-Dioxane	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 19:40	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 19:40	1
Hexachlorobenzene	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 19:40	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		01/18/23 09:38	01/19/23 19:40	1
Hexachloroethane	ND		10	4.2	ug/L		01/18/23 09:38	01/19/23 19:40	1
Indene	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 19:40	1
Isophorone	ND		10	0.14	ug/L		01/18/23 09:38	01/19/23 19:40	1
2-Methylphenol	ND		10	1.8	ug/L		01/18/23 09:38	01/19/23 19:40	1

Client Sample ID: MW3-ROX-011123

Date Collected: 01/11/23 09:25
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-3

Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	ND		20	0.39	ug/L		01/18/23 09:38	01/19/23 19:40	1
2-Nitroaniline	ND		10	2.2	ug/L		01/18/23 09:38	01/19/23 19:40	1
3-Nitroaniline	ND		10	1.8	ug/L		01/18/23 09:38	01/19/23 19:40	1
4-Nitroaniline	ND		10	1.5	ug/L		01/18/23 09:38	01/19/23 19:40	1
Nitrobenzene	ND		10	0.13	ug/L		01/18/23 09:38	01/19/23 19:40	1
2-Nitrophenol	ND		10	5.2	ug/L		01/18/23 09:38	01/19/23 19:40	1
4-Nitrophenol	ND		10	2.1	ug/L		01/18/23 09:38	01/19/23 19:40	1
N-Nitrosodimethylamine	ND		10	3.5	ug/L		01/18/23 09:38	01/19/23 19:40	1
N-Nitrosodi-n-propylamine	ND		10	3.3	ug/L		01/18/23 09:38	01/19/23 19:40	1
N-Nitrosodiphenylamine	ND		10	0.18	ug/L		01/18/23 09:38	01/19/23 19:40	1
Pentachlorophenol	ND		20	1.4	ug/L		01/18/23 09:38	01/19/23 19:40	1
Phenol	ND		10	2.6	ug/L		01/18/23 09:38	01/19/23 19:40	1
Pyridine	ND		10	3.2	ug/L		01/18/23 09:38	01/19/23 19:40	1
Quinoline	ND		10	4.5	ug/L		01/18/23 09:38	01/19/23 19:40	1
2,4,5-Trichlorophenol	ND		10	3.7	ug/L		01/18/23 09:38	01/19/23 19:40	1
2,4,6-Trichlorophenol	ND		10	3.5	ug/L		01/18/23 09:38	01/19/23 19:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*95*		*46 - 124*	*01/18/23 09:38*	*01/19/23 19:40*	*1*
2-Fluorophenol	*46*		*13 - 113*	*01/18/23 09:38*	*01/19/23 19:40*	*1*
Nitrobenzene-d5	*93*		*36 - 126*	*01/18/23 09:38*	*01/19/23 19:40*	*1*
Phenol-d5	*81*		*17 - 127*	*01/18/23 09:38*	*01/19/23 19:40*	*1*
Terphenyl-d14	*87*		*44 - 149*	*01/18/23 09:38*	*01/19/23 19:40*	*1*
2,4,6-Tribromophenol	*98*		*26 - 150*	*01/18/23 09:38*	*01/19/23 19:40*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND		0.029	0.017	ug/L		01/25/23 10:27	01/25/23 21:58	1
1,2-D bromoethane	ND		0.019	0.015	ug/L		01/25/23 10:27	01/25/23 21:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*	*p*	*51 - 149*	*01/25/23 10:27*	*01/25/23 21:58*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: MW6C-ROX-011123
Date Collected: 01/11/23 10:25
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-4
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/16/23 09:09	1
Acrolein	ND		20	3.3	ug/L			01/16/23 09:09	1
Acrylonitrile	ND		10	2.8	ug/L			01/16/23 09:09	1
Benzene	ND		1.0	0.13	ug/L			01/16/23 09:09	1
Bromobenzene	ND		1.0	0.54	ug/L			01/16/23 09:09	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/16/23 09:09	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/16/23 09:09	1
Bromoform	ND		5.0	0.25	ug/L			01/16/23 09:09	1
Bromomethane	ND		1.0	0.98	ug/L			01/16/23 09:09	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/16/23 09:09	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/16/23 09:09	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/16/23 09:09	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/16/23 09:09	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/16/23 09:09	1
Chloroethane	ND		1.0	0.76	ug/L			01/16/23 09:09	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/16/23 09:09	1
Chloroform	ND		1.0	1.0	ug/L			01/16/23 09:09	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/16/23 09:09	1
Chloromethane	ND		1.0	0.32	ug/L			01/16/23 09:09	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/16/23 09:09	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/16/23 09:09	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/16/23 09:09	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/16/23 09:09	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/16/23 09:09	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/16/23 09:09	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/16/23 09:09	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/16/23 09:09	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/16/23 09:09	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 09:09	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 09:09	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 09:09	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/16/23 09:09	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/16/23 09:09	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/16/23 09:09	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/16/23 09:09	1
2-Hexanone	ND		25	1.4	ug/L			01/16/23 09:09	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/16/23 09:09	1
Methylene bromide	ND		5.0	0.22	ug/L			01/16/23 09:09	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/16/23 09:09	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/16/23 09:09	1
Methyl tert-butyl ether	**0.33**	**J**	1.0	0.22	ug/L			01/16/23 09:09	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/16/23 09:09	1
Naphthalene	ND		5.0	3.0	ug/L			01/16/23 09:09	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/16/23 09:09	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/16/23 09:09	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/16/23 09:09	1
o-Xylene	ND		5.0	0.60	ug/L			01/16/23 09:09	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/16/23 09:09	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/16/23 09:09	1

Client Sample ID: MW6C-ROX-011123
Date Collected: 01/11/23 10:25
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-4
Matrix: Water

Method: SW846 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			01/16/23 09:09	1
Styrene	ND		1.0	1.0	ug/L			01/16/23 09:09	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/16/23 09:09	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/16/23 09:09	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/16/23 09:09	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/16/23 09:09	1
Toluene	ND		1.0	0.41	ug/L			01/16/23 09:09	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/16/23 09:09	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/16/23 09:09	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/16/23 09:09	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/16/23 09:09	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/16/23 09:09	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/16/23 09:09	1
Trichloroethene	ND		1.0	0.15	ug/L			01/16/23 09:09	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/16/23 09:09	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/16/23 09:09	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/16/23 09:09	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/16/23 09:09	1
Vinyl acetate	ND		25	0.93	ug/L			01/16/23 09:09	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/16/23 09:09	1
Xylenes, Total	ND		10	1.6	ug/L			01/16/23 09:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*72 - 119*		*01/16/23 09:09*	*1*
Dibromofluoromethane	*102*		*75 - 126*		*01/16/23 09:09*	*1*
Toluene-d8 (Surr)	*91*		*64 - 132*		*01/16/23 09:09*	*1*

Method: SW846 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	0.033	ug/L		01/18/23 09:38	01/21/23 05:14	1
Acenaphthylene	ND		0.20	0.046	ug/L		01/18/23 09:38	01/21/23 05:14	1
Anthracene	ND		0.20	0.033	ug/L		01/18/23 09:38	01/21/23 05:14	1
Benzo[a]anthracene	ND		0.20	0.047	ug/L		01/18/23 09:38	01/21/23 05:14	1
Benzo[a]pyrene	ND		0.20	0.043	ug/L		01/18/23 09:38	01/21/23 05:14	1
Benzo[b]fluoranthene	**0.044**	**J**	0.20	0.035	ug/L		01/18/23 09:38	01/21/23 05:14	1
Benzo[g,h,i]perylene	ND		0.20	0.13	ug/L		01/18/23 09:38	01/21/23 05:14	1
Benzo[k]fluoranthene	ND		0.20	0.10	ug/L		01/18/23 09:38	01/21/23 05:14	1
Chrysene	ND		0.20	0.075	ug/L		01/18/23 09:38	01/21/23 05:14	1
Dibenz(a,h)anthracene	ND		0.20	0.051	ug/L		01/18/23 09:38	01/21/23 05:14	1
Fluoranthene	ND		0.20	0.069	ug/L		01/18/23 09:38	01/21/23 05:14	1
Fluorene	ND		0.20	0.11	ug/L		01/18/23 09:38	01/21/23 05:14	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.044	ug/L		01/18/23 09:38	01/21/23 05:14	1
1-Methylnaphthalene	ND		0.20	0.075	ug/L		01/18/23 09:38	01/21/23 05:14	1
2-Methylnaphthalene	ND		0.20	0.061	ug/L		01/18/23 09:38	01/21/23 05:14	1
Phenanthrene	ND		0.20	0.037	ug/L		01/18/23 09:38	01/21/23 05:14	1
Pyrene	ND		0.20	0.041	ug/L		01/18/23 09:38	01/21/23 05:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*85*		*15 - 122*	*01/18/23 09:38*	*01/21/23 05:14*	*1*
Nitrobenzene-d5	*84*		*19 - 130*	*01/18/23 09:38*	*01/21/23 05:14*	*1*

Client Sample ID: MW6C-ROX-011123

Date Collected: 01/11/23 10:25
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-4

Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*111*		*33 - 138*	*01/18/23 09:38*	*01/21/23 05:14*	*1*

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND	H UJ	0.20	0.035	ug/L		01/18/23 09:38	02/28/23 19:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*87*		*15 - 122*	*01/18/23 09:38*	*02/28/23 19:48*	*1*
Nitrobenzene-d5	*88*		*19 - 130*	*01/18/23 09:38*	*02/28/23 19:48*	*1*
Terphenyl-d14	*99*		*33 - 138*	*01/18/23 09:38*	*02/28/23 19:48*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.9	ug/L		01/18/23 09:38	01/19/23 20:01	1
Benzenethiol	ND	*- UJ	10	1.7	ug/L		01/18/23 09:38	01/19/23 20:01	1
Benzoic acid	ND		30	7.4	ug/L		01/18/23 09:38	01/19/23 20:01	1
Benzyl alcohol	ND		10	2.0	ug/L		01/18/23 09:38	01/19/23 20:01	1
Bis(2-chloroethoxy)methane	ND		10	0.16	ug/L		01/18/23 09:38	01/19/23 20:01	1
Bis(2-chloroethyl)ether	ND		10	2.7	ug/L		01/18/23 09:38	01/19/23 20:01	1
bis (2-chloroisopropyl) ether	ND		10	0.16	ug/L		01/18/23 09:38	01/19/23 20:01	1
Bis(2-ethylhexyl) phthalate	ND		10	5.1	ug/L		01/18/23 09:38	01/19/23 20:01	1
4-Bromophenyl phenyl ether	ND		10	0.20	ug/L		01/18/23 09:38	01/19/23 20:01	1
Butyl benzyl phthalate	ND		10	0.19	ug/L		01/18/23 09:38	01/19/23 20:01	1
4-Chloroaniline	ND		10	3.5	ug/L		01/18/23 09:38	01/19/23 20:01	1
4-Chloro-3-methylphenol	ND		10	3.9	ug/L		01/18/23 09:38	01/19/23 20:01	1
2-Chloronaphthalene	ND		10	0.14	ug/L		01/18/23 09:38	01/19/23 20:01	1
2-Chlorophenol	ND		10	2.2	ug/L		01/18/23 09:38	01/19/23 20:01	1
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		01/18/23 09:38	01/19/23 20:01	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 20:01	1
Dibenzofuran	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 20:01	1
3,3'-Dichlorobenzidine	ND	*+	10	2.6	ug/L		01/18/23 09:38	01/19/23 20:01	1
2,4-Dichlorophenol	ND		10	3.0	ug/L		01/18/23 09:38	01/19/23 20:01	1
Diethyl phthalate	ND		10	0.24	ug/L		01/18/23 09:38	01/20/23 17:38	1
2,4-Dimethylphenol	ND		10	3.6	ug/L		01/18/23 09:38	01/19/23 20:01	1
Dimethyl phthalate	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 20:01	1
Di-n-butyl phthalate	ND		10	2.7	ug/L		01/18/23 09:38	01/19/23 20:01	1
4,6-Dinitro-ortho-cresol	ND		10	1.6	ug/L		01/18/23 09:38	01/19/23 20:01	1
2,4-Dinitrophenol	ND		30	3.5	ug/L		01/18/23 09:38	01/19/23 20:01	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		01/18/23 09:38	01/19/23 20:01	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		01/18/23 09:38	01/19/23 20:01	1
Di-n-octyl phthalate	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 20:01	1
1,4-Dioxane	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 20:01	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 20:01	1
Hexachlorobenzene	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 20:01	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		01/18/23 09:38	01/19/23 20:01	1
Hexachloroethane	ND		10	4.3	ug/L		01/18/23 09:38	01/19/23 20:01	1
Indene	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 20:01	1
Isophorone	ND		10	0.14	ug/L		01/18/23 09:38	01/19/23 20:01	1
2-Methylphenol	ND		10	1.8	ug/L		01/18/23 09:38	01/19/23 20:01	1

Client Sample ID: MW6C-ROX-011123
Date Collected: 01/11/23 10:25
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-4
Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	ND		20	0.40	ug/L		01/18/23 09:38	01/19/23 20:01	1
2-Nitroaniline	ND		10	2.2	ug/L		01/18/23 09:38	01/19/23 20:01	1
3-Nitroaniline	ND		10	1.8	ug/L		01/18/23 09:38	01/19/23 20:01	1
4-Nitroaniline	ND		10	1.5	ug/L		01/18/23 09:38	01/19/23 20:01	1
Nitrobenzene	ND		10	0.13	ug/L		01/18/23 09:38	01/19/23 20:01	1
2-Nitrophenol	ND		10	5.3	ug/L		01/18/23 09:38	01/19/23 20:01	1
4-Nitrophenol	ND		10	2.1	ug/L		01/18/23 09:38	01/19/23 20:01	1
N-Nitrosodimethylamine	ND		10	3.6	ug/L		01/18/23 09:38	01/19/23 20:01	1
N-Nitrosodi-n-propylamine	ND		10	3.4	ug/L		01/18/23 09:38	01/19/23 20:01	1
N-Nitrosodiphenylamine	ND		10	0.18	ug/L		01/18/23 09:38	01/19/23 20:01	1
Pentachlorophenol	ND		20	1.4	ug/L		01/18/23 09:38	01/19/23 20:01	1
Phenol	ND		10	2.6	ug/L		01/18/23 09:38	01/19/23 20:01	1
Pyridine	ND		10	3.3	ug/L		01/18/23 09:38	01/19/23 20:01	1
Quinoline	ND		10	4.6	ug/L		01/18/23 09:38	01/19/23 20:01	1
2,4,5-Trichlorophenol	ND		10	3.8	ug/L		01/18/23 09:38	01/19/23 20:01	1
2,4,6-Trichlorophenol	ND		10	3.6	ug/L		01/18/23 09:38	01/19/23 20:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*98*		*46 - 124*	*01/18/23 09:38*	*01/19/23 20:01*	*1*
2-Fluorophenol	*16*		*13 - 113*	*01/18/23 09:38*	*01/19/23 20:01*	*1*
Nitrobenzene-d5	*97*		*36 - 126*	*01/18/23 09:38*	*01/19/23 20:01*	*1*
Phenol-d5	*49*		*17 - 127*	*01/18/23 09:38*	*01/19/23 20:01*	*1*
Terphenyl-d14	*126*		*44 - 149*	*01/18/23 09:38*	*01/19/23 20:01*	*1*
2,4,6-Tribromophenol	*81*		*26 - 150*	*01/18/23 09:38*	*01/19/23 20:01*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND		0.029	0.017	ug/L		01/25/23 10:27	01/25/23 22:18	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/25/23 10:27	01/25/23 22:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*103*	*p*	*51 - 149*	*01/25/23 10:27*	*01/25/23 22:18*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: MW6A-ROX-011123
Date Collected: 01/11/23 11:20
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-5
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/16/23 14:17	1
Acrolein	ND		20	3.3	ug/L			01/16/23 14:17	1
Acrylonitrile	ND		10	2.8	ug/L			01/16/23 14:17	1
Benzene	ND		1.0	0.13	ug/L			01/16/23 14:17	1
Bromobenzene	ND		1.0	0.54	ug/L			01/16/23 14:17	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/16/23 14:17	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/16/23 14:17	1
Bromoform	ND		5.0	0.25	ug/L			01/16/23 14:17	1
Bromomethane	ND		1.0	0.98	ug/L			01/16/23 14:17	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/16/23 14:17	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/16/23 14:17	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/16/23 14:17	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/16/23 14:17	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/16/23 14:17	1
Chloroethane	ND		1.0	0.76	ug/L			01/16/23 14:17	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/16/23 14:17	1
Chloroform	ND		1.0	1.0	ug/L			01/16/23 14:17	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/16/23 14:17	1
Chloromethane	ND		1.0	0.32	ug/L			01/16/23 14:17	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/16/23 14:17	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/16/23 14:17	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/16/23 14:17	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/16/23 14:17	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/16/23 14:17	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/16/23 14:17	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/16/23 14:17	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/16/23 14:17	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/16/23 14:17	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 14:17	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 14:17	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 14:17	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/16/23 14:17	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/16/23 14:17	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/16/23 14:17	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/16/23 14:17	1
2-Hexanone	ND		25	1.4	ug/L			01/16/23 14:17	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/16/23 14:17	1
Methylene bromide	ND		5.0	0.22	ug/L			01/16/23 14:17	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/16/23 14:17	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/16/23 14:17	1
Methyl tert-butyl ether	**0.61**	**J**	1.0	0.22	ug/L			01/16/23 14:17	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/16/23 14:17	1
Naphthalene	ND		5.0	3.0	ug/L			01/16/23 14:17	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/16/23 14:17	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/16/23 14:17	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/16/23 14:17	1
o-Xylene	ND		5.0	0.60	ug/L			01/16/23 14:17	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/16/23 14:17	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/16/23 14:17	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: MW6A-ROX-011123
Date Collected: 01/11/23 11:20
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-5
Matrix: Water

Method: SW846 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			01/16/23 14:17	1
Styrene	ND		1.0	1.0	ug/L			01/16/23 14:17	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/16/23 14:17	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/16/23 14:17	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/16/23 14:17	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/16/23 14:17	1
Toluene	ND		1.0	0.41	ug/L			01/16/23 14:17	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/16/23 14:17	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/16/23 14:17	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/16/23 14:17	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/16/23 14:17	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/16/23 14:17	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/16/23 14:17	1
Trichloroethene	ND		1.0	0.15	ug/L			01/16/23 14:17	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/16/23 14:17	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/16/23 14:17	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/16/23 14:17	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/16/23 14:17	1
Vinyl acetate	ND		25	0.93	ug/L			01/16/23 14:17	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/16/23 14:17	1
Xylenes, Total	ND		10	1.6	ug/L			01/16/23 14:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*72 - 119*		*01/16/23 14:17*	*1*
Dibromofluoromethane	*103*		*75 - 126*		*01/16/23 14:17*	*1*
Toluene-d8 (Surr)	*92*		*64 - 132*		*01/16/23 14:17*	*1*

Method: SW846 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	0.034	ug/L		01/18/23 09:38	01/21/23 05:31	1
Acenaphthylene	ND		0.21	0.047	ug/L		01/18/23 09:38	01/21/23 05:31	1
Anthracene	ND		0.21	0.034	ug/L		01/18/23 09:38	01/21/23 05:31	1
Benzo[a]anthracene	ND		0.21	0.048	ug/L		01/18/23 09:38	01/21/23 05:31	1
Benzo[a]pyrene	ND		0.21	0.044	ug/L		01/18/23 09:38	01/21/23 05:31	1
Benzo[b]fluoranthene	ND		0.21	0.036	ug/L		01/18/23 09:38	01/21/23 05:31	1
Benzo[g,h,i]perylene	ND		0.21	0.14	ug/L		01/18/23 09:38	01/21/23 05:31	1
Benzo[k]fluoranthene	ND		0.21	0.10	ug/L		01/18/23 09:38	01/21/23 05:31	1
Chrysene	ND		0.21	0.078	ug/L		01/18/23 09:38	01/21/23 05:31	1
Dibenz(a,h)anthracene	ND		0 21	0 052	ug/L		01/18/23 09 38	01/21/23 05 31	1
Fluoranthene	ND		0.21	0.071	ug/L		01/18/23 09:38	01/21/23 05:31	1
Fluorene	ND		0.21	0.12	ug/L		01/18/23 09:38	01/21/23 05:31	1
Indeno[1,2,3-cd]pyrene	ND		0.21	0.045	ug/L		01/18/23 09:38	01/21/23 05:31	1
1-Methylnaphthalene	ND		0.21	0.078	ug/L		01/18/23 09:38	01/21/23 05:31	1
2-Methylnaphthalene	ND		0.21	0.063	ug/L		01/18/23 09:38	01/21/23 05:31	1
Phenanthrene	ND		0.21	0.038	ug/L		01/18/23 09:38	01/21/23 05:31	1
Pyrene	ND		0.21	0.042	ug/L		01/18/23 09:38	01/21/23 05:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*73*		*15 - 122*	*01/18/23 09:38*	*01/21/23 05:31*	*1*
Nitrobenzene-d5	*77*		*19 - 130*	*01/18/23 09:38*	*01/21/23 05:31*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: MW6A-ROX-011123
Date Collected: 01/11/23 11:20
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-5
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	50		33 - 138	01/18/23 09:38	01/21/23 05:31	1

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	4.0	ug/L		01/18/23 09:38	01/19/23 20:21	1
Benzenethiol	ND	*- UJ	10	1.8	ug/L		01/18/23 09:38	01/19/23 20:21	1
Benzoic acid	ND		31	7.6	ug/L		01/18/23 09:38	01/19/23 20:21	1
Benzyl alcohol	ND		10	2.1	ug/L		01/18/23 09:38	01/19/23 20:21	1
Bis(2-chloroethoxy)methane	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 20:21	1
Bis(2-chloroethyl)ether	ND		10	2.8	ug/L		01/18/23 09:38	01/19/23 20:21	1
bis (2-chloroisopropyl) ether	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 20:21	1
Bis(2-ethylhexyl) phthalate	ND		10	5.2	ug/L		01/18/23 09:38	01/19/23 20:21	1
4-Bromophenyl phenyl ether	ND		10	0.21	ug/L		01/18/23 09:38	01/19/23 20:21	1
Butyl benzyl phthalate	ND		10	0.20	ug/L		01/18/23 09:38	01/19/23 20:21	1
4-Chloroaniline	ND		10	3.6	ug/L		01/18/23 09:38	01/19/23 20:21	1
4-Chloro-3-methylphenol	ND		10	4.0	ug/L		01/18/23 09:38	01/19/23 20:21	1
2-Chloronaphthalene	ND		10	0.15	ug/L		01/18/23 09:38	01/19/23 20:21	1
2-Chlorophenol	ND		10	2.3	ug/L		01/18/23 09:38	01/19/23 20:21	1
4-Chlorophenyl phenyl ether	ND		10	2.1	ug/L		01/18/23 09:38	01/19/23 20:21	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 20:21	1
Dibenzofuran	ND		10	0.18	ug/L		01/18/23 09:38	01/19/23 20:21	1
3,3'-Dichlorobenzidine	ND	*+	10	2.7	ug/L		01/18/23 09:38	01/19/23 20:21	1
2,4-Dichlorophenol	ND		10	3.1	ug/L		01/18/23 09:38	01/19/23 20:21	1
Diethyl phthalate	ND		10	0.25	ug/L		01/18/23 09:38	01/19/23 20:21	1
2,4-Dimethylphenol	ND		10	3.7	ug/L		01/18/23 09:38	01/19/23 20:21	1
Dimethyl phthalate	ND		10	0.18	ug/L		01/18/23 09:38	01/19/23 20:21	1
Di-n-butyl phthalate	ND		10	2.8	ug/L		01/18/23 09:38	01/19/23 20:21	1
4,6-Dinitro-ortho-cresol	ND		10	1.7	ug/L		01/18/23 09:38	01/19/23 20:21	1
2,4-Dinitrophenol	ND		31	3.6	ug/L		01/18/23 09:38	01/19/23 20:21	1
2,4-Dinitrotoluene	ND		10	2.0	ug/L		01/18/23 09:38	01/19/23 20:21	1
2,6-Dinitrotoluene	ND		10	2.0	ug/L		01/18/23 09:38	01/19/23 20:21	1
Di-n-octyl phthalate	ND		10	0.18	ug/L		01/18/23 09:38	01/19/23 20:21	1
1,4-Dioxane	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 20:21	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 20:21	1
Hexachlorobenzene	ND		10	0.18	ug/L		01/18/23 09:38	01/19/23 20:21	1
Hexachlorocyclopentadiene	ND		21	2.7	ug/L		01/18/23 09:38	01/19/23 20:21	1
Hexachloroethane	ND		10	4.4	ug/L		01/18/23 09:38	01/19/23 20:21	1
Indene	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 20:21	1
Isophorone	ND		10	0.15	ug/L		01/18/23 09:38	01/19/23 20:21	1
2-Methylphenol	ND		10	1.9	ug/L		01/18/23 09:38	01/19/23 20:21	1
3 & 4 Methylphenol	ND		21	0.41	ug/L		01/18/23 09:38	01/19/23 20:21	1
2-Nitroaniline	ND		10	2.3	ug/L		01/18/23 09:38	01/19/23 20:21	1
3-Nitroaniline	ND		10	1.9	ug/L		01/18/23 09:38	01/19/23 20:21	1
4-Nitroaniline	ND		10	1.6	ug/L		01/18/23 09:38	01/19/23 20:21	1
Nitrobenzene	ND		10	0.14	ug/L		01/18/23 09:38	01/19/23 20:21	1
2-Nitrophenol	ND		10	5.4	ug/L		01/18/23 09:38	01/19/23 20:21	1
4-Nitrophenol	ND		10	2.2	ug/L		01/18/23 09:38	01/19/23 20:21	1
N-Nitrosodimethylamine	ND		10	3.7	ug/L		01/18/23 09:38	01/19/23 20:21	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: MW6A-ROX-011123
Date Collected: 01/11/23 11:20
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-5
Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		10	3.5	ug/L		01/18/23 09:38	01/19/23 20:21	1
N-Nitrosodiphenylamine	ND		10	0.19	ug/L		01/18/23 09:38	01/19/23 20:21	1
Pentachlorophenol	ND		21	1.5	ug/L		01/18/23 09:38	01/19/23 20:21	1
Phenol	ND		10	2.7	ug/L		01/18/23 09:38	01/19/23 20:21	1
Pyridine	ND		10	3.4	ug/L		01/18/23 09:38	01/19/23 20:21	1
Quinoline	ND		10	4.7	ug/L		01/18/23 09:38	01/19/23 20:21	1
2,4,5-Trichlorophenol	ND		10	3.9	ug/L		01/18/23 09:38	01/19/23 20:21	1
2,4,6-Trichlorophenol	ND		10	3.7	ug/L		01/18/23 09:38	01/19/23 20:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*96*		*46 - 124*	*01/18/23 09:38*	*01/19/23 20:21*	*1*
2-Fluorophenol	*46*		*13 - 113*	*01/18/23 09:38*	*01/19/23 20:21*	*1*
Nitrobenzene-d5	*97*		*36 - 126*	*01/18/23 09:38*	*01/19/23 20:21*	*1*
Phenol-d5	*82*		*17 - 127*	*01/18/23 09:38*	*01/19/23 20:21*	*1*
Terphenyl-d14	*66*		*44 - 149*	*01/18/23 09:38*	*01/19/23 20:21*	*1*
2,4,6-Tribromophenol	*117*		*26 - 150*	*01/18/23 09:38*	*01/19/23 20:21*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND		0.030	0.017	ug/L		01/25/23 10:27	01/25/23 22:38	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/25/23 10:27	01/25/23 22:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*105*	*p*	*51 - 149*	*01/25/23 10:27*	*01/25/23 22:38*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: MW6D-ROX-011123
Date Collected: 01/11/23 13:25
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-6
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/16/23 14:42	1
Acrolein	ND		20	3.3	ug/L			01/16/23 14:42	1
Acrylonitrile	ND		10	2.8	ug/L			01/16/23 14:42	1
Benzene	ND		1.0	0.13	ug/L			01/16/23 14:42	1
Bromobenzene	ND		1.0	0.54	ug/L			01/16/23 14:42	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/16/23 14:42	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/16/23 14:42	1
Bromoform	ND		5.0	0.25	ug/L			01/16/23 14:42	1
Bromomethane	ND		1.0	0.98	ug/L			01/16/23 14:42	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/16/23 14:42	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/16/23 14:42	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/16/23 14:42	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/16/23 14:42	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/16/23 14:42	1
Chloroethane	ND		1.0	0.76	ug/L			01/16/23 14:42	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/16/23 14:42	1
Chloroform	ND		1.0	1.0	ug/L			01/16/23 14:42	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/16/23 14:42	1
Chloromethane	ND		1.0	0.32	ug/L			01/16/23 14:42	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/16/23 14:42	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/16/23 14:42	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/16/23 14:42	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/16/23 14:42	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/16/23 14:42	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/16/23 14:42	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/16/23 14:42	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/16/23 14:42	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/16/23 14:42	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 14:42	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 14:42	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 14:42	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/16/23 14:42	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/16/23 14:42	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/16/23 14:42	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/16/23 14:42	1
2-Hexanone	ND		25	1.4	ug/L			01/16/23 14:42	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/16/23 14:42	1
Methylene bromide	ND		5.0	0.22	ug/L			01/16/23 14:42	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/16/23 14:42	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/16/23 14:42	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/16/23 14:42	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/16/23 14:42	1
Naphthalene	ND		5.0	3.0	ug/L			01/16/23 14:42	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/16/23 14:42	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/16/23 14:42	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/16/23 14:42	1
o-Xylene	ND		5.0	0.60	ug/L			01/16/23 14:42	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/16/23 14:42	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/16/23 14:42	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: MW6D-ROX-011123
Date Collected: 01/11/23 13:25
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-6
Matrix: Water

Method: SW846 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			01/16/23 14:42	1
Styrene	ND		1.0	1.0	ug/L			01/16/23 14:42	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/16/23 14:42	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/16/23 14:42	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/16/23 14:42	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/16/23 14:42	1
Toluene	ND		1.0	0.41	ug/L			01/16/23 14:42	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/16/23 14:42	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/16/23 14:42	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/16/23 14:42	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/16/23 14:42	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/16/23 14:42	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/16/23 14:42	1
Trichloroethene	ND		1.0	0.15	ug/L			01/16/23 14:42	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/16/23 14:42	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/16/23 14:42	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/16/23 14:42	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/16/23 14:42	1
Vinyl acetate	ND		25	0.93	ug/L			01/16/23 14:42	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/16/23 14:42	1
Xylenes, Total	ND		10	1.6	ug/L			01/16/23 14:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*72 - 119*		*01/16/23 14:42*	*1*
Dibromofluoromethane	*105*		*75 - 126*		*01/16/23 14:42*	*1*
Toluene-d8 (Surr)	*93*		*64 - 132*		*01/16/23 14:42*	*1*

Method: SW846 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	0.033	ug/L		01/18/23 09:38	01/21/23 05:49	1
Acenaphthylene	**0.054**	**J** J	0.21	0.046	ug/L		01/18/23 09:38	01/21/23 05:49	1
Anthracene	ND		0.21	0.033	ug/L		01/18/23 09:38	01/21/23 05:49	1
Benzo[a]anthracene	ND		0.21	0.047	ug/L		01/18/23 09:38	01/21/23 05:49	1
Benzo[a]pyrene	ND		0.21	0.043	ug/L		01/18/23 09:38	01/21/23 05:49	1
Benzo[b]fluoranthene	**0.050**	**J**	0.21	0.035	ug/L		01/18/23 09:38	01/21/23 05:49	1
Benzo[g,h,i]perylene	ND		0.21	0.13	ug/L		01/18/23 09:38	01/21/23 05:49	1
Benzo[k]fluoranthene	ND		0.21	0.10	ug/L		01/18/23 09:38	01/21/23 05:49	1
Chrysene	ND		0.21	0.076	ug/L		01/18/23 09:38	01/21/23 05:49	1
Dibenz(a,h)anthracene	ND		0 21	0 051	ug/L		01/18/23 09 38	01/21/23 05 49	1
Fluoranthene	ND		0.21	0.070	ug/L		01/18/23 09:38	01/21/23 05:49	1
Fluorene	ND		0.21	0.11	ug/L		01/18/23 09:38	01/21/23 05:49	1
Indeno[1,2,3-cd]pyrene	ND		0.21	0.044	ug/L		01/18/23 09:38	01/21/23 05:49	1
1-Methylnaphthalene	ND		0.21	0.076	ug/L		01/18/23 09:38	01/21/23 05:49	1
2-Methylnaphthalene	ND		0.21	0.062	ug/L		01/18/23 09:38	01/21/23 05:49	1
Phenanthrene	ND		0.21	0.037	ug/L		01/18/23 09:38	01/21/23 05:49	1
Pyrene	ND		0.21	0.041	ug/L		01/18/23 09:38	01/21/23 05:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*87*		*15 - 122*	*01/18/23 09:38*	*01/21/23 05:49*	*1*
Nitrobenzene-d5	*76*		*19 - 130*	*01/18/23 09:38*	*01/21/23 05:49*	*1*

Client Sample ID: MW6D-ROX-011123
Date Collected: 01/11/23 13:25
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-6
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*110*		*33 - 138*	*01/18/23 09:38*	*01/21/23 05:49*	*1*

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND	H UJ	0.21	0.046	ug/L		01/18/23 09:38	02/28/23 20:05	1
Benzo[b]fluoranthene	ND	H UJ	0.21	0.035	ug/L		01/18/23 09:38	02/28/23 20:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*87*		*15 - 122*	*01/18/23 09:38*	*02/28/23 20:05*	*1*
Nitrobenzene-d5	*87*		*19 - 130*	*01/18/23 09:38*	*02/28/23 20:05*	*1*
Terphenyl-d14	*105*		*33 - 138*	*01/18/23 09:38*	*02/28/23 20:05*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.9	ug/L		01/18/23 09:38	01/19/23 20:42	1
Benzenethiol	ND	*- UJ	10	1.7	ug/L		01/18/23 09:38	01/19/23 20:42	1
Benzoic acid	ND		31	7.5	ug/L		01/18/23 09:38	01/19/23 20:42	1
Benzyl alcohol	ND		10	2.1	ug/L		01/18/23 09:38	01/19/23 20:42	1
Bis(2-chloroethoxy)methane	ND		10	0.16	ug/L		01/18/23 09:38	01/19/23 20:42	1
Bis(2-chloroethyl)ether	ND		10	2.8	ug/L		01/18/23 09:38	01/19/23 20:42	1
bis (2-chloroisopropyl) ether	ND		10	0.16	ug/L		01/18/23 09:38	01/19/23 20:42	1
Bis(2-ethylhexyl) phthalate	ND		10	5.1	ug/L		01/18/23 09:38	01/19/23 20:42	1
4-Bromophenyl phenyl ether	ND		10	0.21	ug/L		01/18/23 09:38	01/19/23 20:42	1
Butyl benzyl phthalate	ND		10	0.20	ug/L		01/18/23 09:38	01/19/23 20:42	1
4-Chloroaniline	ND		10	3.5	ug/L		01/18/23 09:38	01/19/23 20:42	1
4-Chloro-3-methylphenol	ND		10	3.9	ug/L		01/18/23 09:38	01/19/23 20:42	1
2-Chloronaphthalene	ND		10	0.14	ug/L		01/18/23 09:38	01/19/23 20:42	1
2-Chlorophenol	ND		10	2.3	ug/L		01/18/23 09:38	01/19/23 20:42	1
4-Chlorophenyl phenyl ether	ND		10	2.1	ug/L		01/18/23 09:38	01/19/23 20:42	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 20:42	1
Dibenzofuran	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 20:42	1
3,3'-Dichlorobenzidine	ND	*+	10	2.7	ug/L		01/18/23 09:38	01/19/23 20:42	1
2,4-Dichlorophenol	ND		10	3.1	ug/L		01/18/23 09:38	01/19/23 20:42	1
Diethyl phthalate	ND		10	0.25	ug/L		01/18/23 09:38	01/19/23 20:42	1
2,4-Dimethylphenol	ND		10	3.6	ug/L		01/18/23 09:38	01/19/23 20:42	1
Dimethyl phthalate	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 20:42	1
Di-n-butyl phthalate	ND		10	2.8	ug/L		01/18/23 09:38	01/19/23 20:42	1
4,6-Dinitro-ortho-cresol	ND		10	1.6	ug/L		01/18/23 09:38	01/19/23 20:42	1
2,4-Dinitrophenol	ND		31	3.5	ug/L		01/18/23 09:38	01/19/23 20:42	1
2,4-Dinitrotoluene	ND		10	2.0	ug/L		01/18/23 09:38	01/19/23 20:42	1
2,6-Dinitrotoluene	ND		10	2.0	ug/L		01/18/23 09:38	01/19/23 20:42	1
Di-n-octyl phthalate	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 20:42	1
1,4-Dioxane	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 20:42	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 20:42	1
Hexachlorobenzene	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 20:42	1
Hexachlorocyclopentadiene	ND		21	2.7	ug/L		01/18/23 09:38	01/19/23 20:42	1
Hexachloroethane	ND		10	4.3	ug/L		01/18/23 09:38	01/19/23 20:42	1
Indene	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 20:42	1
Isophorone	ND		10	0.14	ug/L		01/18/23 09:38	01/19/23 20:42	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: MW6D-ROX-011123
Date Collected: 01/11/23 13:25
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-6
Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	ND		10	1.9	ug/L		01/18/23 09:38	01/19/23 20:42	1
3 & 4 Methylphenol	ND		21	0.40	ug/L		01/18/23 09:38	01/19/23 20:42	1
2-Nitroaniline	ND		10	2.3	ug/L		01/18/23 09:38	01/19/23 20:42	1
3-Nitroaniline	ND		10	1.9	ug/L		01/18/23 09:38	01/19/23 20:42	1
4-Nitroaniline	ND		10	1.5	ug/L		01/18/23 09:38	01/19/23 20:42	1
Nitrobenzene	ND		10	0.13	ug/L		01/18/23 09:38	01/19/23 20:42	1
2-Nitrophenol	ND		10	5.3	ug/L		01/18/23 09:38	01/19/23 20:42	1
4-Nitrophenol	ND		10	2.2	ug/L		01/18/23 09:38	01/19/23 20:42	1
N-Nitrosodimethylamine	ND		10	3.6	ug/L		01/18/23 09:38	01/19/23 20:42	1
N-Nitrosodi-n-propylamine	ND		10	3.4	ug/L		01/18/23 09:38	01/19/23 20:42	1
N-Nitrosodiphenylamine	ND		10	0.19	ug/L		01/18/23 09:38	01/19/23 20:42	1
Pentachlorophenol	ND		21	1.4	ug/L		01/18/23 09:38	01/19/23 20:42	1
Phenol	ND		10	2.7	ug/L		01/18/23 09:38	01/19/23 20:42	1
Pyridine	ND		10	3.3	ug/L		01/18/23 09:38	01/19/23 20:42	1
Quinoline	ND		10	4.6	ug/L		01/18/23 09:38	01/19/23 20:42	1
2,4,5-Trichlorophenol	ND		10	3.8	ug/L		01/18/23 09:38	01/19/23 20:42	1
2,4,6-Trichlorophenol	ND		10	3.6	ug/L		01/18/23 09:38	01/19/23 20:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*95*		*46 - 124*	*01/18/23 09:38*	*01/19/23 20:42*	*1*
2-Fluorophenol	*34*		*13 - 113*	*01/18/23 09:38*	*01/19/23 20:42*	*1*
Nitrobenzene-d5	*96*		*36 - 126*	*01/18/23 09:38*	*01/19/23 20:42*	*1*
Phenol-d5	*63*		*17 - 127*	*01/18/23 09:38*	*01/19/23 20:42*	*1*
Terphenyl-d14	*129*		*44 - 149*	*01/18/23 09:38*	*01/19/23 20:42*	*1*
2,4,6-Tribromophenol	*84*		*26 - 150*	*01/18/23 09:38*	*01/19/23 20:42*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND		0.029	0.017	ug/L		01/25/23 10:27	01/25/23 22:59	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/25/23 10:27	01/25/23 22:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*	*p*	*51 - 149*	*01/25/23 10:27*	*01/25/23 22:59*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: MW6B-ROX-011123
Date Collected: 01/11/23 14:10
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-7
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/16/23 15:06	1
Acrolein	ND		20	3.3	ug/L			01/16/23 15:06	1
Acrylonitrile	ND		10	2.8	ug/L			01/16/23 15:06	1
Benzene	ND		1.0	0.13	ug/L			01/16/23 15:06	1
Bromobenzene	ND		1.0	0.54	ug/L			01/16/23 15:06	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/16/23 15:06	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/16/23 15:06	1
Bromoform	ND		5.0	0.25	ug/L			01/16/23 15:06	1
Bromomethane	ND		1.0	0.98	ug/L			01/16/23 15:06	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/16/23 15:06	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/16/23 15:06	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/16/23 15:06	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/16/23 15:06	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/16/23 15:06	1
Chloroethane	ND		1.0	0.76	ug/L			01/16/23 15:06	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/16/23 15:06	1
Chloroform	ND		1.0	1.0	ug/L			01/16/23 15:06	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/16/23 15:06	1
Chloromethane	ND		1.0	0.32	ug/L			01/16/23 15:06	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/16/23 15:06	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/16/23 15:06	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/16/23 15:06	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/16/23 15:06	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/16/23 15:06	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/16/23 15:06	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/16/23 15:06	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/16/23 15:06	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/16/23 15:06	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 15:06	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 15:06	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 15:06	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/16/23 15:06	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/16/23 15:06	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/16/23 15:06	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/16/23 15:06	1
2-Hexanone	ND		25	1.4	ug/L			01/16/23 15:06	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/16/23 15:06	1
Methylene bromide	ND		5.0	0.22	ug/L			01/16/23 15:06	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/16/23 15:06	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/16/23 15:06	1
Methyl tert-butyl ether	**0.45**	**J**	1.0	0.22	ug/L			01/16/23 15:06	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/16/23 15:06	1
Naphthalene	ND		5.0	3.0	ug/L			01/16/23 15:06	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/16/23 15:06	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/16/23 15:06	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/16/23 15:06	1
o-Xylene	ND		5.0	0.60	ug/L			01/16/23 15:06	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/16/23 15:06	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/16/23 15:06	1

Client Sample ID: MW6B-ROX-011123
Date Collected: 01/11/23 14:10
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-7
Matrix: Water

Method: SW846 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			01/16/23 15:06	1
Styrene	ND		1.0	1.0	ug/L			01/16/23 15:06	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/16/23 15:06	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/16/23 15:06	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/16/23 15:06	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/16/23 15:06	1
Toluene	ND		1.0	0.41	ug/L			01/16/23 15:06	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/16/23 15:06	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/16/23 15:06	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/16/23 15:06	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/16/23 15:06	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/16/23 15:06	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/16/23 15:06	1
Trichloroethene	ND		1.0	0.15	ug/L			01/16/23 15:06	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/16/23 15:06	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/16/23 15:06	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/16/23 15:06	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/16/23 15:06	1
Vinyl acetate	ND		25	0.93	ug/L			01/16/23 15:06	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/16/23 15:06	1
Xylenes, Total	ND		10	1.6	ug/L			01/16/23 15:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*72 - 119*		*01/16/23 15:06*	*1*
Dibromofluoromethane	*103*		*75 - 126*		*01/16/23 15:06*	*1*
Toluene-d8 (Surr)	*93*		*64 - 132*		*01/16/23 15:06*	*1*

Method: SW846 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	0.034	ug/L		01/18/23 09:38	01/23/23 16:19	1
Acenaphthylene	**0.062**	**J** J	0.21	0.048	ug/L		01/18/23 09:38	01/23/23 16:19	1
Anthracene	ND		0.21	0.034	ug/L		01/18/23 09:38	01/23/23 16:19	1
Benzo[a]anthracene	**0.17**	**J**	0.21	0.049	ug/L		01/18/23 09:38	01/23/23 16:19	1
Benzo[a]pyrene	ND		0.21	0.045	ug/L		01/18/23 09:38	01/23/23 16:19	1
Benzo[b]fluoranthene	**0.28**		0.21	0.036	ug/L		01/18/23 09:38	01/23/23 16:19	1
Benzo[g,h,i]perylene	ND		0.21	0.14	ug/L		01/18/23 09:38	01/23/23 16:19	1
Benzo[k]fluoranthene	**0.25**		0.21	0.11	ug/L		01/18/23 09:38	01/23/23 16:19	1
Chrysene	**0.16**	**J**	0.21	0.079	ug/L		01/18/23 09:38	01/23/23 16:19	1
Dibenz(a,h)anthracene	**0.11**	**J**	0 21	0 054	ug/L		01/18/23 09 38	01/23/23 16 19	1
Fluoranthene	ND		0.21	0.073	ug/L		01/18/23 09:38	01/23/23 16:19	1
Fluorene	ND		0.21	0.12	ug/L		01/18/23 09:38	01/23/23 16:19	1
Indeno[1,2,3-cd]pyrene	ND		0.21	0.046	ug/L		01/18/23 09:38	01/23/23 16:19	1
1-Methylnaphthalene	ND		0.21	0.079	ug/L		01/18/23 09:38	01/23/23 16:19	1
2-Methylnaphthalene	ND		0.21	0.064	ug/L		01/18/23 09:38	01/23/23 16:19	1
Phenanthrene	ND		0.21	0.039	ug/L		01/18/23 09:38	01/23/23 16:19	1
Pyrene	**0.17**	**J** J	0.21	0.043	ug/L		01/18/23 09:38	01/23/23 16:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*85*		*15 - 122*	*01/18/23 09:38*	*01/23/23 16:19*	*1*
Nitrobenzene-d5	*83*		*19 - 130*	*01/18/23 09:38*	*01/23/23 16:19*	*1*

Client Sample ID: MW6B-ROX-011123

Lab Sample ID: 400-231703-7

Date Collected: 01/11/23 14:10

Matrix: Water

Date Received: 01/12/23 08:48

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*105*		*33 - 138*	*01/18/23 09:38*	*01/23/23 16:19*	*1*

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND	H UJ	0.21	0.048	ug/L		01/18/23 09:38	02/28/23 20:22	1
Benzo[a]anthracene	**0.15**	**J H** J	0.21	0.049	ug/L		01/18/23 09:38	02/28/23 20:22	1
Benzo[b]fluoranthene	**0.096**	**J H** J	0.21	0.036	ug/L		01/18/23 09:38	02/28/23 20:22	1
Benzo[k]fluoranthene	ND	H UJ	0.21	0.11	ug/L		01/18/23 09:38	02/28/23 20:22	1
Chrysene	**0.11**	**J H** J	0.21	0.079	ug/L		01/18/23 09:38	02/28/23 20:22	1
Dibenz(a,h)anthracene	**0.092**	**J H** J	0.21	0.054	ug/L		01/18/23 09:38	02/28/23 20:22	1
Pyrene	**0.10**	**J H** J	0.21	0.043	ug/L		01/18/23 09:38	02/28/23 20:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*86*		*15 - 122*	*01/18/23 09:38*	*02/28/23 20:22*	*1*
Nitrobenzene-d5	*89*		*19 - 130*	*01/18/23 09:38*	*02/28/23 20:22*	*1*
Terphenyl-d14	*98*		*33 - 138*	*01/18/23 09:38*	*02/28/23 20:22*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		11	4.1	ug/L		01/18/23 09:38	01/19/23 21:02	1
Benzenethiol	ND	*- UJ	11	1.8	ug/L		01/18/23 09:38	01/19/23 21:02	1
Benzoic acid	ND		32	7.8	ug/L		01/18/23 09:38	01/19/23 21:02	1
Benzyl alcohol	ND		11	2.1	ug/L		01/18/23 09:38	01/19/23 21:02	1
Bis(2-chloroethoxy)methane	ND		11	0.17	ug/L		01/18/23 09:38	01/19/23 21:02	1
Bis(2-chloroethyl)ether	ND		11	2.9	ug/L		01/18/23 09:38	01/19/23 21:02	1
bis (2-chloroisopropyl) ether	ND		11	0.17	ug/L		01/18/23 09:38	01/19/23 21:02	1
Bis(2-ethylhexyl) phthalate	ND		11	5.4	ug/L		01/18/23 09:38	01/19/23 21:02	1
4-Bromophenyl phenyl ether	ND		11	0.21	ug/L		01/18/23 09:38	01/19/23 21:02	1
Butyl benzyl phthalate	ND		11	0.20	ug/L		01/18/23 09:38	01/19/23 21:02	1
4-Chloroaniline	ND		11	3.6	ug/L		01/18/23 09:38	01/19/23 21:02	1
4-Chloro-3-methylphenol	ND		11	4.1	ug/L		01/18/23 09:38	01/19/23 21:02	1
2-Chloronaphthalene	ND		11	0.15	ug/L		01/18/23 09:38	01/19/23 21:02	1
2-Chlorophenol	ND		11	2.4	ug/L		01/18/23 09:38	01/19/23 21:02	1
4-Chlorophenyl phenyl ether	ND		11	2.1	ug/L		01/18/23 09:38	01/19/23 21:02	1
Dibenz[a,h]acridine	ND		11	1.1	ug/L		01/18/23 09:38	01/19/23 21:02	1
Dibenzofuran	ND		11	0.18	ug/L		01/18/23 09:38	01/19/23 21:02	1
3,3'-Dichlorobenzidine	ND	*+	11	2.8	ug/L		01/18/23 09:38	01/19/23 21:02	1
2,4-Dichlorophenol	ND		11	3.2	ug/L		01/18/23 09:38	01/19/23 21:02	1
Diethyl phthalate	ND		11	0.26	ug/L		01/18/23 09:38	01/19/23 21:02	1
2,4-Dimethylphenol	ND		11	3.8	ug/L		01/18/23 09:38	01/19/23 21:02	1
Dimethyl phthalate	ND		11	0.18	ug/L		01/18/23 09:38	01/19/23 21:02	1
Di-n-butyl phthalate	ND		11	2.9	ug/L		01/18/23 09:38	01/19/23 21:02	1
4,6-Dinitro-ortho-cresol	ND		11	1.7	ug/L		01/18/23 09:38	01/19/23 21:02	1
2,4-Dinitrophenol	ND		32	3.6	ug/L		01/18/23 09:38	01/19/23 21:02	1
2,4-Dinitrotoluene	ND		11	2.0	ug/L		01/18/23 09:38	01/19/23 21:02	1
2,6-Dinitrotoluene	ND		11	2.0	ug/L		01/18/23 09:38	01/19/23 21:02	1
Di-n-octyl phthalate	ND		11	0.18	ug/L		01/18/23 09:38	01/19/23 21:02	1
1,4-Dioxane	ND		11	1.1	ug/L		01/18/23 09:38	01/19/23 21:02	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		11	1.1	ug/L		01/18/23 09:38	01/19/23 21:02	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: MW6B-ROX-011123
Date Collected: 01/11/23 14:10
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-7
Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobenzene	ND		11	0.18	ug/L		01/18/23 09:38	01/19/23 21:02	1
Hexachlorocyclopentadiene	ND		21	2.8	ug/L		01/18/23 09:38	01/19/23 21:02	1
Hexachloroethane	ND		11	4.5	ug/L		01/18/23 09:38	01/19/23 21:02	1
Indene	ND		11	1.1	ug/L		01/18/23 09:38	01/19/23 21:02	1
Isophorone	ND		11	0.15	ug/L		01/18/23 09:38	01/19/23 21:02	1
2-Methylphenol	ND		11	1.9	ug/L		01/18/23 09:38	01/19/23 21:02	1
3 & 4 Methylphenol	ND		21	0.42	ug/L		01/18/23 09:38	01/19/23 21:02	1
2-Nitroaniline	ND		11	2.4	ug/L		01/18/23 09:38	01/19/23 21:02	1
3-Nitroaniline	ND		11	1.9	ug/L		01/18/23 09:38	01/19/23 21:02	1
4-Nitroaniline	ND		11	1.6	ug/L		01/18/23 09:38	01/19/23 21:02	1
Nitrobenzene	ND		11	0.14	ug/L		01/18/23 09:38	01/19/23 21:02	1
2-Nitrophenol	ND		11	5.6	ug/L		01/18/23 09:38	01/19/23 21:02	1
4-Nitrophenol	ND		11	2.3	ug/L		01/18/23 09:38	01/19/23 21:02	1
N-Nitrosodimethylamine	ND		11	3.8	ug/L		01/18/23 09:38	01/19/23 21:02	1
N-Nitrosodi-n-propylamine	ND		11	3.5	ug/L		01/18/23 09:38	01/19/23 21:02	1
N-Nitrosodiphenylamine	ND		11	0.19	ug/L		01/18/23 09:38	01/19/23 21:02	1
Pentachlorophenol	ND		21	1.5	ug/L		01/18/23 09:38	01/19/23 21:02	1
Phenol	ND		11	2.8	ug/L		01/18/23 09:38	01/19/23 21:02	1
Pyridine	ND		11	3.4	ug/L		01/18/23 09:38	01/19/23 21:02	1
Quinoline	ND		11	4.8	ug/L		01/18/23 09:38	01/19/23 21:02	1
2,4,5-Trichlorophenol	ND		11	4.0	ug/L		01/18/23 09:38	01/19/23 21:02	1
2,4,6-Trichlorophenol	ND		11	3.8	ug/L		01/18/23 09:38	01/19/23 21:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*103*		*46 - 124*	*01/18/23 09:38*	*01/19/23 21:02*	*1*
2-Fluorophenol	*44*		*13 - 113*	*01/18/23 09:38*	*01/19/23 21:02*	*1*
Nitrobenzene-d5	*103*		*36 - 126*	*01/18/23 09:38*	*01/19/23 21:02*	*1*
Phenol-d5	*77*		*17 - 127*	*01/18/23 09:38*	*01/19/23 21:02*	*1*
Terphenyl-d14	*128*		*44 - 149*	*01/18/23 09:38*	*01/19/23 21:02*	*1*
2,4,6-Tribromophenol	*94*		*26 - 150*	*01/18/23 09:38*	*01/19/23 21:02*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND		0.030	0.017	ug/L		01/25/23 10:27	01/25/23 23:19	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/25/23 10:27	01/25/23 23:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*	*p*	*51 - 149*	*01/25/23 10:27*	*01/25/23 23:19*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: MW6B-ROX-011123-DUP
Date Collected: 01/11/23 14:10
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-8
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/16/23 15:31	1
Acrolein	ND		20	3.3	ug/L			01/16/23 15:31	1
Acrylonitrile	ND		10	2.8	ug/L			01/16/23 15:31	1
Benzene	ND		1.0	0.13	ug/L			01/16/23 15:31	1
Bromobenzene	ND		1.0	0.54	ug/L			01/16/23 15:31	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/16/23 15:31	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/16/23 15:31	1
Bromoform	ND		5.0	0.25	ug/L			01/16/23 15:31	1
Bromomethane	ND		1.0	0.98	ug/L			01/16/23 15:31	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/16/23 15:31	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/16/23 15:31	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/16/23 15:31	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/16/23 15:31	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/16/23 15:31	1
Chloroethane	ND		1.0	0.76	ug/L			01/16/23 15:31	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/16/23 15:31	1
Chloroform	ND		1.0	1.0	ug/L			01/16/23 15:31	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/16/23 15:31	1
Chloromethane	ND		1.0	0.32	ug/L			01/16/23 15:31	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/16/23 15:31	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/16/23 15:31	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/16/23 15:31	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/16/23 15:31	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/16/23 15:31	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/16/23 15:31	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/16/23 15:31	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/16/23 15:31	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/16/23 15:31	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 15:31	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 15:31	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 15:31	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/16/23 15:31	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/16/23 15:31	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/16/23 15:31	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/16/23 15:31	1
2-Hexanone	ND		25	1.4	ug/L			01/16/23 15:31	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/16/23 15:31	1
Methylene bromide	ND		5.0	0.22	ug/L			01/16/23 15:31	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/16/23 15:31	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/16/23 15:31	1
Methyl tert-butyl ether	**0.46**	**J**	1.0	0.22	ug/L			01/16/23 15:31	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/16/23 15:31	1
Naphthalene	ND		5.0	3.0	ug/L			01/16/23 15:31	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/16/23 15:31	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/16/23 15:31	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/16/23 15:31	1
o-Xylene	ND		5.0	0.60	ug/L			01/16/23 15:31	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/16/23 15:31	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/16/23 15:31	1

Client Sample ID: MW6B-ROX-011123-DUP
Date Collected: 01/11/23 14:10
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-8
Matrix: Water

Method: SW846 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			01/16/23 15:31	1
Styrene	ND		1.0	1.0	ug/L			01/16/23 15:31	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/16/23 15:31	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/16/23 15:31	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/16/23 15:31	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/16/23 15:31	1
Toluene	ND		1.0	0.41	ug/L			01/16/23 15:31	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/16/23 15:31	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/16/23 15:31	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/16/23 15:31	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/16/23 15:31	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/16/23 15:31	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/16/23 15:31	1
Trichloroethene	ND		1.0	0.15	ug/L			01/16/23 15:31	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/16/23 15:31	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/16/23 15:31	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/16/23 15:31	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/16/23 15:31	1
Vinyl acetate	ND		25	0.93	ug/L			01/16/23 15:31	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/16/23 15:31	1
Xylenes, Total	ND		10	1.6	ug/L			01/16/23 15:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*72 - 119*		*01/16/23 15:31*	*1*
Dibromofluoromethane	*104*		*75 - 126*		*01/16/23 15:31*	*1*
Toluene-d8 (Surr)	*91*		*64 - 132*		*01/16/23 15:31*	*1*

Method: SW846 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	0.034	ug/L		01/18/23 09:38	01/23/23 16:36	1
Acenaphthylene	ND		0.21	0.047	ug/L		01/18/23 09:38	01/23/23 16:36	1
Anthracene	ND		0.21	0.034	ug/L		01/18/23 09:38	01/23/23 16:36	1
Benzo[a]anthracene	ND		0.21	0.048	ug/L		01/18/23 09:38	01/23/23 16:36	1
Benzo[a]pyrene	ND		0.21	0.044	ug/L		01/18/23 09:38	01/23/23 16:36	1
Benzo[b]fluoranthene	**0.036**	**J**	0.21	0.036	ug/L		01/18/23 09:38	01/27/23 18:02	1
Benzo[g,h,i]perylene	ND		0.21	0.14	ug/L		01/18/23 09:38	01/23/23 16:36	1
Benzo[k]fluoranthene	ND		0.21	0.10	ug/L		01/18/23 09:38	01/27/23 18:02	1
Chrysene	ND		0.21	0.078	ug/L		01/18/23 09:38	01/23/23 16:36	1
Dibenz(a,h)anthracene	ND		0.21	0.052	ug/L		01/18/23 09:38	01/23/23 16:36	1
Fluoranthene	ND		0.21	0.071	ug/L		01/18/23 09:38	01/23/23 16:36	1
Fluorene	ND		0.21	0.12	ug/L		01/18/23 09:38	01/23/23 16:36	1
Indeno[1,2,3-cd]pyrene	ND		0.21	0.045	ug/L		01/18/23 09:38	01/23/23 16:36	1
1-Methylnaphthalene	ND		0.21	0.078	ug/L		01/18/23 09:38	01/23/23 16:36	1
2-Methylnaphthalene	ND		0.21	0.063	ug/L		01/18/23 09:38	01/23/23 16:36	1
Phenanthrene	ND		0.21	0.038	ug/L		01/18/23 09:38	01/23/23 16:36	1
Pyrene	ND		0.21	0.042	ug/L		01/18/23 09:38	01/23/23 16:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*78*		*15 - 122*	*01/18/23 09:38*	*01/23/23 16:36*	*1*
Nitrobenzene-d5	*79*		*19 - 130*	*01/18/23 09:38*	*01/23/23 16:36*	*1*

Client Sample ID: MW6B-ROX-011123-DUP

Date Collected: 01/11/23 14:10
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-8

Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*96*		*33 - 138*	*01/18/23 09:38*	*01/23/23 16:36*	*1*

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND	H UJ	0.21	0.036	ug/L		02/02/23 14:02	02/28/23 18:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*78*		*15 - 122*	*02/02/23 14:02*	*02/28/23 18:39*	*1*
Nitrobenzene-d5	*79*		*19 - 130*	*02/02/23 14:02*	*02/28/23 18:39*	*1*
Terphenyl-d14	*113*		*33 - 138*	*02/02/23 14:02*	*02/28/23 18:39*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	4.0	ug/L		01/18/23 09:38	01/19/23 21:23	1
Benzenethiol	ND	*- UJ	10	1.8	ug/L		01/18/23 09:38	01/19/23 21:23	1
Benzoic acid	ND		31	7.6	ug/L		01/18/23 09:38	01/19/23 21:23	1
Benzyl alcohol	ND		10	2.1	ug/L		01/18/23 09:38	01/19/23 21:23	1
Bis(2-chloroethoxy)methane	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 21:23	1
Bis(2-chloroethyl)ether	ND		10	2.8	ug/L		01/18/23 09:38	01/19/23 21:23	1
bis (2-chloroisopropyl) ether	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 21:23	1
Bis(2-ethylhexyl) phthalate	ND		10	5.2	ug/L		01/18/23 09:38	01/19/23 21:23	1
4-Bromophenyl phenyl ether	ND		10	0.21	ug/L		01/18/23 09:38	01/19/23 21:23	1
Butyl benzyl phthalate	ND		10	0.20	ug/L		01/18/23 09:38	01/19/23 21:23	1
4-Chloroaniline	ND		10	3.6	ug/L		01/18/23 09:38	01/19/23 21:23	1
4-Chloro-3-methylphenol	ND		10	4.0	ug/L		01/18/23 09:38	01/19/23 21:23	1
2-Chloronaphthalene	ND		10	0.15	ug/L		01/18/23 09:38	01/19/23 21:23	1
2-Chlorophenol	ND		10	2.3	ug/L		01/18/23 09:38	01/19/23 21:23	1
4-Chlorophenyl phenyl ether	ND		10	2.1	ug/L		01/18/23 09:38	01/19/23 21:23	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 21:23	1
Dibenzofuran	ND		10	0.18	ug/L		01/18/23 09:38	01/19/23 21:23	1
3,3'-Dichlorobenzidine	ND	*+	10	2.7	ug/L		01/18/23 09:38	01/19/23 21:23	1
2,4-Dichlorophenol	ND		10	3.1	ug/L		01/18/23 09:38	01/19/23 21:23	1
Diethyl phthalate	ND		10	0.25	ug/L		01/18/23 09:38	01/19/23 21:23	1
2,4-Dimethylphenol	ND		10	3.7	ug/L		01/18/23 09:38	01/19/23 21:23	1
Dimethyl phthalate	ND		10	0.18	ug/L		01/18/23 09:38	01/19/23 21:23	1
Di-n-butyl phthalate	ND		10	2.8	ug/L		01/18/23 09:38	01/19/23 21:23	1
4,6-Dinitro-ortho-cresol	ND		10	1.7	ug/L		01/18/23 09:38	01/19/23 21:23	1
2,4-Dinitrophenol	ND		31	3.6	ug/L		01/18/23 09:38	01/19/23 21:23	1
2,4-Dinitrotoluene	ND		10	2.0	ug/L		01/18/23 09:38	01/19/23 21:23	1
2,6-Dinitrotoluene	ND		10	2.0	ug/L		01/18/23 09:38	01/19/23 21:23	1
Di-n-octyl phthalate	ND		10	0.18	ug/L		01/18/23 09:38	01/19/23 21:23	1
1,4-Dioxane	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 21:23	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 21:23	1
Hexachlorobenzene	ND		10	0.18	ug/L		01/18/23 09:38	01/19/23 21:23	1
Hexachlorocyclopentadiene	ND		21	2.7	ug/L		01/18/23 09:38	01/19/23 21:23	1
Hexachloroethane	ND		10	4.4	ug/L		01/18/23 09:38	01/19/23 21:23	1
Indene	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 21:23	1
Isophorone	ND		10	0.15	ug/L		01/18/23 09:38	01/19/23 21:23	1
2-Methylphenol	ND		10	1.9	ug/L		01/18/23 09:38	01/19/23 21:23	1

Client Sample ID: MW6B-ROX-011123-DUP

Lab Sample ID: 400-231703-8

Date Collected: 01/11/23 14:10

Matrix: Water

Date Received: 01/12/23 08:48

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	ND		21	0.41	ug/L		01/18/23 09:38	01/19/23 21:23	1
2-Nitroaniline	ND		10	2.3	ug/L		01/18/23 09:38	01/19/23 21:23	1
3-Nitroaniline	ND		10	1.9	ug/L		01/18/23 09:38	01/19/23 21:23	1
4-Nitroaniline	ND		10	1.6	ug/L		01/18/23 09:38	01/19/23 21:23	1
Nitrobenzene	ND		10	0.14	ug/L		01/18/23 09:38	01/19/23 21:23	1
2-Nitrophenol	ND		10	5.4	ug/L		01/18/23 09:38	01/19/23 21:23	1
4-Nitrophenol	ND		10	2.2	ug/L		01/18/23 09:38	01/19/23 21:23	1
N-Nitrosodimethylamine	ND		10	3.7	ug/L		01/18/23 09:38	01/19/23 21:23	1
N-Nitrosodi-n-propylamine	ND		10	3.5	ug/L		01/18/23 09:38	01/19/23 21:23	1
N-Nitrosodiphenylamine	ND		10	0.19	ug/L		01/18/23 09:38	01/19/23 21:23	1
Pentachlorophenol	ND		21	1.5	ug/L		01/18/23 09:38	01/19/23 21:23	1
Phenol	ND		10	2.7	ug/L		01/18/23 09:38	01/19/23 21:23	1
Pyridine	ND		10	3.4	ug/L		01/18/23 09:38	01/19/23 21:23	1
Quinoline	ND		10	4.7	ug/L		01/18/23 09:38	01/19/23 21:23	1
2,4,5-Trichlorophenol	ND		10	3.9	ug/L		01/18/23 09:38	01/19/23 21:23	1
2,4,6-Trichlorophenol	ND		10	3.7	ug/L		01/18/23 09:38	01/19/23 21:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*101*		*46 - 124*	*01/18/23 09:38*	*01/19/23 21:23*	*1*
2-Fluorophenol	*31*		*13 - 113*	*01/18/23 09:38*	*01/19/23 21:23*	*1*
Nitrobenzene-d5	*101*		*36 - 126*	*01/18/23 09:38*	*01/19/23 21:23*	*1*
Phenol-d5	*73*		*17 - 127*	*01/18/23 09:38*	*01/19/23 21:23*	*1*
Terphenyl-d14	*132*		*44 - 149*	*01/18/23 09:38*	*01/19/23 21:23*	*1*
2,4,6-Tribromophenol	*97*		*26 - 150*	*01/18/23 09:38*	*01/19/23 21:23*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND		0.030	0.017	ug/L		01/25/23 10:27	01/25/23 23:39	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/25/23 10:27	01/25/23 23:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*	*p*	*51 - 149*	*01/25/23 10:27*	*01/25/23 23:39*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: TB-ROX-011123-8260-B
Date Collected: 01/11/23 12:00
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-9
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/16/23 13:52	1
Acrolein	ND		20	3.3	ug/L			01/16/23 13:52	1
Acrylonitrile	ND		10	2.8	ug/L			01/16/23 13:52	1
Benzene	ND		1.0	0.13	ug/L			01/16/23 13:52	1
Bromobenzene	ND		1.0	0.54	ug/L			01/16/23 13:52	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/16/23 13:52	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/16/23 13:52	1
Bromoform	ND		5.0	0.25	ug/L			01/16/23 13:52	1
Bromomethane	ND		1.0	0.98	ug/L			01/16/23 13:52	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/16/23 13:52	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/16/23 13:52	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/16/23 13:52	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/16/23 13:52	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/16/23 13:52	1
Chloroethane	ND		1.0	0.76	ug/L			01/16/23 13:52	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/16/23 13:52	1
Chloroform	ND		1.0	1.0	ug/L			01/16/23 13:52	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/16/23 13:52	1
Chloromethane	ND		1.0	0.32	ug/L			01/16/23 13:52	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/16/23 13:52	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/16/23 13:52	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/16/23 13:52	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/16/23 13:52	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/16/23 13:52	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/16/23 13:52	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/16/23 13:52	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/16/23 13:52	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/16/23 13:52	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 13:52	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 13:52	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 13:52	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/16/23 13:52	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/16/23 13:52	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/16/23 13:52	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/16/23 13:52	1
2-Hexanone	ND		25	1.4	ug/L			01/16/23 13:52	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/16/23 13:52	1
Methylene bromide	ND		5.0	0.22	ug/L			01/16/23 13:52	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/16/23 13:52	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/16/23 13:52	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/16/23 13:52	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/16/23 13:52	1
Naphthalene	ND		5.0	3.0	ug/L			01/16/23 13:52	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/16/23 13:52	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/16/23 13:52	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/16/23 13:52	1
o-Xylene	ND		5.0	0.60	ug/L			01/16/23 13:52	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/16/23 13:52	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/16/23 13:52	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: TB-ROX-011123-8260-B
Date Collected: 01/11/23 12:00
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-9
Matrix: Water

Method: SW846 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			01/16/23 13:52	1
Styrene	ND		1.0	1.0	ug/L			01/16/23 13:52	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/16/23 13:52	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/16/23 13:52	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/16/23 13:52	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/16/23 13:52	1
Toluene	ND		1.0	0.41	ug/L			01/16/23 13:52	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/16/23 13:52	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/16/23 13:52	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/16/23 13:52	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/16/23 13:52	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/16/23 13:52	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/16/23 13:52	1
Trichloroethene	ND		1.0	0.15	ug/L			01/16/23 13:52	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/16/23 13:52	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/16/23 13:52	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/16/23 13:52	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/16/23 13:52	1
Vinyl acetate	ND		25	0.93	ug/L			01/16/23 13:52	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/16/23 13:52	1
Xylenes, Total	ND		10	1.6	ug/L			01/16/23 13:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*72 - 119*		*01/16/23 13:52*	*1*
Dibromofluoromethane	*102*		*75 - 126*		*01/16/23 13:52*	*1*
Toluene-d8 (Surr)	*93*		*64 - 132*		*01/16/23 13:52*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: TB-ROX-011123-8011-B
Date Collected: 01/11/23 12:00
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-10
Matrix: Water

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND		0.031	0.018	ug/L		01/25/23 10:27	01/26/23 00:20	1
1,2-D bromoethane	ND		0.021	0.015	ug/L		01/25/23 10:27	01/26/23 00:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*90*	*p*	*51 - 149*	*01/25/23 10:27*	*01/26/23 00:20*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: T12-ROX-011123
Date Collected: 01/11/23 09:50
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-11
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		250	100	ug/L			01/16/23 09:55	10
Acrolein	ND		200	33	ug/L			01/16/23 09:55	10
Acrylonitrile	ND		100	28	ug/L			01/16/23 09:55	10
Benzene	**2100**		10	1.3	ug/L			01/16/23 09:55	10
Bromobenzene	ND		10	5.4	ug/L			01/16/23 09:55	10
Bromochloromethane	ND		10	2.1	ug/L			01/16/23 09:55	10
Bromodichloromethane	ND		10	5.0	ug/L			01/16/23 09:55	10
Bromoform	ND		50	2.5	ug/L			01/16/23 09:55	10
Bromomethane	ND		10	9.8	ug/L			01/16/23 09:55	10
2-Butanone (MEK)	ND		250	26	ug/L			01/16/23 09:55	10
Carbon disulfide	ND		10	5.0	ug/L			01/16/23 09:55	10
Carbon tetrachloride	ND		10	1.9	ug/L			01/16/23 09:55	10
Chlorobenzene	ND		10	1.5	ug/L			01/16/23 09:55	10
Dibromochloromethane	ND		10	2.4	ug/L			01/16/23 09:55	10
Chloroethane	ND		10	7.6	ug/L			01/16/23 09:55	10
2-Chloroethyl vinyl ether	ND		50	20	ug/L			01/16/23 09:55	10
Chloroform	ND		10	10	ug/L			01/16/23 09:55	10
1-Chlorohexane	ND		10	3.2	ug/L			01/16/23 09:55	10
Chloromethane	ND		10	3.2	ug/L			01/16/23 09:55	10
cis-1,2-Dichloroethene	ND		10	2.0	ug/L			01/16/23 09:55	10
cis-1,3-Dichloropropene	ND		50	5.0	ug/L			01/16/23 09:55	10
1,2-Dichlorobenzene	ND		10	5.0	ug/L			01/16/23 09:55	10
1,3-Dichlorobenzene	ND		10	5.4	ug/L			01/16/23 09:55	10
1,4-Dichlorobenzene	ND		10	6.4	ug/L			01/16/23 09:55	10
Dichlorodifluoromethane	ND		10	8.5	ug/L			01/16/23 09:55	10
1,1-Dichloroethane	ND		10	5.0	ug/L			01/16/23 09:55	10
1,2-Dichloroethane	ND		10	1.9	ug/L			01/16/23 09:55	10
1,1-Dichloroethene	ND		10	5.0	ug/L			01/16/23 09:55	10
1,2-Dichloropropane	ND		10	5.0	ug/L			01/16/23 09:55	10
1,3-Dichloropropane	ND		10	5.0	ug/L			01/16/23 09:55	10
2,2-Dichloropropane	ND		10	5.0	ug/L			01/16/23 09:55	10
1,1-Dichloropropene	ND		10	5.0	ug/L			01/16/23 09:55	10
Ethylbenzene	**26**		10	5.0	ug/L			01/16/23 09:55	10
Ethyl methacrylate	ND		10	6.0	ug/L			01/16/23 09:55	10
Hexachlorobutadiene	ND		50	9.0	ug/L			01/16/23 09:55	10
2-Hexanone	ND		250	14	ug/L			01/16/23 09:55	10
Isopropylbenzene	**6.9**	**J**	10	5.3	ug/L			01/16/23 09:55	10
Methylene bromide	ND		50	2.2	ug/L			01/16/23 09:55	10
Methylene Chloride	ND		50	30	ug/L			01/16/23 09:55	10
4-Methyl-2-pentanone (MIBK)	ND		250	18	ug/L			01/16/23 09:55	10
Methyl tert-butyl ether	ND		10	2.2	ug/L			01/16/23 09:55	10
m-Xylene & p-Xylene	**110**		50	6.3	ug/L			01/16/23 09:55	10
Naphthalene	**70**		50	30	ug/L			01/16/23 09:55	10
n-Butylbenzene	ND		10	7.6	ug/L			01/16/23 09:55	10
N-Propylbenzene	**9.0**	**J**	10	6.9	ug/L			01/16/23 09:55	10
o-Chlorotoluene	ND		10	5.7	ug/L			01/16/23 09:55	10
o-Xylene	**7.9**	**J**	50	6.0	ug/L			01/16/23 09:55	10
p-Chlorotoluene	ND		10	5.6	ug/L			01/16/23 09:55	10
p-Isopropyltoluene	ND		10	7.1	ug/L			01/16/23 09:55	10

Client Sample ID: T12-ROX-011123
Date Collected: 01/11/23 09:50
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-11
Matrix: Water

Method: SW846 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			01/16/23 09:55	10
Styrene	ND		10	10	ug/L			01/16/23 09:55	10
tert-Butylbenzene	ND		10	6.3	ug/L			01/16/23 09:55	10
1,1,1,2-Tetrachloroethane	ND		10	1.6	ug/L			01/16/23 09:55	10
1,1,2,2-Tetrachloroethane	ND		10	5.0	ug/L			01/16/23 09:55	10
Tetrachloroethene	ND		10	9.0	ug/L			01/16/23 09:55	10
Toluene	**53**		10	4.1	ug/L			01/16/23 09:55	10
trans-1,2-Dichloroethene	ND		10	5.0	ug/L			01/16/23 09:55	10
trans-1,3-Dichloropropene	ND		50	2.0	ug/L			01/16/23 09:55	10
1,2,3-Trichlorobenzene	ND		10	9.0	ug/L			01/16/23 09:55	10
1,2,4-Trichlorobenzene	ND		10	8.2	ug/L			01/16/23 09:55	10
1,1,1-Trichloroethane	ND		10	1.8	ug/L			01/16/23 09:55	10
1,1,2-Trichloroethane	ND		50	2.1	ug/L			01/16/23 09:55	10
Trichloroethene	ND		10	1.5	ug/L			01/16/23 09:55	10
Trichlorofluoromethane	ND		10	5.2	ug/L			01/16/23 09:55	10
1,2,3-Trichloropropane	ND		50	8.4	ug/L			01/16/23 09:55	10
1,2,4-Trimethylbenzene	**19**		10	8.2	ug/L			01/16/23 09:55	10
1,3,5-Trimethylbenzene	**22**		10	5.6	ug/L			01/16/23 09:55	10
Vinyl acetate	ND		250	9.3	ug/L			01/16/23 09:55	10
Vinyl chloride	ND		10	5.0	ug/L			01/16/23 09:55	10
Xylenes, Total	**120**		100	16	ug/L			01/16/23 09:55	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*72 - 119*		*01/16/23 09:55*	*10*
Dibromofluoromethane	*102*		*75 - 126*		*01/16/23 09:55*	*10*
Toluene-d8 (Surr)	*94*		*64 - 132*		*01/16/23 09:55*	*10*

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**0.32**		0.19	0.030	ug/L		01/18/23 09:38	01/23/23 16:53	1
Acenaphthylene	ND		0.19	0.043	ug/L		01/18/23 09:38	01/23/23 16:53	1
Anthracene	ND		0.19	0.030	ug/L		01/18/23 09:38	01/23/23 16:53	1
Benzo[a]anthracene	ND		0.19	0.044	ug/L		01/18/23 09:38	01/23/23 16:53	1
Benzo[a]pyrene	ND		0.19	0.040	ug/L		01/18/23 09:38	01/23/23 16:53	1
Benzo[b]fluoranthene	ND		0.19	0.032	ug/L		01/18/23 09:38	01/23/23 16:53	1
Benzo[g,h,i]perylene	ND		0.19	0.12	ug/L		01/18/23 09:38	01/23/23 16:53	1
Benzo[k]fluoranthene	ND		0.19	0.095	ug/L		01/18/23 09:38	01/23/23 16:53	1
Chrysene	ND		0.19	0.071	ug/L		01/18/23 09:38	01/23/23 16:53	1
Dibenz(a,h)anthracene	ND		0.19	0.048	ug/L		01/18/23 09:38	01/23/23 16:53	1
Fluoranthene	ND		0.19	0.065	ug/L		01/18/23 09:38	01/23/23 16:53	1
Fluorene	**0.37**	J	0.19	0.10	ug/L		01/18/23 09:38	01/23/23 16:53	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.041	ug/L		01/18/23 09:38	01/23/23 16:53	1
1-Methylnaphthalene	**22**		0.19	0.071	ug/L		01/18/23 09:38	01/23/23 16:53	1
2-Methylnaphthalene	**32**		0.19	0.057	ug/L		01/18/23 09:38	01/23/23 16:53	1
Phenanthrene	**0.45**		0.19	0.034	ug/L		01/18/23 09:38	01/23/23 16:53	1
Pyrene	ND		0.19	0.038	ug/L		01/18/23 09:38	01/23/23 16:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*91*		*15 - 122*	*01/18/23 09:38*	*01/23/23 16:53*	*1*
Nitrobenzene-d5	*83*		*19 - 130*	*01/18/23 09:38*	*01/23/23 16:53*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: T12-ROX-011123
Date Collected: 01/11/23 09:50
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-11
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*109*		*33 - 138*	*01/18/23 09:38*	*01/23/23 16:53*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.5	3.6	ug/L		01/18/23 09:38	01/19/23 21:43	1
Benzenethiol	ND	*- UJ	9.5	1.6	ug/L		01/18/23 09:38	01/19/23 21:43	1
Benzoic acid	ND	UJ	29	7.0	ug/L		01/18/23 09:38	01/19/23 21:43	1
Benzyl alcohol	ND	UJ	9.5	1.9	ug/L		01/18/23 09:38	01/19/23 21:43	1
Bis(2-chloroethoxy)methane	ND		9.5	0.15	ug/L		01/18/23 09:38	01/19/23 21:43	1
Bis(2-chloroethyl)ether	ND		9.5	2.6	ug/L		01/18/23 09:38	01/19/23 21:43	1
bis (2-chloroisopropyl) ether	ND		9.5	0.15	ug/L		01/18/23 09:38	01/19/23 21:43	1
Bis(2-ethylhexyl) phthalate	ND		9.5	4.8	ug/L		01/18/23 09:38	01/19/23 21:43	1
4-Bromophenyl phenyl ether	ND		9.5	0.19	ug/L		01/18/23 09:38	01/19/23 21:43	1
Butyl benzyl phthalate	ND		9.5	0.18	ug/L		01/18/23 09:38	01/19/23 21:43	1
4-Chloroaniline	ND		9.5	3.2	ug/L		01/18/23 09:38	01/19/23 21:43	1
4-Chloro-3-methylphenol	ND	UJ	9.5	3.6	ug/L		01/18/23 09:38	01/19/23 21:43	1
2-Chloronaphthalene	ND		9.5	0.13	ug/L		01/18/23 09:38	01/19/23 21:43	1
2-Chlorophenol	ND	UJ	9.5	2.1	ug/L		01/18/23 09:38	01/19/23 21:43	1
4-Chlorophenyl phenyl ether	ND		9.5	1.9	ug/L		01/18/23 09:38	01/19/23 21:43	1
Dibenz[a,h]acridine	ND		9.5	0.95	ug/L		01/18/23 09:38	01/19/23 21:43	1
Dibenzofuran	ND		9.5	0.16	ug/L		01/18/23 09:38	01/19/23 21:43	1
3,3'-Dichlorobenzidine	ND	*+	9.5	2.5	ug/L		01/18/23 09:38	01/19/23 21:43	1
2,4-Dichlorophenol	ND	UJ	9.5	2.9	ug/L		01/18/23 09:38	01/19/23 21:43	1
Diethyl phthalate	ND		9.5	0.23	ug/L		01/18/23 09:38	01/19/23 21:43	1
2,4-Dimethylphenol	**3.9**	**J** J	9.5	3.3	ug/L		01/18/23 09:38	01/19/23 21:43	1
Dimethyl phthalate	ND		9.5	0.16	ug/L		01/18/23 09:38	01/19/23 21:43	1
Di-n-butyl phthalate	ND		9.5	2.6	ug/L		01/18/23 09:38	01/19/23 21:43	1
4,6-Dinitro-ortho-cresol	ND	UJ	9.5	1.5	ug/L		01/18/23 09:38	01/19/23 21:43	1
2,4-Dinitrophenol	ND	UJ	29	3.2	ug/L		01/18/23 09:38	01/19/23 21:43	1
2,4-Dinitrotoluene	ND		9.5	1.8	ug/L		01/18/23 09:38	01/19/23 21:43	1
2,6-Dinitrotoluene	ND		9.5	1.8	ug/L		01/18/23 09:38	01/19/23 21:43	1
Di-n-octyl phthalate	ND		9.5	0.16	ug/L		01/18/23 09:38	01/19/23 21:43	1
1,4-Dioxane	ND		9.5	0.95	ug/L		01/18/23 09:38	01/19/23 21:43	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.5	0.95	ug/L		01/18/23 09:38	01/19/23 21:43	1
Hexachlorobenzene	ND		9.5	0.16	ug/L		01/18/23 09:38	01/19/23 21:43	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		01/18/23 09:38	01/19/23 21:43	1
Hexachloroethane	ND		9.5	4.0	ug/L		01/18/23 09:38	01/19/23 21:43	1
Indene	**5.4**	**J**	9.5	0.95	ug/L		01/18/23 09:38	01/20/23 18:03	1
Isophorone	ND		9.5	0.13	ug/L		01/18/23 09:38	01/19/23 21:43	1
2-Methylphenol	ND	UJ	9.5	1.7	ug/L		01/18/23 09:38	01/19/23 21:43	1
3 & 4 Methylphenol	ND	UJ	19	0.37	ug/L		01/18/23 09:38	01/19/23 21:43	1
2-Nitroaniline	ND		9.5	2.1	ug/L		01/18/23 09:38	01/19/23 21:43	1
3-Nitroaniline	ND		9.5	1.7	ug/L		01/18/23 09:38	01/19/23 21:43	1
4-Nitroaniline	ND		9.5	1.4	ug/L		01/18/23 09:38	01/19/23 21:43	1
Nitrobenzene	ND		9.5	0.12	ug/L		01/18/23 09:38	01/19/23 21:43	1
2-Nitrophenol	ND	UJ	9.5	5.0	ug/L		01/18/23 09:38	01/19/23 21:43	1
4-Nitrophenol	ND	UJ	9.5	2.0	ug/L		01/18/23 09:38	01/19/23 21:43	1
N-Nitrosodimethylamine	ND		9.5	3.3	ug/L		01/18/23 09:38	01/19/23 21:43	1

Client Sample ID: T12-ROX-011123
Date Collected: 01/11/23 09:50
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-11
Matrix: Water

Method: SW846 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	3.1	ug/L		01/18/23 09:38	01/19/23 21:43	1
N-Nitrosodiphenylamine	ND		9.5	0.17	ug/L		01/18/23 09:38	01/19/23 21:43	1
Pentachlorophenol	ND	UJ	19	1.3	ug/L		01/18/23 09:38	01/19/23 21:43	1
Phenol	**23**	J	9.5	2.5	ug/L		01/18/23 09:38	01/19/23 21:43	1
Pyridine	ND		9.5	3.0	ug/L		01/18/23 09:38	01/19/23 21:43	1
Quinoline	ND		9.5	4.3	ug/L		01/18/23 09:38	01/19/23 21:43	1
2,4,5-Trichlorophenol	ND	UJ	9.5	3.5	ug/L		01/18/23 09:38	01/19/23 21:43	1
2,4,6-Trichlorophenol	ND	UJ	9.5	3.3	ug/L		01/18/23 09:38	01/19/23 21:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*99*		*46 - 124*	*01/18/23 09:38*	*01/19/23 21:43*	*1*
2-Fluorophenol	*2*	*S1-*	*13 - 113*	*01/18/23 09:38*	*01/19/23 21:43*	*1*
Nitrobenzene-d5	*97*		*36 - 126*	*01/18/23 09:38*	*01/19/23 21:43*	*1*
Phenol-d5	*15*	*S1-*	*17 - 127*	*01/18/23 09:38*	*01/19/23 21:43*	*1*
Terphenyl-d14	*135*		*44 - 149*	*01/18/23 09:38*	*01/19/23 21:43*	*1*
2,4,6-Tribromophenol	*61*		*26 - 150*	*01/18/23 09:38*	*01/19/23 21:43*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND		0.029	0.017	ug/L		01/25/23 10:27	01/26/23 00:40	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/25/23 10:27	01/26/23 00:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*136*		*51 - 149*	*01/25/23 10:27*	*01/26/23 00:40*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: T12-ROX-011123-DUP
Date Collected: 01/11/23 09:50
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-12
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		250	100	ug/L			01/16/23 11:09	10
Acrolein	ND		200	33	ug/L			01/16/23 11:09	10
Acrylonitrile	ND		100	28	ug/L			01/16/23 11:09	10
Benzene	**2100**		10	1.3	ug/L			01/16/23 11:09	10
Bromobenzene	ND		10	5.4	ug/L			01/16/23 11:09	10
Bromochloromethane	ND		10	2.1	ug/L			01/16/23 11:09	10
Bromodichloromethane	ND		10	5.0	ug/L			01/16/23 11:09	10
Bromoform	ND		50	2.5	ug/L			01/16/23 11:09	10
Bromomethane	ND		10	9.8	ug/L			01/16/23 11:09	10
2-Butanone (MEK)	ND		250	26	ug/L			01/16/23 11:09	10
Carbon disulfide	ND		10	5.0	ug/L			01/16/23 11:09	10
Carbon tetrachloride	ND		10	1.9	ug/L			01/16/23 11:09	10
Chlorobenzene	ND		10	1.5	ug/L			01/16/23 11:09	10
Dibromochloromethane	ND		10	2.4	ug/L			01/16/23 11:09	10
Chloroethane	ND		10	7.6	ug/L			01/16/23 11:09	10
2-Chloroethyl vinyl ether	ND		50	20	ug/L			01/16/23 11:09	10
Chloroform	ND		10	10	ug/L			01/16/23 11:09	10
1-Chlorohexane	ND		10	3.2	ug/L			01/16/23 11:09	10
Chloromethane	ND		10	3.2	ug/L			01/16/23 11:09	10
cis-1,2-Dichloroethene	ND		10	2.0	ug/L			01/16/23 11:09	10
cis-1,3-Dichloropropene	ND		50	5.0	ug/L			01/16/23 11:09	10
1,2-Dichlorobenzene	ND		10	5.0	ug/L			01/16/23 11:09	10
1,3-Dichlorobenzene	ND		10	5.4	ug/L			01/16/23 11:09	10
1,4-Dichlorobenzene	ND		10	6.4	ug/L			01/16/23 11:09	10
Dichlorodifluoromethane	ND		10	8.5	ug/L			01/16/23 11:09	10
1,1-Dichloroethane	ND		10	5.0	ug/L			01/16/23 11:09	10
1,2-Dichloroethane	ND		10	1.9	ug/L			01/16/23 11:09	10
1,1-Dichloroethene	ND		10	5.0	ug/L			01/16/23 11:09	10
1,2-Dichloropropane	ND		10	5.0	ug/L			01/16/23 11:09	10
1,3-Dichloropropane	ND		10	5.0	ug/L			01/16/23 11:09	10
2,2-Dichloropropane	ND		10	5.0	ug/L			01/16/23 11:09	10
1,1-Dichloropropene	ND		10	5.0	ug/L			01/16/23 11:09	10
Ethylbenzene	**25**		10	5.0	ug/L			01/16/23 11:09	10
Ethyl methacrylate	ND		10	6.0	ug/L			01/16/23 11:09	10
Hexachlorobutadiene	ND		50	9.0	ug/L			01/16/23 11:09	10
2-Hexanone	ND		250	14	ug/L			01/16/23 11:09	10
Isopropylbenzene	**6.8**	**J**	10	5.3	ug/L			01/16/23 11:09	10
Methylene bromide	ND		50	2.2	ug/L			01/16/23 11:09	10
Methylene Chloride	ND		50	30	ug/L			01/16/23 11:09	10
4-Methyl-2-pentanone (MIBK)	ND		250	18	ug/L			01/16/23 11:09	10
Methyl tert-butyl ether	ND		10	2.2	ug/L			01/16/23 11:09	10
m-Xylene & p-Xylene	**110**		50	6.3	ug/L			01/16/23 11:09	10
Naphthalene	**58**		50	30	ug/L			01/16/23 11:09	10
n-Butylbenzene	ND		10	7.6	ug/L			01/16/23 11:09	10
N-Propylbenzene	**8.8**	**J**	10	6.9	ug/L			01/16/23 11:09	10
o-Chlorotoluene	ND		10	5.7	ug/L			01/16/23 11:09	10
o-Xylene	**7.6**	**J**	50	6.0	ug/L			01/16/23 11:09	10
p-Chlorotoluene	ND		10	5.6	ug/L			01/16/23 11:09	10
p-Isopropyltoluene	ND		10	7.1	ug/L			01/16/23 11:09	10

Client Sample ID: T12-ROX-011123-DUP

Lab Sample ID: 400-231703-12

Date Collected: 01/11/23 09:50

Matrix: Water

Date Received: 01/12/23 08:48

Method: SW846 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			01/16/23 11:09	10
Styrene	ND		10	10	ug/L			01/16/23 11:09	10
tert-Butylbenzene	ND		10	6.3	ug/L			01/16/23 11:09	10
1,1,1,2-Tetrachloroethane	ND		10	1.6	ug/L			01/16/23 11:09	10
1,1,2,2-Tetrachloroethane	ND		10	5.0	ug/L			01/16/23 11:09	10
Tetrachloroethene	ND		10	9.0	ug/L			01/16/23 11:09	10
Toluene	**53**		10	4.1	ug/L			01/16/23 11:09	10
trans-1,2-Dichloroethene	ND		10	5.0	ug/L			01/16/23 11:09	10
trans-1,3-Dichloropropene	ND		50	2.0	ug/L			01/16/23 11:09	10
1,2,3-Trichlorobenzene	ND		10	9.0	ug/L			01/16/23 11:09	10
1,2,4-Trichlorobenzene	ND		10	8.2	ug/L			01/16/23 11:09	10
1,1,1-Trichloroethane	ND		10	1.8	ug/L			01/16/23 11:09	10
1,1,2-Trichloroethane	ND		50	2.1	ug/L			01/16/23 11:09	10
Trichloroethene	ND		10	1.5	ug/L			01/16/23 11:09	10
Trichlorofluoromethane	ND		10	5.2	ug/L			01/16/23 11:09	10
1,2,3-Trichloropropane	ND		50	8.4	ug/L			01/16/23 11:09	10
1,2,4-Trimethylbenzene	**18**		10	8.2	ug/L			01/16/23 11:09	10
1,3,5-Trimethylbenzene	**22**		10	5.6	ug/L			01/16/23 11:09	10
Vinyl acetate	ND		250	9.3	ug/L			01/16/23 11:09	10
Vinyl chloride	ND		10	5.0	ug/L			01/16/23 11:09	10
Xylenes, Total	**120**		100	16	ug/L			01/16/23 11:09	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*72 - 119*		*01/16/23 11:09*	*10*
Dibromofluoromethane	*104*		*75 - 126*		*01/16/23 11:09*	*10*
Toluene-d8 (Surr)	*93*		*64 - 132*		*01/16/23 11:09*	*10*

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**0.26**		0.19	0.031	ug/L		01/18/23 09:38	01/23/23 17:10	1
Acenaphthylene	**0.11**	J J	0.19	0.043	ug/L		01/18/23 09:38	01/23/23 17:10	1
Anthracene	ND		0.19	0.031	ug/L		01/18/23 09:38	01/23/23 17:10	1
Benzo[a]anthracene	ND		0.19	0.044	ug/L		01/18/23 09:38	01/23/23 17:10	1
Benzo[a]pyrene	ND		0.19	0.040	ug/L		01/18/23 09:38	01/23/23 17:10	1
Benzo[b]fluoranthene	ND		0.19	0.032	ug/L		01/18/23 09:38	01/23/23 17:10	1
Benzo[g,h,i]perylene	ND		0.19	0.12	ug/L		01/18/23 09:38	01/23/23 17:10	1
Benzo[k]fluoranthene	ND		0.19	0.095	ug/L		01/18/23 09:38	01/23/23 17:10	1
Chrysene	ND		0.19	0.071	ug/L		01/18/23 09:38	01/23/23 17:10	1
Dibenz(a,h)anthracene	ND		0.19	0.048	ug/L		01/18/23 09:38	01/23/23 17:10	1
Fluoranthene	ND		0.19	0.065	ug/L		01/18/23 09:38	01/23/23 17:10	1
Fluorene	**0.34**	J	0.19	0.11	ug/L		01/18/23 09:38	01/23/23 17:10	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.041	ug/L		01/18/23 09:38	01/23/23 17:10	1
1-Methylnaphthalene	**22**		0.19	0.071	ug/L		01/18/23 09:38	01/23/23 17:10	1
2-Methylnaphthalene	**31**		0.19	0.057	ug/L		01/18/23 09:38	01/23/23 17:10	1
Phenanthrene	**0.48**		0.19	0.034	ug/L		01/18/23 09:38	01/23/23 17:10	1
Pyrene	**0.051**	J J	0.19	0.038	ug/L		01/18/23 09:38	01/23/23 17:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*86*		*15 - 122*	*01/18/23 09:38*	*01/23/23 17:10*	*1*
Nitrobenzene-d5	*82*		*19 - 130*	*01/18/23 09:38*	*01/23/23 17:10*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: T12-ROX-011123-DUP

Date Collected: 01/11/23 09:50
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-12

Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*105*		*33 - 138*	*01/18/23 09:38*	*01/23/23 17:10*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.5	3.6	ug/L		01/18/23 09:38	01/19/23 22:04	1
Benzenethiol	ND	*- UJ	9.5	1.6	ug/L		01/18/23 09:38	01/19/23 22:04	1
Benzoic acid	ND		29	7.0	ug/L		01/18/23 09:38	01/19/23 22:04	1
Benzyl alcohol	ND		9.5	1.9	ug/L		01/18/23 09:38	01/19/23 22:04	1
Bis(2-chloroethoxy)methane	ND		9.5	0.15	ug/L		01/18/23 09:38	01/19/23 22:04	1
Bis(2-chloroethyl)ether	ND		9.5	2.6	ug/L		01/18/23 09:38	01/19/23 22:04	1
bis (2-chloroisopropyl) ether	ND		9.5	0.15	ug/L		01/18/23 09:38	01/19/23 22:04	1
Bis(2-ethylhexyl) phthalate	ND		9.5	4.8	ug/L		01/18/23 09:38	01/19/23 22:04	1
4-Bromophenyl phenyl ether	ND		9.5	0.19	ug/L		01/18/23 09:38	01/19/23 22:04	1
Butyl benzyl phthalate	ND		9.5	0.18	ug/L		01/18/23 09:38	01/19/23 22:04	1
4-Chloroaniline	ND		9.5	3.2	ug/L		01/18/23 09:38	01/19/23 22:04	1
4-Chloro-3-methylphenol	ND		9.5	3.6	ug/L		01/18/23 09:38	01/19/23 22:04	1
2-Chloronaphthalene	ND		9.5	0.13	ug/L		01/18/23 09:38	01/19/23 22:04	1
2-Chlorophenol	ND		9.5	2.1	ug/L		01/18/23 09:38	01/19/23 22:04	1
4-Chlorophenyl phenyl ether	ND		9.5	1.9	ug/L		01/18/23 09:38	01/19/23 22:04	1
Dibenz[a,h]acridine	ND		9.5	0.95	ug/L		01/18/23 09:38	01/19/23 22:04	1
Dibenzofuran	ND		9.5	0.16	ug/L		01/18/23 09:38	01/19/23 22:04	1
3,3'-Dichlorobenzidine	ND	*+	9.5	2.5	ug/L		01/18/23 09:38	01/19/23 22:04	1
2,4-Dichlorophenol	ND		9.5	2.9	ug/L		01/18/23 09:38	01/19/23 22:04	1
Diethyl phthalate	ND		9.5	0.23	ug/L		01/18/23 09:38	01/19/23 22:04	1
2,4-Dimethylphenol	**4.2**	**J**	9.5	3.3	ug/L		01/18/23 09:38	01/19/23 22:04	1
Dimethyl phthalate	ND		9.5	0.16	ug/L		01/18/23 09:38	01/19/23 22:04	1
Di-n-butyl phthalate	ND		9.5	2.6	ug/L		01/18/23 09:38	01/19/23 22:04	1
4,6-Dinitro-ortho-cresol	ND		9.5	1.5	ug/L		01/18/23 09:38	01/19/23 22:04	1
2,4-Dinitrophenol	ND		29	3.2	ug/L		01/18/23 09:38	01/19/23 22:04	1
2,4-Dinitrotoluene	ND		9.5	1.8	ug/L		01/18/23 09:38	01/19/23 22:04	1
2,6-Dinitrotoluene	ND		9.5	1.8	ug/L		01/18/23 09:38	01/19/23 22:04	1
Di-n-octyl phthalate	ND		9.5	0.16	ug/L		01/18/23 09:38	01/19/23 22:04	1
1,4-Dioxane	ND		9.5	0.95	ug/L		01/18/23 09:38	01/19/23 22:04	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.5	0.95	ug/L		01/18/23 09:38	01/19/23 22:04	1
Hexachlorobenzene	ND		9.5	0.16	ug/L		01/18/23 09:38	01/19/23 22:04	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		01/18/23 09:38	01/19/23 22:04	1
Hexachloroethane	ND		9.5	4.0	ug/L		01/18/23 09:38	01/19/23 22:04	1
Indene	ND		9.5	0.95	ug/L		01/18/23 09:38	01/20/23 18:28	1
Isophorone	ND		9.5	0.13	ug/L		01/18/23 09:38	01/19/23 22:04	1
2-Methylphenol	ND		9.5	1.7	ug/L		01/18/23 09:38	01/19/23 22:04	1
3 & 4 Methylphenol	**0.87**	**J**	19	0.37	ug/L		01/18/23 09:38	01/19/23 22:04	1
2-Nitroaniline	ND		9.5	2.1	ug/L		01/18/23 09:38	01/19/23 22:04	1
3-Nitroaniline	ND		9.5	1.7	ug/L		01/18/23 09:38	01/19/23 22:04	1
4-Nitroaniline	ND		9.5	1.4	ug/L		01/18/23 09:38	01/19/23 22:04	1
Nitrobenzene	ND		9.5	0.12	ug/L		01/18/23 09:38	01/19/23 22:04	1
2-Nitrophenol	ND		9.5	5.0	ug/L		01/18/23 09:38	01/19/23 22:04	1
4-Nitrophenol	ND		9.5	2.0	ug/L		01/18/23 09:38	01/19/23 22:04	1
N-Nitrosodimethylamine	ND		9.5	3.3	ug/L		01/18/23 09:38	01/19/23 22:04	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: T12-ROX-011123-DUP

Date Collected: 01/11/23 09:50
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-12

Matrix: Water

Method: SW846 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	3.2	ug/L		01/18/23 09:38	01/19/23 22:04	1
N-Nitrosodiphenylamine	ND		9.5	0.17	ug/L		01/18/23 09:38	01/19/23 22:04	1
Pentachlorophenol	ND		19	1.3	ug/L		01/18/23 09:38	01/19/23 22:04	1
Phenol	**56**	J	9.5	2.5	ug/L		01/18/23 09:38	01/19/23 22:04	1
Pyridine	ND		9.5	3.1	ug/L		01/18/23 09:38	01/19/23 22:04	1
Quinoline	ND		9.5	4.3	ug/L		01/18/23 09:38	01/19/23 22:04	1
2,4,5-Trichlorophenol	ND		9.5	3.5	ug/L		01/18/23 09:38	01/19/23 22:04	1
2,4,6-Trichlorophenol	ND		9.5	3.3	ug/L		01/18/23 09:38	01/19/23 22:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*101*		*46 - 124*	*01/18/23 09:38*	*01/19/23 22:04*	*1*
2-Fluorophenol	*5*	*S1-*	*13 - 113*	*01/18/23 09:38*	*01/19/23 22:04*	*1*
Nitrobenzene-d5	*101*		*36 - 126*	*01/18/23 09:38*	*01/19/23 22:04*	*1*
Phenol-d5	*35*		*17 - 127*	*01/18/23 09:38*	*01/19/23 22:04*	*1*
Terphenyl-d14	*134*		*44 - 149*	*01/18/23 09:38*	*01/19/23 22:04*	*1*
2,4,6-Tribromophenol	*95*		*26 - 150*	*01/18/23 09:38*	*01/19/23 22:04*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND		0.029	0.016	ug/L		01/25/23 10:27	01/26/23 01:00	1
1,2-D bromoethane	ND		0.019	0.015	ug/L		01/25/23 10:27	01/26/23 01:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*124*	*p*	*51 - 149*	*01/25/23 10:27*	*01/26/23 01:00*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: P59-ROX-011123
Date Collected: 01/11/23 11:05
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-13
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		500	200	ug/L			01/16/23 17:31	20
Acrolein	ND		400	66	ug/L			01/16/23 17:31	20
Acrylonitrile	ND		200	56	ug/L			01/16/23 17:31	20
Benzene	**2500**		20	2.6	ug/L			01/16/23 17:31	20
Bromobenzene	ND		20	11	ug/L			01/16/23 17:31	20
Bromochloromethane	ND		20	4.2	ug/L			01/16/23 17:31	20
Bromodichloromethane	ND		20	10	ug/L			01/16/23 17:31	20
Bromoform	ND		100	5.0	ug/L			01/16/23 17:31	20
Bromomethane	ND		20	20	ug/L			01/16/23 17:31	20
2-Butanone (MEK)	ND		500	52	ug/L			01/16/23 17:31	20
Carbon disulfide	ND		20	10	ug/L			01/16/23 17:31	20
Carbon tetrachloride	ND		20	3.8	ug/L			01/16/23 17:31	20
Chlorobenzene	ND		20	3.0	ug/L			01/16/23 17:31	20
Dibromochloromethane	ND		20	4.8	ug/L			01/16/23 17:31	20
Chloroethane	ND		20	15	ug/L			01/16/23 17:31	20
2-Chloroethyl vinyl ether	ND		100	40	ug/L			01/16/23 17:31	20
Chloroform	ND		20	20	ug/L			01/16/23 17:31	20
1-Chlorohexane	ND		20	6.4	ug/L			01/16/23 17:31	20
Chloromethane	ND		20	6.4	ug/L			01/16/23 17:31	20
cis-1,2-Dichloroethene	ND		20	4.0	ug/L			01/16/23 17:31	20
cis-1,3-Dichloropropene	ND		100	10	ug/L			01/16/23 17:31	20
1,2-Dichlorobenzene	ND		20	10	ug/L			01/16/23 17:31	20
1,3-Dichlorobenzene	ND		20	11	ug/L			01/16/23 17:31	20
1,4-Dichlorobenzene	ND		20	13	ug/L			01/16/23 17:31	20
Dichlorodifluoromethane	ND		20	17	ug/L			01/16/23 17:31	20
1,1-Dichloroethane	ND		20	10	ug/L			01/16/23 17:31	20
1,2-Dichloroethane	ND		20	3.8	ug/L			01/16/23 17:31	20
1,1-Dichloroethene	ND		20	10	ug/L			01/16/23 17:31	20
1,2-Dichloropropane	ND		20	10	ug/L			01/16/23 17:31	20
1,3-Dichloropropane	ND		20	10	ug/L			01/16/23 17:31	20
2,2-Dichloropropane	ND		20	10	ug/L			01/16/23 17:31	20
1,1-Dichloropropene	ND		20	10	ug/L			01/16/23 17:31	20
Ethylbenzene	**160**		20	10	ug/L			01/16/23 17:31	20
Ethyl methacrylate	ND		20	12	ug/L			01/16/23 17:31	20
Hexachlorobutadiene	ND		100	18	ug/L			01/16/23 17:31	20
2-Hexanone	ND		500	28	ug/L			01/16/23 17:31	20
Isopropylbenzene	**45**		20	11	ug/L			01/16/23 17:31	20
Methylene bromide	ND		100	4.4	ug/L			01/16/23 17:31	20
Methylene Chloride	ND		100	60	ug/L			01/16/23 17:31	20
4-Methyl-2-pentanone (MIBK)	ND		500	36	ug/L			01/16/23 17:31	20
Methyl tert-butyl ether	ND		20	4.4	ug/L			01/16/23 17:31	20
m-Xylene & p-Xylene	**150**		100	13	ug/L			01/16/23 17:31	20
Naphthalene	**120**		100	60	ug/L			01/16/23 17:31	20
n-Butylbenzene	ND		20	15	ug/L			01/16/23 17:31	20
N-Propylbenzene	**73**		20	14	ug/L			01/16/23 17:31	20
o-Chlorotoluene	ND		20	11	ug/L			01/16/23 17:31	20
o-Xylene	ND		100	12	ug/L			01/16/23 17:31	20
p-Chlorotoluene	ND		20	11	ug/L			01/16/23 17:31	20
p-Isopropyltoluene	ND		20	14	ug/L			01/16/23 17:31	20

Client Sample ID: P59-ROX-011123
Date Collected: 01/11/23 11:05
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-13
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		20	14	ug/L			01/16/23 17:31	20
Styrene	ND		20	20	ug/L			01/16/23 17:31	20
tert-Butylbenzene	ND		20	13	ug/L			01/16/23 17:31	20
1,1,1,2-Tetrachloroethane	ND		20	3.2	ug/L			01/16/23 17:31	20
1,1,2,2-Tetrachloroethane	ND		20	10	ug/L			01/16/23 17:31	20
Tetrachloroethene	ND		20	18	ug/L			01/16/23 17:31	20
Toluene	**100**		20	8.2	ug/L			01/16/23 17:31	20
trans-1,2-Dichloroethene	ND		20	10	ug/L			01/16/23 17:31	20
trans-1,3-Dichloropropene	ND		100	4.0	ug/L			01/16/23 17:31	20
1,2,3-Trichlorobenzene	ND		20	18	ug/L			01/16/23 17:31	20
1,2,4-Trichlorobenzene	ND		20	16	ug/L			01/16/23 17:31	20
1,1,1-Trichloroethane	ND		20	3.6	ug/L			01/16/23 17:31	20
1,1,2-Trichloroethane	ND		100	4.2	ug/L			01/16/23 17:31	20
Trichloroethene	ND		20	3.0	ug/L			01/16/23 17:31	20
Trichlorofluoromethane	ND		20	10	ug/L			01/16/23 17:31	20
1,2,3-Trichloropropane	ND		100	17	ug/L			01/16/23 17:31	20
1,2,4-Trimethylbenzene	**51**		20	16	ug/L			01/16/23 17:31	20
1,3,5-Trimethylbenzene	**39**		20	11	ug/L			01/16/23 17:31	20
Vinyl acetate	ND		500	19	ug/L			01/16/23 17:31	20
Vinyl chloride	ND		20	10	ug/L			01/16/23 17:31	20
Xylenes, Total	**160**	**J**	200	32	ug/L			01/16/23 17:31	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*72 - 119*		*01/16/23 17:31*	*20*
Dibromofluoromethane	*104*		*75 - 126*		*01/16/23 17:31*	*20*
Toluene-d8 (Surr)	*92*		*64 - 132*		*01/16/23 17:31*	*20*

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**0.44**		0.19	0.031	ug/L		01/18/23 09:38	01/23/23 17:28	1
Acenaphthylene	ND		0.19	0.044	ug/L		01/18/23 09:38	01/23/23 17:28	1
Anthracene	ND		0.19	0.031	ug/L		01/18/23 09:38	01/23/23 17:28	1
Benzo[a]anthracene	ND		0.19	0.044	ug/L		01/18/23 09:38	01/23/23 17:28	1
Benzo[a]pyrene	ND		0.19	0.041	ug/L		01/18/23 09:38	01/23/23 17:28	1
Benzo[b]fluoranthene	ND		0.19	0.033	ug/L		01/18/23 09:38	01/23/23 17:28	1
Benzo[g,h,i]perylene	ND		0.19	0.13	ug/L		01/18/23 09:38	01/23/23 17:28	1
Benzo[k]fluoranthene	ND		0.19	0.097	ug/L		01/18/23 09:38	01/23/23 17:28	1
Chrysene	ND		0.19	0.072	ug/L		01/18/23 09:38	01/23/23 17:28	1
Dibenz(a,h)anthracene	ND		0.19	0.048	ug/L		01/18/23 09:38	01/23/23 17:28	1
Fluoranthene	ND		0.19	0.066	ug/L		01/18/23 09:38	01/23/23 17:28	1
Fluorene	**0.36**	J	0.19	0.11	ug/L		01/18/23 09:38	01/23/23 17:28	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.042	ug/L		01/18/23 09:38	01/23/23 17:28	1
1-Methylnaphthalene	**12**	J	0.19	0.072	ug/L		01/18/23 09:38	01/23/23 17:28	1
2-Methylnaphthalene	**15**	J	0.19	0.058	ug/L		01/18/23 09:38	01/23/23 17:28	1
Phenanthrene	**0.92**	J	0.19	0.035	ug/L		01/18/23 09:38	01/23/23 17:28	1
Pyrene	**0.37**	J	0.19	0.039	ug/L		01/18/23 09:38	01/23/23 17:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*62*		*15 - 122*	*01/18/23 09:38*	*01/23/23 17:28*	*1*
Nitrobenzene-d5	*57*		*19 - 130*	*01/18/23 09:38*	*01/23/23 17:28*	*1*

Client Sample ID: P59-ROX-011123
Date Collected: 01/11/23 11:05
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-13
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	80		33 - 138	01/18/23 09:38	01/23/23 17:28	1

Method: SW846 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		01/18/23 09:38	01/19/23 22:24	1
Benzenethiol	ND	*- UJ	9.7	1.6	ug/L		01/18/23 09:38	01/19/23 22:24	1
Benzoic acid	ND		29	7.1	ug/L		01/18/23 09:38	01/19/23 22:24	1
Benzyl alcohol	ND		9.7	1.9	ug/L		01/18/23 09:38	01/19/23 22:24	1
Bis(2-chloroethoxy)methane	ND		9.7	0.15	ug/L		01/18/23 09:38	01/19/23 22:24	1
Bis(2-chloroethyl)ether	ND		9.7	2.6	ug/L		01/18/23 09:38	01/19/23 22:24	1
bis (2-chloroisopropyl) ether	ND		9.7	0.15	ug/L		01/18/23 09:38	01/19/23 22:24	1
Bis(2-ethylhexyl) phthalate	ND		9.7	4.8	ug/L		01/18/23 09:38	01/20/23 18:54	1
4-Bromophenyl phenyl ether	ND		9.7	0.19	ug/L		01/18/23 09:38	01/19/23 22:24	1
Butyl benzyl phthalate	ND		9.7	0.18	ug/L		01/18/23 09:38	01/19/23 22:24	1
4-Chloroaniline	ND		9.7	3.3	ug/L		01/18/23 09:38	01/19/23 22:24	1
4-Chloro-3-methylphenol	ND		9.7	3.7	ug/L		01/18/23 09:38	01/19/23 22:24	1
2-Chloronaphthalene	ND		9.7	0.14	ug/L		01/18/23 09:38	01/19/23 22:24	1
2-Chlorophenol	ND		9.7	2.1	ug/L		01/18/23 09:38	01/19/23 22:24	1
4-Chlorophenyl phenyl ether	ND		9.7	1.9	ug/L		01/18/23 09:38	01/19/23 22:24	1
Dibenz[a,h]acridine	ND		9.7	0.97	ug/L		01/18/23 09:38	01/19/23 22:24	1
Dibenzofuran	ND		9.7	0.16	ug/L		01/18/23 09:38	01/19/23 22:24	1
3,3'-Dichlorobenzidine	ND	*+	9.7	2.5	ug/L		01/18/23 09:38	01/19/23 22:24	1
2,4-Dichlorophenol	ND		9.7	2.9	ug/L		01/18/23 09:38	01/19/23 22:24	1
Diethyl phthalate	ND		9.7	0.23	ug/L		01/18/23 09:38	01/19/23 22:24	1
2,4-Dimethylphenol	ND		9.7	3.4	ug/L		01/18/23 09:38	01/19/23 22:24	1
Dimethyl phthalate	ND		9.7	0.16	ug/L		01/18/23 09:38	01/19/23 22:24	1
Di-n-butyl phthalate	ND		9.7	2.6	ug/L		01/18/23 09:38	01/19/23 22:24	1
4,6-Dinitro-ortho-cresol	ND		9.7	1.5	ug/L		01/18/23 09:38	01/19/23 22:24	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		01/18/23 09:38	01/19/23 22:24	1
2,4-Dinitrotoluene	ND		9.7	1.8	ug/L		01/18/23 09:38	01/19/23 22:24	1
2,6-Dinitrotoluene	ND		9.7	1.8	ug/L		01/18/23 09:38	01/19/23 22:24	1
Di-n-octyl phthalate	ND		9.7	0.16	ug/L		01/18/23 09:38	01/19/23 22:24	1
1,4-Dioxane	ND		9.7	0.97	ug/L		01/18/23 09:38	01/19/23 22:24	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.7	0.97	ug/L		01/18/23 09:38	01/19/23 22:24	1
Hexachlorobenzene	ND		9.7	0.16	ug/L		01/18/23 09:38	01/19/23 22:24	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		01/18/23 09:38	01/19/23 22:24	1
Hexachloroethane	ND		9.7	4.1	ug/L		01/18/23 09:38	01/19/23 22:24	1
Indene	ND		9.7	0.97	ug/L		01/18/23 09:38	01/19/23 22:24	1
Isophorone	ND		9.7	0.14	ug/L		01/18/23 09:38	01/19/23 22:24	1
2-Methylphenol	ND		9.7	1.7	ug/L		01/18/23 09:38	01/19/23 22:24	1
3 & 4 Methylphenol	**1.2**	**J**	19	0.38	ug/L		01/18/23 09:38	01/19/23 22:24	1
2-Nitroaniline	ND		9.7	2.1	ug/L		01/18/23 09:38	01/19/23 22:24	1
3-Nitroaniline	ND		9.7	1.7	ug/L		01/18/23 09:38	01/19/23 22:24	1
4-Nitroaniline	ND		9.7	1.5	ug/L		01/18/23 09:38	01/19/23 22:24	1
Nitrobenzene	ND		9.7	0.13	ug/L		01/18/23 09:38	01/19/23 22:24	1
2-Nitrophenol	ND		9.7	5.0	ug/L		01/18/23 09:38	01/19/23 22:24	1
4-Nitrophenol	ND		9.7	2.0	ug/L		01/18/23 09:38	01/19/23 22:24	1
N-Nitrosodimethylamine	ND		9.7	3.4	ug/L		01/18/23 09:38	01/19/23 22:24	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: P59-ROX-011123
Date Collected: 01/11/23 11:05
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-13
Matrix: Water

Method: SW846 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		01/18/23 09:38	01/19/23 22:24	1
N-Nitrosodiphenylamine	ND		9.7	0.17	ug/L		01/18/23 09:38	01/19/23 22:24	1
Pentachlorophenol	ND		19	1.4	ug/L		01/18/23 09:38	01/19/23 22:24	1
Phenol	**35**	J	9.7	2.5	ug/L		01/18/23 09:38	01/19/23 22:24	1
Pyridine	ND		9.7	3.1	ug/L		01/18/23 09:38	01/19/23 22:24	1
Quinoline	ND		9.7	4.4	ug/L		01/18/23 09:38	01/19/23 22:24	1
2,4,5-Trichlorophenol	ND		9.7	3.6	ug/L		01/18/23 09:38	01/19/23 22:24	1
2,4,6-Trichlorophenol	ND		9.7	3.4	ug/L		01/18/23 09:38	01/19/23 22:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*91*		*46 - 124*	*01/18/23 09:38*	*01/19/23 22:24*	*1*
2-Fluorophenol	*27*		*13 - 113*	*01/18/23 09:38*	*01/19/23 22:24*	*1*
Nitrobenzene-d5	*89*		*36 - 126*	*01/18/23 09:38*	*01/19/23 22:24*	*1*
Phenol-d5	*69*		*17 - 127*	*01/18/23 09:38*	*01/19/23 22:24*	*1*
Terphenyl-d14	*104*		*44 - 149*	*01/18/23 09:38*	*01/19/23 22:24*	*1*
2,4,6-Tribromophenol	*133*		*26 - 150*	*01/18/23 09:38*	*01/19/23 22:24*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND		0.029	0.017	ug/L		01/25/23 10:27	01/26/23 01:21	1
1,2-D bromoethane	ND		0.019	0.015	ug/L		01/25/23 10:27	01/26/23 01:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*130*	*p*	*51 - 149*	*01/25/23 10:27*	*01/26/23 01:21*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: P59-ROX-011123-DUP
Date Collected: 01/11/23 11:05
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-14
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		500	200	ug/L			01/16/23 11:33	20
Acrolein	ND		400	66	ug/L			01/16/23 11:33	20
Acrylonitrile	ND		200	56	ug/L			01/16/23 11:33	20
Benzene	**2700**		20	2.6	ug/L			01/16/23 11:33	20
Bromobenzene	ND		20	11	ug/L			01/16/23 11:33	20
Bromochloromethane	ND		20	4.2	ug/L			01/16/23 11:33	20
Bromodichloromethane	ND		20	10	ug/L			01/16/23 11:33	20
Bromoform	ND		100	5.0	ug/L			01/16/23 11:33	20
Bromomethane	ND		20	20	ug/L			01/16/23 11:33	20
2-Butanone (MEK)	ND		500	52	ug/L			01/16/23 11:33	20
Carbon disulfide	ND		20	10	ug/L			01/16/23 11:33	20
Carbon tetrachloride	ND		20	3.8	ug/L			01/16/23 11:33	20
Chlorobenzene	ND		20	3.0	ug/L			01/16/23 11:33	20
Dibromochloromethane	ND		20	4.8	ug/L			01/16/23 11:33	20
Chloroethane	ND		20	15	ug/L			01/16/23 11:33	20
2-Chloroethyl vinyl ether	ND		100	40	ug/L			01/16/23 11:33	20
Chloroform	ND		20	20	ug/L			01/16/23 11:33	20
1-Chlorohexane	ND		20	6.4	ug/L			01/16/23 11:33	20
Chloromethane	ND		20	6.4	ug/L			01/16/23 11:33	20
cis-1,2-Dichloroethene	ND		20	4.0	ug/L			01/16/23 11:33	20
cis-1,3-Dichloropropene	ND		100	10	ug/L			01/16/23 11:33	20
1,2-Dichlorobenzene	ND		20	10	ug/L			01/16/23 11:33	20
1,3-Dichlorobenzene	ND		20	11	ug/L			01/16/23 11:33	20
1,4-Dichlorobenzene	ND		20	13	ug/L			01/16/23 11:33	20
Dichlorodifluoromethane	ND		20	17	ug/L			01/16/23 11:33	20
1,1-Dichloroethane	ND		20	10	ug/L			01/16/23 11:33	20
1,2-Dichloroethane	ND		20	3.8	ug/L			01/16/23 11:33	20
1,1-Dichloroethene	ND		20	10	ug/L			01/16/23 11:33	20
1,2-Dichloropropane	ND		20	10	ug/L			01/16/23 11:33	20
1,3-Dichloropropane	ND		20	10	ug/L			01/16/23 11:33	20
2,2-Dichloropropane	ND		20	10	ug/L			01/16/23 11:33	20
1,1-Dichloropropene	ND		20	10	ug/L			01/16/23 11:33	20
Ethylbenzene	**170**		20	10	ug/L			01/16/23 11:33	20
Ethyl methacrylate	ND		20	12	ug/L			01/16/23 11:33	20
Hexachlorobutadiene	ND		100	18	ug/L			01/16/23 11:33	20
2-Hexanone	ND		500	28	ug/L			01/16/23 11:33	20
Isopropylbenzene	**49**		20	11	ug/L			01/16/23 11:33	20
Methylene bromide	ND		100	4.4	ug/L			01/16/23 11:33	20
Methylene Chloride	ND		100	60	ug/L			01/16/23 11:33	20
4-Methyl-2-pentanone (MIBK)	ND		500	36	ug/L			01/16/23 11:33	20
Methyl tert-butyl ether	ND		20	4.4	ug/L			01/16/23 11:33	20
m-Xylene & p-Xylene	**170**		100	13	ug/L			01/16/23 11:33	20
Naphthalene	**130**		100	60	ug/L			01/16/23 11:33	20
n-Butylbenzene	ND		20	15	ug/L			01/16/23 11:33	20
N-Propylbenzene	**76**		20	14	ug/L			01/16/23 11:33	20
o-Chlorotoluene	ND		20	11	ug/L			01/16/23 11:33	20
o-Xylene	ND		100	12	ug/L			01/16/23 11:33	20
p-Chlorotoluene	ND		20	11	ug/L			01/16/23 11:33	20
p-Isopropyltoluene	ND		20	14	ug/L			01/16/23 11:33	20

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: P59-ROX-011123-DUP

Date Collected: 01/11/23 11:05
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-14

Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		20	14	ug/L			01/16/23 11:33	20
Styrene	ND		20	20	ug/L			01/16/23 11:33	20
tert-Butylbenzene	ND		20	13	ug/L			01/16/23 11:33	20
1,1,1,2-Tetrachloroethane	ND		20	3.2	ug/L			01/16/23 11:33	20
1,1,2,2-Tetrachloroethane	ND		20	10	ug/L			01/16/23 11:33	20
Tetrachloroethene	ND		20	18	ug/L			01/16/23 11:33	20
Toluene	**110**		20	8.2	ug/L			01/16/23 11:33	20
trans-1,2-Dichloroethene	ND		20	10	ug/L			01/16/23 11:33	20
trans-1,3-Dichloropropene	ND		100	4.0	ug/L			01/16/23 11:33	20
1,2,3-Trichlorobenzene	ND		20	18	ug/L			01/16/23 11:33	20
1,2,4-Trichlorobenzene	ND		20	16	ug/L			01/16/23 11:33	20
1,1,1-Trichloroethane	ND		20	3.6	ug/L			01/16/23 11:33	20
1,1,2-Trichloroethane	ND		100	4.2	ug/L			01/16/23 11:33	20
Trichloroethene	ND		20	3.0	ug/L			01/16/23 11:33	20
Trichlorofluoromethane	ND		20	10	ug/L			01/16/23 11:33	20
1,2,3-Trichloropropane	ND		100	17	ug/L			01/16/23 11:33	20
1,2,4-Trimethylbenzene	**58**		20	16	ug/L			01/16/23 11:33	20
1,3,5-Trimethylbenzene	**40**		20	11	ug/L			01/16/23 11:33	20
Vinyl acetate	ND		500	19	ug/L			01/16/23 11:33	20
Vinyl chloride	ND		20	10	ug/L			01/16/23 11:33	20
Xylenes, Total	**170**	**J**	200	32	ug/L			01/16/23 11:33	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*72 - 119*		*01/16/23 11:33*	*20*
Dibromofluoromethane	*102*		*75 - 126*		*01/16/23 11:33*	*20*
Toluene-d8 (Surr)	*93*		*64 - 132*		*01/16/23 11:33*	*20*

Method: SW846 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	0.031	ug/L		01/18/23 09:38	01/25/23 20:16	1
Acenaphthylene	ND		0.19	0.043	ug/L		01/18/23 09:38	01/25/23 20:16	1
Anthracene	ND		0.19	0.031	ug/L		01/18/23 09:38	01/23/23 17:45	1
Benzo[a]anthracene	ND		0.19	0.044	ug/L		01/18/23 09:38	01/25/23 20:16	1
Benzo[a]pyrene	ND		0.19	0.040	ug/L		01/18/23 09:38	01/23/23 17:45	1
Benzo[b]fluoranthene	**0.075**	**J**	0.19	0.033	ug/L		01/18/23 09:38	01/23/23 17:45	1
Benzo[g,h,i]perylene	ND		0.19	0.12	ug/L		01/18/23 09:38	01/23/23 17:45	1
Benzo[k]fluoranthene	ND		0.19	0.096	ug/L		01/18/23 09:38	01/23/23 17:45	1
Chrysene	**0.092**	**J**	0.19	0.071	ug/L		01/18/23 09:38	01/23/23 17:45	1
Dibenz(a,h)anthracene	ND		0 19	0 048	ug/L		01/18/23 09 38	01/23/23 17 45	1
Fluoranthene	**0.089**	**J**	0.19	0.065	ug/L		01/18/23 09:38	01/27/23 18:20	1
Fluorene	ND		0.19	0.11	ug/L		01/18/23 09:38	01/23/23 17:45	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.041	ug/L		01/18/23 09:38	01/23/23 17:45	1
1-Methylnaphthalene	**3.9**	**J**	0.19	0.071	ug/L		01/18/23 09:38	01/25/23 20:16	1
2-Methylnaphthalene	**5.3**	**J**	0.19	0.058	ug/L		01/18/23 09:38	01/25/23 20:16	1
Phenanthrene	**0.37**	**J**	0.19	0.035	ug/L		01/18/23 09:38	01/23/23 17:45	1
Pyrene	**0.19**	**J**	0.19	0.038	ug/L		01/18/23 09:38	01/23/23 17:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*23*		*15 - 122*	*01/18/23 09:38*	*01/25/23 20:16*	*1*
Nitrobenzene-d5	*21*		*19 - 130*	*01/18/23 09:38*	*01/25/23 20:16*	*1*

Client Sample ID: P59-ROX-011123-DUP

Date Collected: 01/11/23 11:05
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-14

Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*28*	*S1-*	*33 - 138*	*01/18/23 09:38*	*01/25/23 20:16*	*1*

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	**0.18**	**J H B** UJ	0.38	0.065	ug/L		02/02/23 14:02	02/05/23 12:00	2
Chrysene	ND	H UJ	0.38	0.14	ug/L		02/02/23 14:02	02/05/23 12:00	2
Fluoranthene	**0.22**	**J H** J	0.38	0.13	ug/L		02/02/23 14:02	02/05/23 12:00	2
1-Methylnaphthalene	**12**	**H** J	0.38	0.14	ug/L		02/02/23 14:02	02/05/23 12:00	2
2-Methylnaphthalene	**16**	**H** J	0.38	0.12	ug/L		02/02/23 14:02	02/05/23 12:00	2
Phenanthrene	**0.76**	**H** J	0.38	0.069	ug/L		02/02/23 14:02	02/05/23 12:00	2
Pyrene	**0.40**	**H** J	0.38	0.077	ug/L		02/02/23 14:02	02/05/23 12:00	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*69*		*15 - 122*	*02/02/23 14:02*	*02/05/23 12:00*	*2*
Nitrobenzene-d5	*79*		*19 - 130*	*02/02/23 14:02*	*02/05/23 12:00*	*2*
Terphenyl-d14	*89*		*33 - 138*	*02/02/23 14:02*	*02/05/23 12:00*	*2*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND	UJ	9.6	3.7	ug/L		01/18/23 09:38	01/19/23 22:45	1
Benzenethiol	ND	*- UJ	9.6	1.6	ug/L		01/18/23 09:38	01/19/23 22:45	1
Benzoic acid	ND		29	7.0	ug/L		01/18/23 09:38	01/19/23 22:45	1
Benzyl alcohol	ND		9.6	1.9	ug/L		01/18/23 09:38	01/19/23 22:45	1
Bis(2-chloroethoxy)methane	ND		9.6	0.15	ug/L		01/18/23 09:38	01/19/23 22:45	1
Bis(2-chloroethyl)ether	ND		9.6	2.6	ug/L		01/18/23 09:38	01/19/23 22:45	1
bis (2-chloroisopropyl) ether	ND		9.6	0.15	ug/L		01/18/23 09:38	01/19/23 22:45	1
Bis(2-ethylhexyl) phthalate	ND		9.6	4.8	ug/L		01/18/23 09:38	01/19/23 22:45	1
4-Bromophenyl phenyl ether	ND		9.6	0.19	ug/L		01/18/23 09:38	01/19/23 22:45	1
Butyl benzyl phthalate	ND		9.6	0.18	ug/L		01/18/23 09:38	01/19/23 22:45	1
4-Chloroaniline	ND		9.6	3.3	ug/L		01/18/23 09:38	01/19/23 22:45	1
4-Chloro-3-methylphenol	ND		9.6	3.7	ug/L		01/18/23 09:38	01/19/23 22:45	1
2-Chloronaphthalene	ND		9.6	0.13	ug/L		01/18/23 09:38	01/19/23 22:45	1
2-Chlorophenol	ND		9.6	2.1	ug/L		01/18/23 09:38	01/19/23 22:45	1
4-Chlorophenyl phenyl ether	ND		9.6	1.9	ug/L		01/18/23 09:38	01/19/23 22:45	1
Dibenz[a,h]acridine	ND		9.6	0.96	ug/L		01/18/23 09:38	01/19/23 22:45	1
Dibenzofuran	ND		9.6	0.16	ug/L		01/18/23 09:38	01/19/23 22:45	1
3,3'-Dichlorobenzidine	ND	*+	9.6	2.5	ug/L		01/18/23 09:38	01/19/23 22:45	1
2,4-Dichlorophenol	ND		9.6	2.9	ug/L		01/18/23 09:38	01/19/23 22:45	1
Diethyl phthalate	ND		9.6	0.23	ug/L		01/18/23 09:38	01/19/23 22:45	1
2,4-Dimethylphenol	ND		9.6	3.4	ug/L		01/18/23 09:38	01/19/23 22:45	1
Dimethyl phthalate	ND		9.6	0.16	ug/L		01/18/23 09:38	01/19/23 22:45	1
Di-n-butyl phthalate	ND		9.6	2.6	ug/L		01/18/23 09:38	01/19/23 22:45	1
4,6-Dinitro-ortho-cresol	ND		9.6	1.5	ug/L		01/18/23 09:38	01/19/23 22:45	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		01/18/23 09:38	01/19/23 22:45	1
2,4-Dinitrotoluene	ND		9.6	1.8	ug/L		01/18/23 09:38	01/19/23 22:45	1
2,6-Dinitrotoluene	ND		9.6	1.8	ug/L		01/18/23 09:38	01/19/23 22:45	1
Di-n-octyl phthalate	ND		9.6	0.16	ug/L		01/18/23 09:38	01/19/23 22:45	1
1,4-Dioxane	ND		9.6	0.96	ug/L		01/18/23 09:38	01/19/23 22:45	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.6	0.96	ug/L		01/18/23 09:38	01/19/23 22:45	1

Client Sample ID: P59-ROX-011123-DUP
Date Collected: 01/11/23 11:05
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-14
Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobenzene	**3.6**	**J** J	9.6	0.16	ug/L		01/18/23 09:38	01/20/23 19:19	1
Hexachlorocyclopentadiene	ND	UJ	19	2.5	ug/L		01/18/23 09:38	01/19/23 22:45	1
Hexachloroethane	ND		9.6	4.0	ug/L		01/18/23 09:38	01/19/23 22:45	1
Indene	ND		9.6	0.96	ug/L		01/18/23 09:38	01/19/23 22:45	1
Isophorone	ND		9.6	0.13	ug/L		01/18/23 09:38	01/19/23 22:45	1
2-Methylphenol	ND		9.6	1.7	ug/L		01/18/23 09:38	01/19/23 22:45	1
3 & 4 Methylphenol	ND		19	0.37	ug/L		01/18/23 09:38	01/19/23 22:45	1
2-Nitroaniline	ND		9.6	2.1	ug/L		01/18/23 09:38	01/19/23 22:45	1
3-Nitroaniline	ND		9.6	1.7	ug/L		01/18/23 09:38	01/19/23 22:45	1
4-Nitroaniline	ND		9.6	1.4	ug/L		01/18/23 09:38	01/19/23 22:45	1
Nitrobenzene	ND		9.6	0.12	ug/L		01/18/23 09:38	01/19/23 22:45	1
2-Nitrophenol	ND		9.6	5.0	ug/L		01/18/23 09:38	01/19/23 22:45	1
4-Nitrophenol	ND		9.6	2.0	ug/L		01/18/23 09:38	01/19/23 22:45	1
N-Nitrosodimethylamine	ND		9.6	3.4	ug/L		01/18/23 09:38	01/19/23 22:45	1
N-Nitrosodi-n-propylamine	ND		9.6	3.2	ug/L		01/18/23 09:38	01/19/23 22:45	1
N-Nitrosodiphenylamine	ND		9.6	0.17	ug/L		01/18/23 09:38	01/19/23 22:45	1
Pentachlorophenol	ND		19	1.3	ug/L		01/18/23 09:38	01/19/23 22:45	1
Phenol	**2.5**	**J** J	9.6	2.5	ug/L		01/18/23 09:38	01/19/23 22:45	1
Pyridine	ND	UJ	9.6	3.1	ug/L		01/18/23 09:38	01/19/23 22:45	1
Quinoline	ND		9.6	4.3	ug/L		01/18/23 09:38	01/19/23 22:45	1
2,4,5-Trichlorophenol	ND		9.6	3.6	ug/L		01/18/23 09:38	01/19/23 22:45	1
2,4,6-Trichlorophenol	ND		9.6	3.4	ug/L		01/18/23 09:38	01/19/23 22:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*34*	*S1-*	*46 - 124*	*01/18/23 09:38*	*01/19/23 22:45*	*1*
2-Fluorophenol	*1*	*S1-*	*13 - 113*	*01/18/23 09:38*	*01/19/23 22:45*	*1*
Nitrobenzene-d5	*33*	*S1-*	*36 - 126*	*01/18/23 09:38*	*01/19/23 22:45*	*1*
Phenol-d5	*9*	*S1-*	*17 - 127*	*01/18/23 09:38*	*01/19/23 22:45*	*1*
Terphenyl-d14	*48*		*44 - 149*	*01/18/23 09:38*	*01/19/23 22:45*	*1*
2,4,6-Tribromophenol	*33*		*26 - 150*	*01/18/23 09:38*	*01/19/23 22:45*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND		0.030	0.017	ug/L		01/25/23 10:27	01/26/23 01:41	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/25/23 10:27	01/26/23 01:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*133*	*p*	*51 - 149*	*01/25/23 10:27*	*01/26/23 01:41*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: P93B-ROX-011123
Date Collected: 01/11/23 12:40
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-15
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	UJ	25000	10000	ug/L			01/16/23 11:58	1000
Acrolein	ND		20000	3300	ug/L			01/16/23 11:58	1000
Acrylonitrile	ND		10000	2800	ug/L			01/16/23 11:58	1000
Bromobenzene	ND		1000	540	ug/L			01/16/23 11:58	1000
Bromochloromethane	ND		1000	210	ug/L			01/16/23 11:58	1000
Bromodichloromethane	ND		1000	500	ug/L			01/16/23 11:58	1000
Bromoform	ND		5000	250	ug/L			01/16/23 11:58	1000
Bromomethane	ND		1000	980	ug/L			01/16/23 11:58	1000
2-Butanone (MEK)	ND		25000	2600	ug/L			01/16/23 11:58	1000
Carbon disulfide	ND		1000	500	ug/L			01/16/23 11:58	1000
Carbon tetrachloride	ND		1000	190	ug/L			01/16/23 11:58	1000
Chlorobenzene	ND		1000	150	ug/L			01/16/23 11:58	1000
Dibromochloromethane	ND		1000	240	ug/L			01/16/23 11:58	1000
Chloroethane	ND		1000	760	ug/L			01/16/23 11:58	1000
2-Chloroethyl vinyl ether	ND		5000	2000	ug/L			01/16/23 11:58	1000
Chloroform	ND		1000	1000	ug/L			01/16/23 11:58	1000
1-Chlorohexane	ND		1000	320	ug/L			01/16/23 11:58	1000
Chloromethane	ND		1000	320	ug/L			01/16/23 11:58	1000
cis-1,2-Dichloroethene	ND		1000	200	ug/L			01/16/23 11:58	1000
cis-1,3-Dichloropropene	ND		5000	500	ug/L			01/16/23 11:58	1000
1,2-Dichlorobenzene	ND		1000	500	ug/L			01/16/23 11:58	1000
1,3-Dichlorobenzene	ND		1000	540	ug/L			01/16/23 11:58	1000
1,4-Dichlorobenzene	ND		1000	640	ug/L			01/16/23 11:58	1000
Dichlorodifluoromethane	ND		1000	850	ug/L			01/16/23 11:58	1000
1,1-Dichloroethane	ND		1000	500	ug/L			01/16/23 11:58	1000
1,2-Dichloroethane	ND		1000	190	ug/L			01/16/23 11:58	1000
1,1-Dichloroethene	ND		1000	500	ug/L			01/16/23 11:58	1000
1,2-Dichloropropane	ND		1000	500	ug/L			01/16/23 11:58	1000
1,3-Dichloropropane	ND		1000	500	ug/L			01/16/23 11:58	1000
2,2-Dichloropropane	ND		1000	500	ug/L			01/16/23 11:58	1000
1,1-Dichloropropene	ND		1000	500	ug/L			01/16/23 11:58	1000
Ethylbenzene	ND		1000	500	ug/L			01/16/23 11:58	1000
Ethyl methacrylate	ND		1000	600	ug/L			01/16/23 11:58	1000
Hexachlorobutadiene	ND		5000	900	ug/L			01/16/23 11:58	1000
2-Hexanone	ND		25000	1400	ug/L			01/16/23 11:58	1000
Isopropy benzene	ND		1000	530	ug/L			01/16/23 11:58	1000
Methylene bromide	ND		5000	220	ug/L			01/16/23 11:58	1000
Methylene Chloride	ND		5000	3000	ug/L			01/16/23 11:58	1000
4-Methyl-2-pentanone (MIBK)	ND		25000	1800	ug/L			01/16/23 11:58	1000
Methyl tert-butyl ether	ND		1000	220	ug/L			01/16/23 11:58	1000
m-Xylene & p-Xylene	ND		5000	630	ug/L			01/16/23 11:58	1000
Naphthalene	ND		5000	3000	ug/L			01/16/23 11:58	1000
n-Butylbenzene	ND		1000	760	ug/L			01/16/23 11:58	1000
N-Propylbenzene	ND		1000	690	ug/L			01/16/23 11:58	1000
o-Chlorotoluene	ND		1000	570	ug/L			01/16/23 11:58	1000
o-Xylene	ND		5000	600	ug/L			01/16/23 11:58	1000
p-Chlorotoluene	ND		1000	560	ug/L			01/16/23 11:58	1000
p-Isopropyltoluene	ND		1000	710	ug/L			01/16/23 11:58	1000
sec-Butylbenzene	ND		1000	700	ug/L			01/16/23 11:58	1000

Client Sample ID: P93B-ROX-011123
Date Collected: 01/11/23 12:40
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-15
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND	UJ	1000	1000	ug/L			01/16/23 11:58	1000
tert-Butylbenzene	ND		1000	630	ug/L			01/16/23 11:58	1000
1,1,1,2-Tetrachloroethane	ND		1000	160	ug/L			01/16/23 11:58	1000
1,1,2,2-Tetrachloroethane	ND		1000	500	ug/L			01/16/23 11:58	1000
Tetrachloroethene	ND		1000	900	ug/L			01/16/23 11:58	1000
Toluene	ND		1000	410	ug/L			01/16/23 11:58	1000
trans-1,2-Dichloroethene	ND		1000	500	ug/L			01/16/23 11:58	1000
trans-1,3-Dichloropropene	ND		5000	200	ug/L			01/16/23 11:58	1000
1,2,3-Trichlorobenzene	ND		1000	900	ug/L			01/16/23 11:58	1000
1,2,4-Trichlorobenzene	ND		1000	820	ug/L			01/16/23 11:58	1000
1,1,1-Trichloroethane	ND		1000	180	ug/L			01/16/23 11:58	1000
1,1,2-Trichloroethane	ND		5000	210	ug/L			01/16/23 11:58	1000
Trichloroethene	ND		1000	150	ug/L			01/16/23 11:58	1000
Trichlorofluoromethane	ND		1000	520	ug/L			01/16/23 11:58	1000
1,2,3-Trichloropropane	ND		5000	840	ug/L			01/16/23 11:58	1000
1,2,4-Trimethy benzene	ND		1000	820	ug/L			01/16/23 11:58	1000
1,3,5-Trimethy benzene	ND		1000	560	ug/L			01/16/23 11:58	1000
Vinyl acetate	ND		25000	930	ug/L			01/16/23 11:58	1000
Vinyl chloride	ND		1000	500	ug/L			01/16/23 11:58	1000
Xylenes, Total	ND		10000	1600	ug/L			01/16/23 11:58	1000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*72 - 119*		*01/16/23 11:58*	*1000*
Dibromofluoromethane	*103*		*75 - 126*		*01/16/23 11:58*	*1000*
Toluene-d8 (Surr)	*92*		*64 - 132*		*01/16/23 11:58*	*1000*

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1400000**		5000	650	ug/L			01/16/23 17:56	5000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*72 - 119*		*01/16/23 17:56*	*5000*
Dibromofluoromethane	*101*		*75 - 126*		*01/16/23 17:56*	*5000*
Toluene-d8 (Surr)	*92*		*64 - 132*		*01/16/23 17:56*	*5000*

Method: SW846 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	0.031	ug/L		01/18/23 09:38	01/23/23 18:02	1
Acenaphthylene	ND		0.19	0.043	ug/L		01/18/23 09:38	01/23/23 18:02	1
Anthracene	ND		0.19	0.031	ug/L		01/18/23 09:38	01/23/23 18:02	1
Benzo[a]anthracene	ND		0.19	0.044	ug/L		01/18/23 09:38	01/23/23 18:02	1
Benzo[a]pyrene	ND		0.19	0.040	ug/L		01/18/23 09:38	01/23/23 18:02	1
Benzo[b]fluoranthene	ND		0.19	0.033	ug/L		01/18/23 09:38	01/23/23 18:02	1
Benzo[g,h,i]perylene	ND		0.19	0.12	ug/L		01/18/23 09:38	01/23/23 18:02	1
Benzo[k]fluoranthene	ND		0.19	0.096	ug/L		01/18/23 09:38	01/23/23 18:02	1
Chrysene	ND		0.19	0.071	ug/L		01/18/23 09:38	01/23/23 18:02	1
Dibenz(a,h)anthracene	ND		0.19	0.048	ug/L		01/18/23 09:38	01/23/23 18:02	1
Fluoranthene	ND		0.19	0.065	ug/L		01/18/23 09:38	01/23/23 18:02	1
Fluorene	ND		0.19	0.11	ug/L		01/18/23 09:38	01/23/23 18:02	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.041	ug/L		01/18/23 09:38	01/23/23 18:02	1

Client Sample ID: P93B-ROX-011123
Date Collected: 01/11/23 12:40
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-15
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.19	0.071	ug/L		01/18/23 09:38	01/23/23 18:02	1
2-Methylnaphthalene	ND		0.19	0.058	ug/L		01/18/23 09:38	01/23/23 18:02	1
Phenanthrene	ND		0.19	0.035	ug/L		01/18/23 09:38	01/23/23 18:02	1
Pyrene	ND		0.19	0.038	ug/L		01/18/23 09:38	01/23/23 18:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*80*		*15 - 122*	*01/18/23 09:38*	*01/23/23 18:02*	*1*
Nitrobenzene-d5	*65*		*19 - 130*	*01/18/23 09:38*	*01/23/23 18:02*	*1*
Terphenyl-d14	*84*		*33 - 138*	*01/18/23 09:38*	*01/23/23 18:02*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		9.6	3.6	ug/L		01/18/23 09:38	01/19/23 23:05	1
Benzenethiol	ND	*- UJ	9.6	1.6	ug/L		01/18/23 09:38	01/19/23 23:05	1
Benzoic acid	ND		29	7.0	ug/L		01/18/23 09:38	01/19/23 23:05	1
Benzyl alcohol	ND		9.6	1.9	ug/L		01/18/23 09:38	01/19/23 23:05	1
Bis(2-chloroethoxy)methane	ND		9.6	0.15	ug/L		01/18/23 09:38	01/19/23 23:05	1
Bis(2-chloroethyl)ether	ND		9.6	2.6	ug/L		01/18/23 09:38	01/19/23 23:05	1
bis (2-chloroisopropyl) ether	ND		9.6	0.15	ug/L		01/18/23 09:38	01/19/23 23:05	1
Bis(2-ethylhexyl) phthalate	ND		9.6	4.8	ug/L		01/18/23 09:38	01/19/23 23:05	1
4-Bromophenyl phenyl ether	ND		9.6	0.19	ug/L		01/18/23 09:38	01/19/23 23:05	1
Butyl benzyl phthalate	ND		9.6	0.18	ug/L		01/18/23 09:38	01/19/23 23:05	1
4-Chloroaniline	ND		9.6	3.3	ug/L		01/18/23 09:38	01/19/23 23:05	1
4-Chloro-3-methylphenol	ND		9.6	3.6	ug/L		01/18/23 09:38	01/19/23 23:05	1
2-Chloronaphthalene	ND		9.6	0.13	ug/L		01/18/23 09:38	01/19/23 23:05	1
2-Chlorophenol	ND		9.6	2.1	ug/L		01/18/23 09:38	01/19/23 23:05	1
4-Chlorophenyl phenyl ether	ND		9.6	1.9	ug/L		01/18/23 09:38	01/19/23 23:05	1
Dibenz[a,h]acridine	ND		9.6	0.96	ug/L		01/18/23 09:38	01/19/23 23:05	1
Dibenzofuran	ND		9.6	0.16	ug/L		01/18/23 09:38	01/19/23 23:05	1
3,3'-Dichlorobenzidine	ND	*+	9.6	2.5	ug/L		01/18/23 09:38	01/19/23 23:05	1
2,4-Dichlorophenol	ND		9.6	2.9	ug/L		01/18/23 09:38	01/19/23 23:05	1
Diethyl phthalate	ND		9.6	0.23	ug/L		01/18/23 09:38	01/19/23 23:05	1
2,4-Dimethylphenol	**4.5**	**J**	9.6	3.4	ug/L		01/18/23 09:38	01/19/23 23:05	1
Dimethyl phthalate	ND		9.6	0.16	ug/L		01/18/23 09:38	01/19/23 23:05	1
Di-n-butyl phthalate	ND		9.6	2.6	ug/L		01/18/23 09:38	01/19/23 23:05	1
4,6-Dinitro-ortho-cresol	ND		9.6	1.5	ug/L		01/18/23 09:38	01/19/23 23:05	1
2,4-Dinitrophenol	ND		29	3.3	ug/L		01/18/23 09:38	01/19/23 23:05	1
2,4-Dinitrotoluene	ND		9.6	1.8	ug/L		01/18/23 09:38	01/19/23 23:05	1
2,6-Dinitrotoluene	ND		9.6	1.8	ug/L		01/18/23 09:38	01/19/23 23:05	1
Di-n-octyl phthalate	ND		9.6	0.16	ug/L		01/18/23 09:38	01/19/23 23:05	1
1,4-Dioxane	ND		9.6	0.96	ug/L		01/18/23 09:38	01/19/23 23:05	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		9.6	0.96	ug/L		01/18/23 09:38	01/19/23 23:05	1
Hexachlorobenzene	ND		9.6	0.16	ug/L		01/18/23 09:38	01/19/23 23:05	1
Hexachlorocyclopentadiene	ND		19	2.5	ug/L		01/18/23 09:38	01/19/23 23:05	1
Hexachloroethane	ND		9.6	4.0	ug/L		01/18/23 09:38	01/19/23 23:05	1
Indene	ND		9.6	0.96	ug/L		01/18/23 09:38	01/19/23 23:05	1
Isophorone	ND		9.6	0.13	ug/L		01/18/23 09:38	01/19/23 23:05	1
2-Methylphenol	ND		9.6	1.7	ug/L		01/18/23 09:38	01/19/23 23:05	1
3 & 4 Methylphenol	**1.4**	**J**	19	0.37	ug/L		01/18/23 09:38	01/19/23 23:05	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: P93B-ROX-011123
Date Collected: 01/11/23 12:40
Date Received: 01/12/23 08:48

Lab Sample ID: 400-231703-15
Matrix: Water

Method: SW846 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		01/18/23 09:38	01/19/23 23:05	1
3-Nitroaniline	ND		9.6	1.7	ug/L		01/18/23 09:38	01/19/23 23:05	1
4-Nitroaniline	ND		9.6	1.4	ug/L		01/18/23 09:38	01/19/23 23:05	1
Nitrobenzene	ND		9.6	0.12	ug/L		01/18/23 09:38	01/19/23 23:05	1
2-Nitrophenol	ND		9.6	5.0	ug/L		01/18/23 09:38	01/19/23 23:05	1
4-Nitrophenol	ND		9.6	2.0	ug/L		01/18/23 09:38	01/19/23 23:05	1
N-Nitrosodimethylamine	ND		9.6	3.4	ug/L		01/18/23 09:38	01/19/23 23:05	1
N-Nitrosodi-n-propylamine	ND		9.6	3.2	ug/L		01/18/23 09:38	01/19/23 23:05	1
N-Nitrosodiphenylamine	ND		9.6	0.17	ug/L		01/18/23 09:38	01/19/23 23:05	1
Pentachlorophenol	ND		19	1.3	ug/L		01/18/23 09:38	01/19/23 23:05	1
Phenol	**310**		9.6	2.5	ug/L		01/18/23 09:38	01/19/23 23:05	1
Pyridine	ND		9.6	3.1	ug/L		01/18/23 09:38	01/19/23 23:05	1
Quinoline	ND		9.6	4.3	ug/L		01/18/23 09:38	01/19/23 23:05	1
2,4,5-Trichlorophenol	ND		9.6	3.5	ug/L		01/18/23 09:38	01/19/23 23:05	1
2,4,6-Trichlorophenol	ND		9.6	3.4	ug/L		01/18/23 09:38	01/19/23 23:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*97*		*46 - 124*	*01/18/23 09:38*	*01/19/23 23:05*	*1*
2-Fluorophenol	*46*		*13 - 113*	*01/18/23 09:38*	*01/19/23 23:05*	*1*
Nitrobenzene-d5	*98*		*36 - 126*	*01/18/23 09:38*	*01/19/23 23:05*	*1*
Phenol-d5	*78*		*17 - 127*	*01/18/23 09:38*	*01/19/23 23:05*	*1*
Terphenyl-d14	*109*		*44 - 149*	*01/18/23 09:38*	*01/19/23 23:05*	*1*
2,4,6-Tribromophenol	*119*		*26 - 150*	*01/18/23 09:38*	*01/19/23 23:05*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND		0.029	0.017	ug/L		01/25/23 10:27	01/26/23 02:01	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/25/23 10:27	01/26/23 02:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*131*	*p*	*51 - 149*	*01/25/23 10:27*	*01/26/23 02:01*	*1*

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds 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/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.

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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

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	(72-119)	(75-126)	(64-132)
400-231703-1	TB-ROX-011123-8260-A	100	100	94
400-231703-3	MW3-ROX-011123	101	102	93
400-231703-3 MS	MW3-ROX-011123	98	101	93
400-231703-3 MSD	MW3-ROX-011123	98	102	94
400-231703-4	MW6C-ROX-011123	101	102	91
400-231703-5	MW6A-ROX-011123	100	103	92
400-231703-6	MW6D-ROX-011123	101	105	93
400-231703-7	MW6B-ROX-011123	99	103	93
400-231703-8	MW6B-ROX-011123-DUP	101	104	91
400-231703-9	TB-ROX-011123-8260-B	98	102	93
400-231703-11	T12-ROX-011123	100	102	94
400-231703-12	T12-ROX-011123-DUP	99	104	93
400-231703-13	P59-ROX-011123	100	104	92
400-231703-14	P59-ROX-011123-DUP	99	102	93
400-231703-15	P93B-ROX-011123	100	103	92
400-231703-15 - DL	P93B-ROX-011123	99	101	92
LCS 400-608580/1002	Lab Control Sample	100	101	94
MB 400-608580/4	Method Blank	101	103	92

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	(46-124)	(13-113)	(36-126)	(17-127)	(44-149)	(26-150)
400-231703-3	MW3-ROX-011123	95	46	93	81	87	98
400-231703-4	MW6C-ROX-011123	98	16	97	49	126	81
400-231703-5	MW6A-ROX-011123	96	46	97	82	66	117
400-231703-6	MW6D-ROX-011123	95	34	96	63	129	84
400-231703-7	MW6B-ROX-011123	103	44	103	77	128	94
400-231703-8	MW6B-ROX-011123-DUP	101	31	101	73	132	97
400-231703-11	T12-ROX-011123	99	2 S1-	97	15 S1-	135	61
400-231703-12	T12-ROX-011123-DUP	101	5 S1-	101	35	134	95
400-231703-13	P59-ROX-011123	91	27	89	69	104	133
400-231703-14	P59-ROX-011123-DUP	34 S1-	1 S1-	33 S1-	9 S1-	48	33
400-231703-15	P93B-ROX-011123	97	46	98	78	109	119
LCS 400-608912/2-A	Lab Control Sample	90	53	95	85	117	98
LCS 400-608912/7-A	Lab Control Sample	100	40	97	78	130	50
LCSD 400-608912/8-A	Lab Control Sample Dup	99	40	95	74	131	55
MB 400-608912/1-A	Method Blank	108	11 S1-	107	54	144	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)		
		FBP	NBZ	TPHL
Lab Sample ID	Client Sample ID	(15-122)	(19-130)	(33-138)
400-231703-3	MW3-ROX-011123	88	86	84
400-231703-3 - RA	MW3-ROX-011123	85	85	74
400-231703-4	MW6C-ROX-011123	85	84	111
400-231703-4 - RA	MW6C-ROX-011123	87	88	99
400-231703-5	MW6A-ROX-011123	73	77	50
400-231703-6	MW6D-ROX-011123	87	76	110
400-231703-6 - RA	MW6D-ROX-011123	87	87	105
400-231703-7	MW6B-ROX-011123	85	83	105
400-231703-7 - RA	MW6B-ROX-011123	86	89	98
400-231703-8	MW6B-ROX-011123-DUP	78	79	96
400-231703-8 - RE	MW6B-ROX-011123-DUP	78	79	113
400-231703-11	T12-ROX-011123	91	83	109
400-231703-12	T12-ROX-011123-DUP	86	82	105
400-231703-13	P59-ROX-011123	62	57	80
400-231703-14	P59-ROX-011123-DUP	23	21	28 S1-
400-231703-14 - RE	P59-ROX-011123-DUP	69	79	89
400-231703-15	P93B-ROX-011123	80	65	84
LCS 400-608912/2-A	Lab Control Sample	75	54	83
LCS 400-610934/2-A - RE	Lab Control Sample	82	107	99
LCSD 400-610934/3-A - RE	Lab Control Sample Dup	82	100	97
MB 400-608912/1-A	Method Blank	80	77	102
MB 400-610934/1-A	Method Blank	74	78	91

Surrogate Legend

FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14

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)
400-231703-2	TB-ROX-011123-8011A	106 p
400-231703-3	MW3-ROX-011123	100 p
400-231703-4	MW6C-ROX-011123	103 p
400-231703-5	MW6A-ROX-011123	105 p
400-231703-6	MW6D-ROX-011123	102 p
400-231703-7	MW6B-ROX-011123	93 p
400-231703-8	MW6B-ROX-011123-DUP	100 p
400-231703-10	TB-ROX-011123-8011-B	90 p
400-231703-11	T12-ROX-011123	136
400-231703-12	T12-ROX-011123-DUP	124 p
400-231703-13	P59-ROX-011123	130 p
400-231703-14	P59-ROX-011123-DUP	133 p
400-231703-15	P93B-ROX-011123	131 p
LCS 400-609810/2-A	Lab Control Sample	107

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Method: 8011 - EDB and DBCP in Water by Microextraction (Continued)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)								
Lab Sample ID	Client Sample ID	BFB2 (51-149)								
LCSD 400-609810/3-A	Lab Control Sample Dup	104								
MB 400-609810/1-A	Method Blank	100								

Surrogate Legend

BFB = 4-Bromofluorobenzene

Method Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	EET PEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	EET PEN
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	EET PEN
8011	EDB and DBCP in Water by Microextraction	EPA	EET PEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	EET PEN
5030B	Purge and Trap	SW846	EET PEN
8011	Microextraction	SW846	EET 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:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: TB-ROX-011123-8260-A
Lab Sample ID: 400-231703-1
Date Collected: 01/11/23 12:00
Matrix: Water
Date Received: 01/12/23 08:48

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	608580	01/16/23 08:22	WPD	EET PEN

Client Sample ID: TB-ROX-011123-8011A
Lab Sample ID: 400-231703-2
Date Collected: 01/11/23 12:00
Matrix: Water
Date Received: 01/12/23 08:48

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			36 mL	35 mL	609810	01/25/23 10:27	DS	EET PEN
Total/NA	Analysis	8011		1			609918	01/25/23 21:37	DS	EET PEN

Client Sample ID: MW3-ROX-011123
Lab Sample ID: 400-231703-3
Date Collected: 01/11/23 09:25
Matrix: Water
Date Received: 01/12/23 08:48

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	608580	01/16/23 08:44	WPD	EET PEN
Total/NA	Prep	3520C			248.4 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609136	01/19/23 19:40	S1B	EET PEN
Total/NA	Prep	3520C			248.4 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	609371	01/21/23 04:57	KJA	EET PEN
Total/NA	Prep	3520C	RA		248.4 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL	RA	1	0.4 mL	0.4 mL	614365	02/28/23 19:31	PP1	EET PEN
Total/NA	Prep	8011			35.9 mL	35 mL	609810	01/25/23 10:27	DS	EET PEN
Total/NA	Analysis	8011		1			609918	01/25/23 21:58	DS	EET PEN

Client Sample ID: MW6C-ROX-011123
Lab Sample ID: 400-231703-4
Date Collected: 01/11/23 10:25
Matrix: Water
Date Received: 01/12/23 08:48

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	608580	01/16/23 09:09	WPD	EET PEN
Total/NA	Prep	3520C			246 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609136	01/19/23 20:01	S1B	EET PEN
Total/NA	Prep	3520C			246 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609330	01/20/23 17:38	S1B	EET PEN
Total/NA	Prep	3520C			246 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	609371	01/21/23 05:14	KJA	EET PEN
Total/NA	Prep	3520C	RA		246 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL	RA	1	0.4 mL	0.4 mL	614365	02/28/23 19:48	PP1	EET PEN
Total/NA	Prep	8011			35.8 mL	35 mL	609810	01/25/23 10:27	DS	EET PEN
Total/NA	Analysis	8011		1			609918	01/25/23 22:18	DS	EET PEN

Client Sample ID: MW6A-ROX-011123

Lab Sample ID: 400-231703-5

Date Collected: 01/11/23 11:20

Matrix: Water

Date Received: 01/12/23 08:48

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	608580	01/16/23 14:17	WPD	EET PEN
Total/NA	Prep	3520C			238.6 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609136	01/19/23 20:21	S1B	EET PEN
Total/NA	Prep	3520C			238.6 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	609371	01/21/23 05:31	KJA	EET PEN
Total/NA	Prep	8011			35 mL	35 mL	609810	01/25/23 10:27	DS	EET PEN
Total/NA	Analysis	8011		1			609918	01/25/23 22:38	DS	EET PEN

Client Sample ID: MW6D-ROX-011123

Lab Sample ID: 400-231703-6

Date Collected: 01/11/23 13:25

Matrix: Water

Date Received: 01/12/23 08:48

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	608580	01/16/23 14:42	WPD	EET PEN
Total/NA	Prep	3520C			243.2 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609136	01/19/23 20:42	S1B	EET PEN
Total/NA	Prep	3520C			243.2 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	609371	01/21/23 05:49	KJA	EET PEN
Total/NA	Prep	3520C	RA		243.2 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL	RA	1	0.4 mL	0.4 mL	614365	02/28/23 20:05	PP1	EET PEN
Total/NA	Prep	8011			35.7 mL	35 mL	609810	01/25/23 10:27	DS	EET PEN
Total/NA	Analysis	8011		1			609918	01/25/23 22:59	DS	EET PEN

Client Sample ID: MW6B-ROX-011123

Lab Sample ID: 400-231703-7

Date Collected: 01/11/23 14:10

Matrix: Water

Date Received: 01/12/23 08:48

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	608580	01/16/23 15:06	WPD	EET PEN
Total/NA	Prep	3520C			233 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609136	01/19/23 21:02	S1B	EET PEN
Total/NA	Prep	3520C			233 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	609585	01/23/23 16:19	KJA	EET PEN
Total/NA	Prep	3520C	RA		233 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL	RA	1	0.4 mL	0.4 mL	614365	02/28/23 20:22	PP1	EET PEN
Total/NA	Prep	8011			35.2 mL	35 mL	609810	01/25/23 10:27	DS	EET PEN
Total/NA	Analysis	8011		1			609918	01/25/23 23:19	DS	EET PEN

Client Sample ID: MW6B-ROX-011123-DUP

Lab Sample ID: 400-231703-8

Date Collected: 01/11/23 14:10

Matrix: Water

Date Received: 01/12/23 08:48

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	608580	01/16/23 15:31	WPD	EET PEN

Client Sample ID: MW6B-ROX-011123-DUP

Lab Sample ID: 400-231703-8

Date Collected: 01/11/23 14:10

Matrix: Water

Date Received: 01/12/23 08:48

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			238.6 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609136	01/19/23 21:23	S1B	EET PEN
Total/NA	Prep	3520C			238.6 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	609585	01/23/23 16:36	KJA	EET PEN
Total/NA	Prep	3520C			238.6 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	610183	01/27/23 18:02	PP1	EET PEN
Total/NA	Prep	3520C	RE		236.4 mL	1 mL	610934	02/02/23 14:02	BKL	EET PEN
Total/NA	Analysis	8270D LL	RE	1	0.4 mL	0.4 mL	614365	02/28/23 18:39	PP1	EET PEN
Total/NA	Prep	8011			34.8 mL	35 mL	609810	01/25/23 10:27	DS	EET PEN
Total/NA	Analysis	8011		1			609918	01/25/23 23:39	DS	EET PEN

Client Sample ID: TB-ROX-011123-8260-B

Lab Sample ID: 400-231703-9

Date Collected: 01/11/23 12:00

Matrix: Water

Date Received: 01/12/23 08:48

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	608580	01/16/23 13:52	WPD	EET PEN

Client Sample ID: TB-ROX-011123-8011-B

Lab Sample ID: 400-231703-10

Date Collected: 01/11/23 12:00

Matrix: Water

Date Received: 01/12/23 08:48

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	35 mL	609810	01/25/23 10:27	DS	EET PEN
Total/NA	Analysis	8011		1			609918	01/26/23 00:20	DS	EET PEN

Client Sample ID: T12-ROX-011123

Lab Sample ID: 400-231703-11

Date Collected: 01/11/23 09:50

Matrix: Water

Date Received: 01/12/23 08:48

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	608580	01/16/23 09:55	WPD	EET PEN
Total/NA	Prep	3520C			262.4 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609136	01/19/23 21:43	S1B	EET PEN
Total/NA	Prep	3520C			262.4 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609330	01/20/23 18:03	S1B	EET PEN
Total/NA	Prep	3520C			262.4 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	609585	01/23/23 16:53	KJA	EET PEN
Total/NA	Prep	8011			35.8 mL	35 mL	609810	01/25/23 10:27	DS	EET PEN
Total/NA	Analysis	8011		1			609918	01/26/23 00:40	DS	EET PEN

Client Sample ID: T12-ROX-011123-DUP

Lab Sample ID: 400-231703-12

Date Collected: 01/11/23 09:50

Matrix: Water

Date Received: 01/12/23 08:48

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	608580	01/16/23 11:09	WPD	EET PEN
Total/NA	Prep	3520C			261.8 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609136	01/19/23 22:04	S1B	EET PEN
Total/NA	Prep	3520C			261.8 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609330	01/20/23 18:28	S1B	EET PEN
Total/NA	Prep	3520C			261.8 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	609585	01/23/23 17:10	KJA	EET PEN
Total/NA	Prep	8011			36.2 mL	35 mL	609810	01/25/23 10:27	DS	EET PEN
Total/NA	Analysis	8011		1			609918	01/26/23 01:00	DS	EET PEN

Client Sample ID: P59-ROX-011123

Lab Sample ID: 400-231703-13

Date Collected: 01/11/23 11:05

Matrix: Water

Date Received: 01/12/23 08:48

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		20	5 mL	5 mL	608580	01/16/23 17:31	WPD	EET PEN
Total/NA	Prep	3520C			258.6 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609136	01/19/23 22:24	S1B	EET PEN
Total/NA	Prep	3520C			258.6 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609330	01/20/23 18:54	S1B	EET PEN
Total/NA	Prep	3520C			258.6 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	609585	01/23/23 17:28	KJA	EET PEN
Total/NA	Prep	8011			36 mL	35 mL	609810	01/25/23 10:27	DS	EET PEN
Total/NA	Analysis	8011		1			609918	01/26/23 01:21	DS	EET PEN

Client Sample ID: P59-ROX-011123-DUP

Lab Sample ID: 400-231703-14

Date Collected: 01/11/23 11:05

Matrix: Water

Date Received: 01/12/23 08:48

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		20	5 mL	5 mL	608580	01/16/23 11:33	WPD	EET PEN
Total/NA	Prep	3520C			260.2 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609136	01/19/23 22:45	S1B	EET PEN
Total/NA	Prep	3520C			260.2 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609330	01/20/23 19:19	S1B	EET PEN
Total/NA	Prep	3520C			260.2 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	609585	01/23/23 17:45	KJA	EET PEN
Total/NA	Prep	3520C			260.2 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	609903	01/25/23 20:16	KJA	EET PEN
Total/NA	Prep	3520C			260.2 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	610183	01/27/23 18:20	PP1	EET PEN
Total/NA	Prep	3520C	RE		260.6 mL	1 mL	610934	02/02/23 14:02	BKL	EET PEN
Total/NA	Analysis	8270D LL	RE	2	0.4 mL	0.4 mL	611182	02/05/23 12:00	PP1	EET PEN
Total/NA	Prep	8011			35.1 mL	35 mL	609810	01/25/23 10:27	DS	EET PEN
Total/NA	Analysis	8011		1			609918	01/26/23 01:41	DS	EET PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: P93B-ROX-011123

Lab Sample ID: 400-231703-15

Date Collected: 01/11/23 12:40

Matrix: Water

Date Received: 01/12/23 08:48

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	608580	01/16/23 11:58	WPD	EET PEN
Total/NA	Analysis	8260B	DL	5000	5 mL	5 mL	608580	01/16/23 17:56	WPD	EET PEN
Total/NA	Prep	3520C			260.6 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609136	01/19/23 23:05	S1B	EET PEN
Total/NA	Prep	3520C			260.6 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	609585	01/23/23 18:02	KJA	EET PEN
Total/NA	Prep	8011			35.8 mL	35 mL	609810	01/25/23 10:27	DS	EET PEN
Total/NA	Analysis	8011		1			609918	01/26/23 02:01	DS	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-608580/4

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	608580	01/16/23 08:01	WPD	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-608912/1-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			250 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609136	01/19/23 16:35	S1B	EET PEN
Total/NA	Prep	3520C			250 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	609371	01/21/23 02:57	KJA	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-609810/1-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	609810	01/25/23 10:27	DS	EET PEN
Total/NA	Analysis	8011		1			609918	01/25/23 20:36	DS	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-610934/1-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			250 mL	1 mL	610934	02/02/23 14:02	BKL	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	614365	02/28/23 18:22	PP1	EET PEN

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 400-608580/1002**
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	608580	01/16/23 07:12	WPD	EET PEN

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 400-608912/2-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			250 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609136	01/19/23 17:37	S1B	EET PEN
Total/NA	Prep	3520C			250 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL		5	0.4 mL	0.4 mL	609371	01/21/23 03:14	KJA	EET PEN

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 400-608912/7-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			250 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609136	01/19/23 16:55	S1B	EET PEN

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 400-609810/2-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	609810	01/25/23 10:27	DS	EET PEN
Total/NA	Analysis	8011		1			609918	01/25/23 20:57	DS	EET PEN

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 400-610934/2-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	RE		250 mL	1 mL	610934	02/02/23 14:02	BKL	EET PEN
Total/NA	Analysis	8270D LL	RE	5	0.4 mL	0.4 mL	611182	02/05/23 10:34	PP1	EET PEN

Client Sample ID: Lab Control Sample Dup — **Lab Sample ID: LCSD 400-608912/8-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			250 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609136	01/19/23 17:16	S1B	EET PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231703-1

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-609810/3-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	609810	01/25/23 10:27	DS	EET PEN
Total/NA	Analysis	8011		1			609918	01/25/23 21:17	DS	EET PEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-610934/3-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	RE		250 mL	1 mL	610934	02/02/23 14:02	BKL	EET PEN
Total/NA	Analysis	8270D LL	RE	5	0.4 mL	0.4 mL	611182	02/05/23 10:52	PP1	EET PEN

Client Sample ID: MW3-ROX-011123
Lab Sample ID: 400-231703-3 MS
Date Collected: 01/11/23 09:25
Matrix: Water
Date Received: 01/12/23 08:48

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	608580	01/16/23 12:22	WPD	EET PEN

Client Sample ID: MW3-ROX-011123
Lab Sample ID: 400-231703-3 MSD
Date Collected: 01/11/23 09:25
Matrix: Water
Date Received: 01/12/23 08:48

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	608580	01/16/23 12:44	WPD	EET PEN

Laboratory References:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

GC/MS VOA

Analysis Batch: 608580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231703-1	TB-ROX-011123-8260-A	Total/NA	Water	8260B	
400-231703-3	MW3-ROX-011123	Total/NA	Water	8260B	
400-231703-4	MW6C-ROX-011123	Total/NA	Water	8260B	
400-231703-5	MW6A-ROX-011123	Total/NA	Water	8260B	
400-231703-6	MW6D-ROX-011123	Total/NA	Water	8260B	
400-231703-7	MW6B-ROX-011123	Total/NA	Water	8260B	
400-231703-8	MW6B-ROX-011123-DUP	Total/NA	Water	8260B	
400-231703-9	TB-ROX-011123-8260-B	Total/NA	Water	8260B	
400-231703-11	T12-ROX-011123	Total/NA	Water	8260B	
400-231703-12	T12-ROX-011123-DUP	Total/NA	Water	8260B	
400-231703-13	P59-ROX-011123	Total/NA	Water	8260B	
400-231703-14	P59-ROX-011123-DUP	Total/NA	Water	8260B	
400-231703-15	P93B-ROX-011123	Total/NA	Water	8260B	
400-231703-15 - DL	P93B-ROX-011123	Total/NA	Water	8260B	
MB 400-608580/4	Method Blank	Total/NA	Water	8260B	
LCS 400-608580/1002	Lab Control Sample	Total/NA	Water	8260B	
400-231703-3 MS	MW3-ROX-011123	Total/NA	Water	8260B	
400-231703-3 MSD	MW3-ROX-011123	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 608912

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231703-3 - RA	MW3-ROX-011123	Total/NA	Water	3520C	
400-231703-3	MW3-ROX-011123	Total/NA	Water	3520C	
400-231703-4	MW6C-ROX-011123	Total/NA	Water	3520C	
400-231703-4 - RA	MW6C-ROX-011123	Total/NA	Water	3520C	
400-231703-5	MW6A-ROX-011123	Total/NA	Water	3520C	
400-231703-6 - RA	MW6D-ROX-011123	Total/NA	Water	3520C	
400-231703-6	MW6D-ROX-011123	Total/NA	Water	3520C	
400-231703-7	MW6B-ROX-011123	Total/NA	Water	3520C	
400-231703-7 - RA	MW6B-ROX-011123	Total/NA	Water	3520C	
400-231703-8	MW6B-ROX-011123-DUP	Total/NA	Water	3520C	
400-231703-11	T12-ROX-011123	Total/NA	Water	3520C	
400-231703-12	T12-ROX-011123-DUP	Total/NA	Water	3520C	
400-231703-13	P59-ROX-011123	Total/NA	Water	3520C	
400-231703-14	P59-ROX-011123-DUP	Total/NA	Water	3520C	
400-231703-15	P93B-ROX-011123	Total/NA	Water	3520C	
MB 400-608912/1-A	Method Blank	Total/NA	Water	3520C	
LCS 400-608912/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 400-608912/7-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-608912/8-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 609136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231703-3	MW3-ROX-011123	Total/NA	Water	8270D	608912
400-231703-4	MW6C-ROX-011123	Total/NA	Water	8270D	608912
400-231703-5	MW6A-ROX-011123	Total/NA	Water	8270D	608912
400-231703-6	MW6D-ROX-011123	Total/NA	Water	8270D	608912
400-231703-7	MW6B-ROX-011123	Total/NA	Water	8270D	608912
400-231703-8	MW6B-ROX-011123-DUP	Total/NA	Water	8270D	608912

GC/MS Semi VOA (Continued)

Analysis Batch: 609136 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231703-11	T12-ROX-011123	Total/NA	Water	8270D	608912
400-231703-12	T12-ROX-011123-DUP	Total/NA	Water	8270D	608912
400-231703-13	P59-ROX-011123	Total/NA	Water	8270D	608912
400-231703-14	P59-ROX-011123-DUP	Total/NA	Water	8270D	608912
400-231703-15	P93B-ROX-011123	Total/NA	Water	8270D	608912
MB 400-608912/1-A	Method Blank	Total/NA	Water	8270D	608912
LCS 400-608912/2-A	Lab Control Sample	Total/NA	Water	8270D	608912
LCS 400-608912/7-A	Lab Control Sample	Total/NA	Water	8270D	608912
LCSD 400-608912/8-A	Lab Control Sample Dup	Total/NA	Water	8270D	608912

Analysis Batch: 609330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231703-4	MW6C-ROX-011123	Total/NA	Water	8270D	608912
400-231703-11	T12-ROX-011123	Total/NA	Water	8270D	608912
400-231703-12	T12-ROX-011123-DUP	Total/NA	Water	8270D	608912
400-231703-13	P59-ROX-011123	Total/NA	Water	8270D	608912
400-231703-14	P59-ROX-011123-DUP	Total/NA	Water	8270D	608912

Analysis Batch: 609371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231703-3	MW3-ROX-011123	Total/NA	Water	8270D LL	608912
400-231703-4	MW6C-ROX-011123	Total/NA	Water	8270D LL	608912
400-231703-5	MW6A-ROX-011123	Total/NA	Water	8270D LL	608912
400-231703-6	MW6D-ROX-011123	Total/NA	Water	8270D LL	608912
MB 400-608912/1-A	Method Blank	Total/NA	Water	8270D LL	608912
LCS 400-608912/2-A	Lab Control Sample	Total/NA	Water	8270D LL	608912

Analysis Batch: 609585

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231703-7	MW6B-ROX-011123	Total/NA	Water	8270D LL	608912
400-231703-8	MW6B-ROX-011123-DUP	Total/NA	Water	8270D LL	608912
400-231703-11	T12-ROX-011123	Total/NA	Water	8270D LL	608912
400-231703-12	T12-ROX-011123-DUP	Total/NA	Water	8270D LL	608912
400-231703-13	P59-ROX-011123	Total/NA	Water	8270D LL	608912
400-231703-14	P59-ROX-011123-DUP	Total/NA	Water	8270D LL	608912
400-231703-15	P93B-ROX-011123	Total/NA	Water	8270D LL	608912

Analysis Batch: 609903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231703-14	P59-ROX-011123-DUP	Total/NA	Water	8270D LL	608912

Analysis Batch: 610183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231703-8	MW6B-ROX-011123-DUP	Total/NA	Water	8270D LL	608912
400-231703-14	P59-ROX-011123-DUP	Total/NA	Water	8270D LL	608912

Prep Batch: 610934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231703-8 - RE	MW6B-ROX-011123-DUP	Total/NA	Water	3520C	
400-231703-14 - RE	P59-ROX-011123-DUP	Total/NA	Water	3520C	
MB 400-610934/1-A	Method Blank	Total/NA	Water	3520C	

GC/MS Semi VOA (Continued)

Prep Batch: 610934 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-610934/2-A - RE	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-610934/3-A - RE	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 611182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231703-14 - RE	P59-ROX-011123-DUP	Total/NA	Water	8270D LL	610934
LCS 400-610934/2-A - RE	Lab Control Sample	Total/NA	Water	8270D LL	610934
LCSD 400-610934/3-A - RE	Lab Control Sample Dup	Total/NA	Water	8270D LL	610934

Analysis Batch: 614365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231703-3 - RA	MW3-ROX-011123	Total/NA	Water	8270D LL	608912
400-231703-4 - RA	MW6C-ROX-011123	Total/NA	Water	8270D LL	608912
400-231703-6 - RA	MW6D-ROX-011123	Total/NA	Water	8270D LL	608912
400-231703-7 - RA	MW6B-ROX-011123	Total/NA	Water	8270D LL	608912
400-231703-8 - RE	MW6B-ROX-011123-DUP	Total/NA	Water	8270D LL	610934
MB 400-610934/1-A	Method Blank	Total/NA	Water	8270D LL	610934

GC Semi VOA

Prep Batch: 609810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231703-2	TB-ROX-011123-8011A	Total/NA	Water	8011	
400-231703-3	MW3-ROX-011123	Total/NA	Water	8011	
400-231703-4	MW6C-ROX-011123	Total/NA	Water	8011	
400-231703-5	MW6A-ROX-011123	Total/NA	Water	8011	
400-231703-6	MW6D-ROX-011123	Total/NA	Water	8011	
400-231703-7	MW6B-ROX-011123	Total/NA	Water	8011	
400-231703-8	MW6B-ROX-011123-DUP	Total/NA	Water	8011	
400-231703-10	TB-ROX-011123-8011-B	Total/NA	Water	8011	
400-231703-11	T12-ROX-011123	Total/NA	Water	8011	
400-231703-12	T12-ROX-011123-DUP	Total/NA	Water	8011	
400-231703-13	P59-ROX-011123	Total/NA	Water	8011	
400-231703-14	P59-ROX-011123-DUP	Total/NA	Water	8011	
400-231703-15	P93B-ROX-011123	Total/NA	Water	8011	
MB 400-609810/1-A	Method Blank	Total/NA	Water	8011	
LCS 400-609810/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 400-609810/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 609918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231703-2	TB-ROX-011123-8011A	Total/NA	Water	8011	609810
400-231703-3	MW3-ROX-011123	Total/NA	Water	8011	609810
400-231703-4	MW6C-ROX-011123	Total/NA	Water	8011	609810
400-231703-5	MW6A-ROX-011123	Total/NA	Water	8011	609810
400-231703-6	MW6D-ROX-011123	Total/NA	Water	8011	609810
400-231703-7	MW6B-ROX-011123	Total/NA	Water	8011	609810
400-231703-8	MW6B-ROX-011123-DUP	Total/NA	Water	8011	609810
400-231703-10	TB-ROX-011123-8011-B	Total/NA	Water	8011	609810
400-231703-11	T12-ROX-011123	Total/NA	Water	8011	609810
400-231703-12	T12-ROX-011123-DUP	Total/NA	Water	8011	609810

GC Semi VOA (Continued)

Analysis Batch: 609918 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231703-13	P59-ROX-011123	Total/NA	Water	8011	609810
400-231703-14	P59-ROX-011123-DUP	Total/NA	Water	8011	609810
400-231703-15	P93B-ROX-011123	Total/NA	Water	8011	609810
MB 400-609810/1-A	Method Blank	Total/NA	Water	8011	609810
LCS 400-609810/2-A	Lab Control Sample	Total/NA	Water	8011	609810
LCSD 400-609810/3-A	Lab Control Sample Dup	Total/NA	Water	8011	609810

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-608580/4
Matrix: Water
Analysis Batch: 608580

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			01/16/23 08:01	1
Acrolein	ND		20	3.3	ug/L			01/16/23 08:01	1
Acrylonitrile	ND		10	2.8	ug/L			01/16/23 08:01	1
Benzene	ND		1.0	0.13	ug/L			01/16/23 08:01	1
Bromobenzene	ND		1.0	0.54	ug/L			01/16/23 08:01	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/16/23 08:01	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/16/23 08:01	1
Bromoform	ND		5.0	0.25	ug/L			01/16/23 08:01	1
Bromomethane	ND		1.0	0.98	ug/L			01/16/23 08:01	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/16/23 08:01	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/16/23 08:01	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/16/23 08:01	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/16/23 08:01	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/16/23 08:01	1
Chloroethane	ND		1.0	0.76	ug/L			01/16/23 08:01	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/16/23 08:01	1
Chloroform	ND		1.0	1.0	ug/L			01/16/23 08:01	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/16/23 08:01	1
Chloromethane	ND		1.0	0.32	ug/L			01/16/23 08:01	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/16/23 08:01	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/16/23 08:01	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/16/23 08:01	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/16/23 08:01	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/16/23 08:01	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/16/23 08:01	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/16/23 08:01	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/16/23 08:01	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/16/23 08:01	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 08:01	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 08:01	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/16/23 08:01	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/16/23 08:01	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/16/23 08:01	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/16/23 08:01	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/16/23 08:01	1
2-Hexanone	ND		25	1.4	ug/L			01/16/23 08:01	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/16/23 08:01	1
Methylene bromide	ND		5.0	0.22	ug/L			01/16/23 08:01	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/16/23 08:01	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/16/23 08:01	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/16/23 08:01	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/16/23 08:01	1
Naphthalene	ND		5.0	3.0	ug/L			01/16/23 08:01	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/16/23 08:01	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/16/23 08:01	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/16/23 08:01	1
o-Xylene	ND		5.0	0.60	ug/L			01/16/23 08:01	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/16/23 08:01	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-608580/4
Matrix: Water
Analysis Batch: 608580

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			01/16/23 08:01	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			01/16/23 08:01	1
Styrene	ND		1.0	1.0	ug/L			01/16/23 08:01	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/16/23 08:01	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/16/23 08:01	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/16/23 08:01	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/16/23 08:01	1
Toluene	ND		1.0	0.41	ug/L			01/16/23 08:01	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/16/23 08:01	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/16/23 08:01	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/16/23 08:01	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/16/23 08:01	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/16/23 08:01	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/16/23 08:01	1
Trichloroethene	ND		1.0	0.15	ug/L			01/16/23 08:01	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/16/23 08:01	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/16/23 08:01	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/16/23 08:01	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/16/23 08:01	1
Vinyl acetate	ND		25	0.93	ug/L			01/16/23 08:01	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/16/23 08:01	1
Xylenes, Total	ND		10	1.6	ug/L			01/16/23 08:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*72 - 119*		*01/16/23 08:01*	*1*
Dibromofluoromethane	*103*		*75 - 126*		*01/16/23 08:01*	*1*
Toluene-d8 (Surr)	*92*		*64 - 132*		*01/16/23 08:01*	*1*

Lab Sample ID: LCS 400-608580/1002
Matrix: Water
Analysis Batch: 608580

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	200	218		ug/L		109	43 - 160
Acrolein	500	639		ug/L		128	38 - 160
Acrylonitrile	500	550		ug/L		110	64 - 142
Benzene	50.0	53.9		ug/L		108	70 - 130
Bromobenzene	50.0	52.2		ug/L		104	70 - 132
Bromochloromethane	50.0	58.2		ug/L		116	70 - 130
Bromodichloromethane	50.0	54.9		ug/L		110	67 - 133
Bromoform	50.0	52.5		ug/L		105	57 - 140
Bromomethane	50.0	69.8		ug/L		140	10 - 160
2-Butanone (MEK)	200	216		ug/L		108	61 - 145
Carbon disulfide	50.0	48.1		ug/L		96	61 - 137
Carbon tetrachloride	50.0	50.2		ug/L		100	61 - 137
Chlorobenzene	50.0	51.5		ug/L		103	70 - 130
Dibromochloromethane	50.0	52.0		ug/L		104	67 - 135
Chloroethane	50.0	54.2		ug/L		108	55 - 141

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-608580/1002
Matrix: Water
Analysis Batch: 608580

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	78.1		ug/L		156	10 - 160
Chloroform	50.0	51.9		ug/L		104	69 - 130
1-Chlorohexane	50.0	48.7		ug/L		97	69 - 130
Chloromethane	50.0	46.2		ug/L		92	58 - 137
cis-1,2-Dichloroethene	50.0	51.7		ug/L		103	68 - 130
cis-1,3-Dichloropropene	50.0	57.9		ug/L		116	69 - 132
1,2-Dichlorobenzene	50.0	54.2		ug/L		108	67 - 130
1,3-Dichlorobenzene	50.0	53.8		ug/L		108	70 - 130
1,4-Dichlorobenzene	50.0	53.4		ug/L		107	70 - 130
Dichlorodifluoromethane	50.0	39.1		ug/L		78	41 - 146
1,1-Dichloroethane	50.0	53.7		ug/L		107	70 - 130
1,2-Dichloroethane	50.0	53.6		ug/L		107	69 - 130
1,1-Dichloroethene	50.0	50.8		ug/L		102	63 - 134
1,2-Dichloropropane	50.0	55.1		ug/L		110	70 - 130
1,3-Dichloropropane	50.0	54.3		ug/L		109	70 - 130
2,2-Dichloropropane	50.0	55.2		ug/L		110	52 - 135
1,1-Dichloropropene	50.0	53.6		ug/L		107	70 - 130
Ethylbenzene	50.0	49.6		ug/L		99	70 - 130
Ethyl methacrylate	50.0	53.8		ug/L		108	68 - 130
Hexachlorobutadiene	50.0	56.2		ug/L		112	53 - 140
2-Hexanone	200	211		ug/L		106	65 - 137
Isopropy benzene	50.0	49.5		ug/L		99	70 - 130
Methylene bromide	50.0	57.9		ug/L		116	70 - 130
Methylene Chloride	50.0	55.3		ug/L		111	66 - 135
4-Methyl-2-pentanone (MIBK)	200	240		ug/L		120	69 - 138
Methyl tert-butyl ether	50.0	58.1		ug/L		116	66 - 130
m-Xylene & p-Xylene	50.0	50.1		ug/L		100	70 - 130
Naphthalene	50.0	65.9		ug/L		132	47 - 149
n-Butylbenzene	50.0	52.1		ug/L		104	67 - 130
N-Propylbenzene	50.0	50.9		ug/L		102	70 - 130
o-Chlorotoluene	50.0	49.7		ug/L		99	70 - 130
o-Xylene	50.0	50.5		ug/L		101	70 - 130
p-Chlorotoluene	50.0	50.2		ug/L		100	70 - 130
p-Isopropyltoluene	50.0	50.4		ug/L		101	65 - 130
sec-Butylbenzene	50.0	50.1		ug/L		100	66 - 130
Styrene	50.0	50.3		ug/L		101	70 - 130
tert-Butylbenzene	50.0	55.1		ug/L		110	64 - 139
1,1,1,2-Tetrachloroethane	50.0	51.9		ug/L		104	67 - 131
1,1,2,2-Tetrachloroethane	50.0	53.1		ug/L		106	70 - 131
Tetrachloroethene	50.0	51.6		ug/L		103	65 - 130
Toluene	50.0	49.4		ug/L		99	70 - 130
trans-1,2-Dichloroethene	50.0	52.6		ug/L		105	70 - 130
trans-1,3-Dichloropropene	50.0	53.0		ug/L		106	63 - 130
1,2,3-Trichlorobenzene	50.0	64.4		ug/L		129	60 - 138
1,2,4-Trichlorobenzene	50.0	60.6		ug/L		121	60 - 140
1,1,1-Trichloroethane	50.0	51.4		ug/L		103	68 - 130
1,1,2-Trichloroethane	50.0	53.0		ug/L		106	70 - 130
Trichloroethene	50.0	54.8		ug/L		110	70 - 130
Trichlorofluoromethane	50.0	56.2		ug/L		112	65 - 138

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-608580/1002
Matrix: Water
Analysis Batch: 608580

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	50.0	52.6		ug/L		105	70 - 130
1,2,4-Trimethy benzene	50.0	52.0		ug/L		104	70 - 130
1,3,5-Trimethy benzene	50.0	50.1		ug/L		100	69 - 130
Vinyl acetate	100	144		ug/L		144	26 - 160
Vinyl chloride	50.0	54.8		ug/L		110	59 - 136
Xylenes, Total	100	101		ug/L		101	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*100*		*72 - 119*
Dibromofluoromethane	*101*		*75 - 126*
Toluene-d8 (Surr)	*94*		*64 - 132*

Lab Sample ID: 400-231703-3 MS
Matrix: Water
Analysis Batch: 608580

Client Sample ID: MW3-ROX-011123
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	ND	F1 F2	200	197		ug/L		98	43 - 150
Acrolein	ND		500	513		ug/L		103	38 - 150
Acrylonitrile	ND		500	481		ug/L		96	62 - 149
Benzene	0.61	J	50.0	48.2		ug/L		95	56 - 142
Bromobenzene	ND		50.0	40.5		ug/L		81	59 - 136
Bromochloromethane	ND		50.0	50.1		ug/L		100	64 - 140
Bromodichloromethane	ND		50.0	48.2		ug/L		96	59 - 143
Bromoform	ND		50.0	42.9		ug/L		86	50 - 140
Bromomethane	ND		50.0	49.9		ug/L		100	10 - 150
2-Butanone (MEK)	ND		200	193		ug/L		97	55 - 150
Carbon disulfide	ND		50.0	42.5		ug/L		85	48 - 150
Carbon tetrachloride	ND		50.0	44.0		ug/L		88	55 - 145
Chlorobenzene	ND		50.0	42.9		ug/L		86	64 - 130
Dibromochloromethane	ND		50.0	44.3		ug/L		89	56 - 143
Chloroethane	ND		50.0	45.5		ug/L		91	50 - 150
2-Chloroethyl vinyl ether	ND	F1 F2	50.0	6.94		ug/L		14	10 - 150
Chloroform	ND		50.0	45.8		ug/L		92	60 - 141
1-Chlorohexane	ND		50.0	39.2		ug/L		78	56 - 136
Chloromethane	ND		50.0	39.3		ug/L		79	49 - 148
cis-1,2-Dichloroethene	ND		50.0	45.4		ug/L		91	59 - 143
cis-1,3-Dichloropropene	ND		50.0	49.1		ug/L		98	57 - 140
1,2-Dichlorobenzene	ND		50.0	41.6		ug/L		83	52 - 137
1,3-Dichlorobenzene	ND		50.0	40.5		ug/L		81	54 - 135
1,4-Dichlorobenzene	ND		50.0	40.3		ug/L		81	53 - 135
Dichlorodifluoromethane	ND		50.0	34.0		ug/L		68	16 - 150
1,1-Dichloroethane	ND		50.0	47.1		ug/L		94	61 - 144
1,2-Dichloroethane	ND		50.0	46.4		ug/L		93	60 - 141
1,1-Dichloroethene	ND		50.0	44.1		ug/L		88	54 - 147
1,2-Dichloropropane	ND		50.0	47.3		ug/L		95	66 - 137
1,3-Dichloropropane	ND		50.0	47.1		ug/L		94	66 - 133
2,2-Dichloropropane	ND		50.0	47.6		ug/L		95	42 - 144

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231703-3 MS
Matrix: Water
Analysis Batch: 608580

Client Sample ID: MW3-ROX-011123
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloropropene	ND		50.0	45.8		ug/L		92	65 - 136
Ethylbenzene	ND		50.0	40.2		ug/L		80	58 - 131
Ethyl methacrylate	ND		50.0	46.3		ug/L		93	64 - 130
Hexachlorobutadiene	ND		50.0	39.2		ug/L		78	31 - 149
2-Hexanone	ND		200	183		ug/L		91	65 - 140
Isopropy benzene	ND		50.0	39.7		ug/L		79	56 - 133
Methylene bromide	ND		50.0	49.9		ug/L		100	63 - 138
Methylene Chloride	ND		50.0	48.8		ug/L		98	60 - 146
4-Methyl-2-pentanone (MIBK)	ND		200	212		ug/L		106	63 - 146
Methyl tert-butyl ether	1.7		50.0	53.6		ug/L		104	59 - 137
m-Xylene & p-Xylene	ND		50.0	40.5		ug/L		81	57 - 130
Naphthalene	ND		50.0	52.8		ug/L		106	25 - 150
n-Butylbenzene	ND		50.0	38.0		ug/L		76	41 - 142
N-Propylbenzene	ND		50.0	38.0		ug/L		76	51 - 138
o-Chlorotoluene	ND		50.0	38.1		ug/L		76	53 - 134
o-Xylene	ND		50.0	40.8		ug/L		82	61 - 130
p-Chlorotoluene	ND		50.0	37.6		ug/L		75	54 - 133
p-Isopropyltoluene	ND		50.0	37.1		ug/L		74	48 - 139
sec-Butylbenzene	ND		50.0	37.1		ug/L		74	50 - 138
Styrene	ND		50.0	40.9		ug/L		82	58 - 131
tert-Butylbenzene	ND		50.0	42.0		ug/L		84	54 - 146
1,1,1,2-Tetrachloroethane	ND		50.0	43.4		ug/L		87	59 - 137
1,1,2,2-Tetrachloroethane	ND		50.0	43.8		ug/L		88	66 - 135
Tetrachloroethene	ND		50.0	41.8		ug/L		84	52 - 133
Toluene	ND		50.0	41.5		ug/L		83	65 - 130
trans-1,2-Dichloroethene	ND		50.0	45.4		ug/L		91	61 - 143
trans-1,3-Dichloropropene	ND		50.0	44.6		ug/L		89	53 - 133
1,2,3-Trichlorobenzene	ND		50.0	49.3		ug/L		99	43 - 145
1,2,4-Trichlorobenzene	ND		50.0	46.1		ug/L		92	39 - 148
1,1,1-Trichloroethane	ND		50.0	45.1		ug/L		90	57 - 142
1,1,2-Trichloroethane	ND		50.0	46.7		ug/L		93	66 - 131
Trichloroethene	ND		50.0	46.4		ug/L		93	64 - 136
Trichlorofluoromethane	ND		50.0	46.9		ug/L		94	54 - 150
1,2,3-Trichloropropane	ND		50.0	42.8		ug/L		86	65 - 133
1,2,4-Trimethy benzene	ND		50.0	39.0		ug/L		78	50 - 139
1,3,5-Trimethy benzene	ND		50.0	37.7		ug/L		75	52 - 135
Vinyl acetate	ND		100	118		ug/L		118	26 - 150
Vinyl chloride	ND		50.0	46.6		ug/L		93	46 - 150
Xylenes, Total	ND		100	81.3		ug/L		81	59 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*98*		*72 - 119*
Dibromofluoromethane	*101*		*75 - 126*
Toluene-d8 (Surr)	*93*		*64 - 132*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231703-3 MSD
Matrix: Water
Analysis Batch: 608580

Client Sample ID: MW3-ROX-011123
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 F2	200	302	F1 F2	ug/L		151	43 - 150	42	30
Acrolein	ND		500	527		ug/L		105	38 - 150	3	31
Acrylonitrile	ND		500	538		ug/L		108	62 - 149	11	30
Benzene	0.61	J	50.0	52.9		ug/L		105	56 - 142	9	30
Bromobenzene	ND		50.0	44.3		ug/L		89	59 - 136	9	30
Bromochloromethane	ND		50.0	56.1		ug/L		112	64 - 140	11	30
Bromodichloromethane	ND		50.0	53.3		ug/L		107	59 - 143	10	30
Bromoform	ND		50.0	47.0		ug/L		94	50 - 140	9	30
Bromomethane	ND		50.0	50.9		ug/L		102	10 - 150	2	50
2-Butanone (MEK)	ND		200	212		ug/L		106	55 - 150	9	30
Carbon disulfide	ND		50.0	45.6		ug/L		91	48 - 150	7	30
Carbon tetrachloride	ND		50.0	48.8		ug/L		98	55 - 145	10	30
Chlorobenzene	ND		50.0	47.2		ug/L		94	64 - 130	10	30
Dibromochloromethane	ND		50.0	49.6		ug/L		99	56 - 143	11	30
Chloroethane	ND		50.0	46.8		ug/L		94	50 - 150	3	30
2-Chloroethyl vinyl ether	ND	F1 F2	50.0	3.46	J F1 F2	ug/L		7	10 - 150	67	50
Chloroform	ND		50.0	50.7		ug/L		101	60 - 141	10	30
1-Chlorohexane	ND		50.0	44.0		ug/L		88	56 - 136	12	30
Chloromethane	ND		50.0	39.4		ug/L		79	49 - 148	0	31
cis-1,2-Dichloroethene	ND		50.0	50.2		ug/L		100	59 - 143	10	30
cis-1,3-Dichloropropene	ND		50.0	54.9		ug/L		110	57 - 140	11	30
1,2-Dichlorobenzene	ND		50.0	45.1		ug/L		90	52 - 137	8	30
1,3-Dichlorobenzene	ND		50.0	44.4		ug/L		89	54 - 135	9	30
1,4-Dichlorobenzene	ND		50.0	44.0		ug/L		88	53 - 135	9	30
Dichlorodifluoromethane	ND		50.0	33.8		ug/L		68	16 - 150	1	31
1,1-Dichloroethane	ND		50.0	51.8		ug/L		104	61 - 144	10	30
1,2-Dichloroethane	ND		50.0	51.5		ug/L		103	60 - 141	10	30
1,1-Dichloroethene	ND		50.0	42.4		ug/L		85	54 - 147	4	30
1,2-Dichloropropane	ND		50.0	52.5		ug/L		105	66 - 137	10	30
1,3-Dichloropropane	ND		50.0	51.9		ug/L		104	66 - 133	10	30
2,2-Dichloropropane	ND		50.0	52.7		ug/L		105	42 - 144	10	31
1,1-Dichloropropene	ND		50.0	50.1		ug/L		100	65 - 136	9	30
Ethylbenzene	ND		50.0	45.0		ug/L		90	58 - 131	11	30
Ethyl methacrylate	ND		50.0	52.0		ug/L		104	64 - 130	12	30
Hexachlorobutadiene	ND		50.0	42.6		ug/L		85	31 - 149	8	36
2-Hexanone	ND		200	204		ug/L		102	65 - 140	11	30
Isopropy benzene	ND		50.0	44.4		ug/L		89	56 - 133	11	30
Methylene bromide	ND		50.0	56.4		ug/L		113	63 - 138	12	30
Methylene Chloride	ND		50.0	55.8		ug/L		112	60 - 146	13	32
4-Methyl-2-pentanone (MIBK)	ND		200	230		ug/L		115	63 - 146	8	30
Methyl tert-butyl ether	1.7		50.0	57.5		ug/L		112	59 - 137	7	30
m-Xylene & p-Xylene	ND		50.0	45.5		ug/L		91	57 - 130	12	30
Naphthalene	ND		50.0	59.2		ug/L		118	25 - 150	11	30
n-Butylbenzene	ND		50.0	41.8		ug/L		84	41 - 142	10	31
N-Propylbenzene	ND		50.0	42.1		ug/L		84	51 - 138	10	30
o-Chlorotoluene	ND		50.0	41.7		ug/L		83	53 - 134	9	30
o-Xylene	ND		50.0	45.6		ug/L		91	61 - 130	11	30
p-Chlorotoluene	ND		50.0	41.6		ug/L		83	54 - 133	10	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231703-3 MSD
Matrix: Water
Analysis Batch: 608580

Client Sample ID: MW3-ROX-011123
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	41.2		ug/L		82	48 - 139	11	30
sec-Butylbenzene	ND		50.0	41.3		ug/L		83	50 - 138	11	30
Styrene	ND		50.0	45.9		ug/L		92	58 - 131	12	30
tert-Butylbenzene	ND		50.0	46.5		ug/L		93	54 - 146	10	30
1,1,1,2-Tetrachloroethane	ND		50.0	47.8		ug/L		96	59 - 137	10	30
1,1,2,2-Tetrachloroethane	ND		50.0	48.3		ug/L		97	66 - 135	10	30
Tetrachloroethene	ND		50.0	46.5		ug/L		93	52 - 133	11	30
Toluene	ND		50.0	46.4		ug/L		93	65 - 130	11	30
trans-1,2-Dichloroethene	ND		50.0	47.2		ug/L		94	61 - 143	4	30
trans-1,3-Dichloropropene	ND		50.0	49.9		ug/L		100	53 - 133	11	30
1,2,3-Trichlorobenzene	ND		50.0	51.7		ug/L		103	43 - 145	5	30
1,2,4-Trichlorobenzene	ND		50.0	48.7		ug/L		97	39 - 148	6	30
1,1,1-Trichloroethane	ND		50.0	48.9		ug/L		98	57 - 142	8	30
1,1,2-Trichloroethane	ND		50.0	50.6		ug/L		101	66 - 131	8	30
Trichloroethene	ND		50.0	51.8		ug/L		104	64 - 136	11	30
Trichlorofluoromethane	ND		50.0	48.3		ug/L		97	54 - 150	3	30
1,2,3-Trichloropropane	ND		50.0	47.9		ug/L		96	65 - 133	11	30
1,2,4-Trimethy benzene	ND		50.0	42.9		ug/L		86	50 - 139	10	30
1,3,5-Trimethy benzene	ND		50.0	41.9		ug/L		84	52 - 135	11	30
Vinyl acetate	ND		100	123		ug/L		123	26 - 150	5	33
Vinyl chloride	ND		50.0	47.0		ug/L		94	46 - 150	1	30
Xylenes, Total	ND		100	91.1		ug/L		91	59 - 130	11	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*98*		*72 - 119*
Dibromofluoromethane	*102*		*75 - 126*
Toluene-d8 (Surr)	*94*		*64 - 132*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-608912/1-A
Matrix: Water
Analysis Batch: 609136

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 608912

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.8	ug/L		01/18/23 09:38	01/19/23 16:35	1
Benzenethiol	ND		10	1.7	ug/L		01/18/23 09:38	01/19/23 16:35	1
Benzoic acid	ND		30	7.3	ug/L		01/18/23 09:38	01/19/23 16:35	1
Benzyl alcohol	ND		10	2.0	ug/L		01/18/23 09:38	01/19/23 16:35	1
Bis(2-chloroethoxy)methane	ND		10	0.16	ug/L		01/18/23 09:38	01/19/23 16:35	1
Bis(2-chloroethyl)ether	ND		10	2.7	ug/L		01/18/23 09:38	01/19/23 16:35	1
bis (2-chloroisopropyl) ether	ND		10	0.16	ug/L		01/18/23 09:38	01/19/23 16:35	1
Bis(2-ethylhexyl) phthalate	ND		10	5.0	ug/L		01/18/23 09:38	01/19/23 16:35	1
4-Bromophenyl phenyl ether	ND		10	0.20	ug/L		01/18/23 09:38	01/19/23 16:35	1
Butyl benzyl phthalate	ND		10	0.19	ug/L		01/18/23 09:38	01/19/23 16:35	1
4-Chloroaniline	ND		10	3.4	ug/L		01/18/23 09:38	01/19/23 16:35	1
4-Chloro-3-methylphenol	ND		10	3.8	ug/L		01/18/23 09:38	01/19/23 16:35	1
2-Chloronaphthalene	ND		10	0.14	ug/L		01/18/23 09:38	01/19/23 16:35	1
2-Chlorophenol	ND		10	2.2	ug/L		01/18/23 09:38	01/19/23 16:35	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-608912/1-A
Matrix: Water
Analysis Batch: 609136

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 608912

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		01/18/23 09:38	01/19/23 16:35	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 16:35	1
Dibenzofuran	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 16:35	1
3,3'-Dichlorobenzidine	ND		10	2.6	ug/L		01/18/23 09:38	01/19/23 16:35	1
2,4-Dichlorophenol	ND		10	3.0	ug/L		01/18/23 09:38	01/19/23 16:35	1
Diethyl phthalate	ND		10	0.24	ug/L		01/18/23 09:38	01/19/23 16:35	1
2,4-Dimethylphenol	ND		10	3.5	ug/L		01/18/23 09:38	01/19/23 16:35	1
Dimethyl phthalate	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 16:35	1
Di-n-butyl phthalate	ND		10	2.7	ug/L		01/18/23 09:38	01/19/23 16:35	1
4,6-Dinitro-ortho-cresol	ND		10	1.6	ug/L		01/18/23 09:38	01/19/23 16:35	1
2,4-Dinitrophenol	ND		30	3.4	ug/L		01/18/23 09:38	01/19/23 16:35	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		01/18/23 09:38	01/19/23 16:35	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		01/18/23 09:38	01/19/23 16:35	1
Di-n-octyl phthalate	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 16:35	1
1,4-Dioxane	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 16:35	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 16:35	1
Hexachlorobenzene	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 16:35	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		01/18/23 09:38	01/19/23 16:35	1
Hexachloroethane	ND		10	4.2	ug/L		01/18/23 09:38	01/19/23 16:35	1
Indene	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 16:35	1
Isophorone	ND		10	0.14	ug/L		01/18/23 09:38	01/19/23 16:35	1
2-Methylphenol	ND		10	1.8	ug/L		01/18/23 09:38	01/19/23 16:35	1
3 & 4 Methylphenol	ND		20	0.39	ug/L		01/18/23 09:38	01/19/23 16:35	1
2-Nitroaniline	ND		10	2.2	ug/L		01/18/23 09:38	01/19/23 16:35	1
3-Nitroaniline	ND		10	1.8	ug/L		01/18/23 09:38	01/19/23 16:35	1
4-Nitroaniline	ND		10	1.5	ug/L		01/18/23 09:38	01/19/23 16:35	1
Nitrobenzene	ND		10	0.13	ug/L		01/18/23 09:38	01/19/23 16:35	1
2-Nitrophenol	ND		10	5.2	ug/L		01/18/23 09:38	01/19/23 16:35	1
4-Nitrophenol	ND		10	2.1	ug/L		01/18/23 09:38	01/19/23 16:35	1
N-Nitrosodimethylamine	ND		10	3.5	ug/L		01/18/23 09:38	01/19/23 16:35	1
N-Nitrosodi-n-propylamine	ND		10	3.3	ug/L		01/18/23 09:38	01/19/23 16:35	1
N-Nitrosodiphenylamine	ND		10	0.18	ug/L		01/18/23 09:38	01/19/23 16:35	1
Pentachlorophenol	ND		20	1.4	ug/L		01/18/23 09:38	01/19/23 16:35	1
Phenol	ND		10	2.6	ug/L		01/18/23 09:38	01/19/23 16:35	1
Pyridine	ND		10	3.2	ug/L		01/18/23 09:38	01/19/23 16:35	1
Quinoline	ND		10	4.5	ug/L		01/18/23 09:38	01/19/23 16:35	1
2,4,5-Trichlorophenol	ND		10	3.7	ug/L		01/18/23 09:38	01/19/23 16:35	1
2,4,6-Trichlorophenol	ND		10	3.5	ug/L		01/18/23 09:38	01/19/23 16:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*108*		*46 - 124*	*01/18/23 09:38*	*01/19/23 16:35*	*1*
2-Fluorophenol	*11*	*S1-*	*13 - 113*	*01/18/23 09:38*	*01/19/23 16:35*	*1*
Nitrobenzene-d5	*107*		*36 - 126*	*01/18/23 09:38*	*01/19/23 16:35*	*1*
Phenol-d5	*54*		*17 - 127*	*01/18/23 09:38*	*01/19/23 16:35*	*1*
Terphenyl-d14	*144*		*44 - 149*	*01/18/23 09:38*	*01/19/23 16:35*	*1*
2,4,6-Tribromophenol	*77*		*26 - 150*	*01/18/23 09:38*	*01/19/23 16:35*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-608912/2-A
Matrix: Water
Analysis Batch: 609136

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 608912

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aniline	120	120		ug/L		100	21 - 120
Benzoic acid	554	337		ug/L		61	10 - 144
Benzyl alcohol	120	113		ug/L		95	28 - 120
Bis(2-chloroethoxy)methane	120	96.7		ug/L		81	47 - 120
Bis(2-chloroethyl)ether	120	101		ug/L		84	44 - 120
bis (2-chloroisopropyl) ether	120	101		ug/L		84	33 - 121
Bis(2-ethylhexyl) phthalate	120	120		ug/L		100	52 - 147
4-Bromophenyl phenyl ether	120	111		ug/L		93	54 - 122
Butyl benzyl phthalate	120	136		ug/L		114	54 - 133
4-Chloroaniline	120	94.2		ug/L		79	26 - 120
4-Chloro-3-methylphenol	120	117		ug/L		98	48 - 131
2-Chloronaphthalene	120	112		ug/L		93	52 - 121
2-Chlorophenol	120	89.7		ug/L		75	40 - 120
4-Chlorophenyl phenyl ether	120	119		ug/L		100	56 - 125
Dibenz[a,h]acridine	120	108		ug/L		90	31 - 150
Dibenzofuran	120	118		ug/L		98	56 - 122
3,3'-Dichlorobenzidine	160	248	*+	ug/L		155	36 - 132
2,4-Dichlorophenol	120	101		ug/L		84	49 - 120
Diethyl phthalate	120	116		ug/L		96	50 - 137
2,4-Dimethylphenol	120	103		ug/L		86	48 - 120
Dimethyl phthalate	120	111		ug/L		92	57 - 124
Di-n-butyl phthalate	120	122		ug/L		102	58 - 126
4,6-Dinitro-ortho-cresol	240	175		ug/L		73	23 - 148
2,4-Dinitrophenol	240	201		ug/L		84	10 - 150
2,4-Dinitrotoluene	120	134		ug/L		111	54 - 142
2,6-Dinitrotoluene	120	120		ug/L		100	55 - 130
Di-n-octyl phthalate	120	114		ug/L		95	57 - 138
1,4-Dioxane	120	67.9		ug/L		57	31 - 120
1,2-Diphenylhydrazine (as Azobenzene)	120	112		ug/L		94	45 - 124
Hexachlorobenzene	120	117		ug/L		97	52 - 129
Hexachlorocyclopentadiene	120	91.8		ug/L		77	10 - 134
Hexachloroethane	120	108		ug/L		90	20 - 120
Indene	120	110		ug/L		91	49 - 120
Isophorone	120	99.5		ug/L		83	48 - 120
2-Methylphenol	120	107		ug/L		89	46 - 124
3 & 4 Methylphenol	120	103		ug/L		86	45 - 120
2-Nitroaniline	120	118		ug/L		98	51 - 145
3-Nitroaniline	120	117		ug/L		97	37 - 127
4-Nitroaniline	120	128		ug/L		106	36 - 137
Nitrobenzene	120	99.3		ug/L		83	45 - 120
2-Nitrophenol	120	94.4		ug/L		79	40 - 124
4-Nitrophenol	240	208		ug/L		86	23 - 146
N-Nitrosodimethylamine	120	88.1		ug/L		73	29 - 137
N-Nitrosodi-n-propylamine	120	105		ug/L		88	45 - 120
N-Nitrosodiphenylamine	119	105		ug/L		88	54 - 120
Pentachlorophenol	240	222		ug/L		92	31 - 130
Phenol	120	96.0		ug/L		80	11 - 120
Pyridine	240	184		ug/L		77	16 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-608912/2-A
Matrix: Water
Analysis Batch: 609136

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 608912

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Quinoline	120	117		ug/L		97	49 - 130
2,4,5-Trichlorophenol	120	120		ug/L		100	51 - 136
2,4,6-Trichlorophenol	120	117		ug/L		98	50 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*90*		*46 - 124*
2-Fluorophenol	*53*		*13 - 113*
Nitrobenzene-d5	*95*		*36 - 126*
Phenol-d5	*85*		*17 - 127*
Terphenyl-d14	*117*		*44 - 149*
2,4,6-Tribromophenol	*98*		*26 - 150*

Lab Sample ID: LCS 400-608912/7-A
Matrix: Water
Analysis Batch: 609136

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 608912

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzenethiol	120	7.79	J *-	ug/L		6	10 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*100*		*46 - 124*
2-Fluorophenol	*40*		*13 - 113*
Nitrobenzene-d5	*97*		*36 - 126*
Phenol-d5	*78*		*17 - 127*
Terphenyl-d14	*130*		*44 - 149*
2,4,6-Tribromophenol	*50*		*26 - 150*

Lab Sample ID: LCSD 400-608912/8-A
Matrix: Water
Analysis Batch: 609136

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 608912

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzenethiol	120	9.37	J *-	ug/L		8	10 - 120	18	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*99*		*46 - 124*
2-Fluorophenol	*40*		*13 - 113*
Nitrobenzene-d5	*95*		*36 - 126*
Phenol-d5	*74*		*17 - 127*
Terphenyl-d14	*131*		*44 - 149*
2,4,6-Tribromophenol	*55*		*26 - 150*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 400-608912/1-A
Matrix: Water
Analysis Batch: 609371

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 608912

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.032	ug/L		01/18/23 09:38	01/21/23 02:57	1
Acenaphthylene	ND		0.20	0.045	ug/L		01/18/23 09:38	01/21/23 02:57	1
Anthracene	ND		0.20	0.032	ug/L		01/18/23 09:38	01/21/23 02:57	1
Benzo[a]anthracene	ND		0.20	0.046	ug/L		01/18/23 09:38	01/21/23 02:57	1
Benzo[a]pyrene	ND		0.20	0.042	ug/L		01/18/23 09:38	01/21/23 02:57	1
Benzo[b]fluoranthene	ND		0.20	0.034	ug/L		01/18/23 09:38	01/21/23 02:57	1
Benzo[g,h,i]perylene	ND		0.20	0.13	ug/L		01/18/23 09:38	01/21/23 02:57	1
Benzo[k]fluoranthene	ND		0.20	0.10	ug/L		01/18/23 09:38	01/21/23 02:57	1
Chrysene	ND		0.20	0.074	ug/L		01/18/23 09:38	01/21/23 02:57	1
Dibenz(a,h)anthracene	ND		0.20	0.050	ug/L		01/18/23 09:38	01/21/23 02:57	1
Fluoranthene	ND		0.20	0.068	ug/L		01/18/23 09:38	01/21/23 02:57	1
Fluorene	ND		0.20	0.11	ug/L		01/18/23 09:38	01/21/23 02:57	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.043	ug/L		01/18/23 09:38	01/21/23 02:57	1
1-Methylnaphthalene	ND		0.20	0.074	ug/L		01/18/23 09:38	01/21/23 02:57	1
2-Methylnaphthalene	ND		0.20	0.060	ug/L		01/18/23 09:38	01/21/23 02:57	1
Phenanthrene	ND		0.20	0.036	ug/L		01/18/23 09:38	01/21/23 02:57	1
Pyrene	ND		0.20	0.040	ug/L		01/18/23 09:38	01/21/23 02:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*80*		*15 - 122*	*01/18/23 09:38*	*01/21/23 02:57*	*1*
Nitrobenzene-d5	*77*		*19 - 130*	*01/18/23 09:38*	*01/21/23 02:57*	*1*
Terphenyl-d14	*102*		*33 - 138*	*01/18/23 09:38*	*01/21/23 02:57*	*1*

Lab Sample ID: LCS 400-608912/2-A
Matrix: Water
Analysis Batch: 609371

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 608912

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	120	97.9		ug/L		82	41 - 120
Acenaphthylene	120	103		ug/L		86	44 - 120
Anthracene	120	99.2		ug/L		83	49 - 120
Benzo[a]anthracene	120	103		ug/L		86	61 - 135
Benzo[a]pyrene	120	92.6		ug/L		77	52 - 120
Benzo[b]fluoranthene	120	97.8		ug/L		82	53 - 134
Benzo[g,h,i]perylene	120	83.0		ug/L		69	47 - 133
Benzo[k]fluoranthene	120	102		ug/L		85	57 - 134
Chrysene	120	100		ug/L		83	55 - 122
Dibenz(a,h)anthracene	120	85.4		ug/L		71	48 - 146
Fluoranthene	120	117		ug/L		97	54 - 128
Fluorene	120	115		ug/L		96	45 - 125
Indeno[1,2,3-cd]pyrene	120	83.5		ug/L		70	43 - 142
1-Methylnaphthalene	120	78.1		ug/L		65	41 - 120
2-Methylnaphthalene	120	77.9		ug/L		65	32 - 124
Phenanthrene	120	98.7		ug/L		82	48 - 120
Pyrene	120	108		ug/L		90	48 - 132

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*75*		*15 - 122*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCS 400-608912/2-A
Matrix: Water
Analysis Batch: 609371

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 608912

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5	*54*		*19 - 130*
Terphenyl-d14	*83*		*33 - 138*

Lab Sample ID: MB 400-610934/1-A
Matrix: Water
Analysis Batch: 614365

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 610934

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	0.0607	J	0.20	0.034	ug/L		02/02/23 14:02	02/28/23 18:22	1
Chrysene	ND		0.20	0.074	ug/L		02/02/23 14:02	02/28/23 18:22	1
Fluoranthene	ND		0.20	0.068	ug/L		02/02/23 14:02	02/28/23 18:22	1
1-Methylnaphthalene	ND		0.20	0.074	ug/L		02/02/23 14:02	02/28/23 18:22	1
2-Methylnaphthalene	ND		0.20	0.060	ug/L		02/02/23 14:02	02/28/23 18:22	1
Phenanthrene	ND		0.20	0.036	ug/L		02/02/23 14:02	02/28/23 18:22	1
Pyrene	ND		0.20	0.040	ug/L		02/02/23 14:02	02/28/23 18:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*74*		*15 - 122*	*02/02/23 14:02*	*02/28/23 18:22*	*1*
Nitrobenzene-d5	*78*		*19 - 130*	*02/02/23 14:02*	*02/28/23 18:22*	*1*
Terphenyl-d14	*91*		*33 - 138*	*02/02/23 14:02*	*02/28/23 18:22*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - RE

Lab Sample ID: LCS 400-610934/2-A
Matrix: Water
Analysis Batch: 611182

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 610934

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzo[b]fluoranthene - RE	120	116		ug/L		96	53 - 134
Chrysene - RE	120	120		ug/L		100	55 - 122
Fluoranthene - RE	120	128		ug/L		107	54 - 128
1-Methylnaphthalene - RE	120	104		ug/L		86	41 - 120
2-Methylnaphthalene - RE	120	102		ug/L		85	32 - 124
Phenanthrene - RE	120	114		ug/L		95	48 - 120
Pyrene - RE	120	122		ug/L		102	48 - 132

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl - RE	*82*		*15 - 122*
Nitrobenzene-d5 - RE	*107*		*19 - 130*
Terphenyl-d14 - RE	*99*		*33 - 138*

Lab Sample ID: LCSD 400-610934/3-A
Matrix: Water
Analysis Batch: 611182

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 610934

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzo[b]fluoranthene - RE	120	115		ug/L		95	53 - 134	1	54
Chrysene - RE	120	119		ug/L		99	55 - 122	1	50

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - RE (Continued)

Lab Sample ID: LCSD 400-610934/3-A
Matrix: Water
Analysis Batch: 611182

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 610934

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoranthene - RE			120	125		ug/L		104	54 - 128	2	52
1-Methylnaphthalene - RE			120	95.1		ug/L		79	41 - 120	9	55
2-Methylnaphthalene - RE			120	95.0		ug/L		79	32 - 124	7	57
Phenanthrene - RE			120	111		ug/L		93	48 - 120	2	56
Pyrene - RE			120	118		ug/L		98	48 - 132	4	52

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl - RE	*82*		*15 - 122*
Nitrobenzene-d5 - RE	*100*		*19 - 130*
Terphenyl-d14 - RE	*97*		*33 - 138*

Method: 8011 - EDB and DBCP in Water by Microextraction

Lab Sample ID: MB 400-609810/1-A
Matrix: Water
Analysis Batch: 609918

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 609810

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND		0.030	0.017	ug/L		01/25/23 10:27	01/25/23 20:36	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/25/23 10:27	01/25/23 20:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*51 - 149*	*01/25/23 10:27*	*01/25/23 20:36*	*1*

Lab Sample ID: LCS 400-609810/2-A
Matrix: Water
Analysis Batch: 609918

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 609810

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-D bromo-3-Chloropropane			0.101	0.137		ug/L		137	60 - 140
1,2-D bromoethane			0.101	0.113		ug/L		112	60 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*107*		*51 - 149*

Lab Sample ID: LCSD 400-609810/3-A
Matrix: Water
Analysis Batch: 609918

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 609810

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-D bromo-3-Chloropropane			0.101	0.130		ug/L		130	60 - 140	5	30
1,2-D bromoethane			0.101	0.106		ug/L		105	60 - 140	6	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*104*		*51 - 149*

LAB (LOCATION)

☐ ACCUTEST (_____)

☐ CALSCIENCE (_____)

☑ TESTAMERICA (TestAmerica Pensacola; 3355 McLemore Dr. Pensacola, FL 32514 (850-474-1001))

☐ Other (_____)

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
Melissa Remiger	25278	DATE: 1/11/2023
PO #	**GSAP Project ID**	PAGE: 1 of 2
60697537 – 3.1.2	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 60697537 – 3.1.2

ADDRESS: 100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA

EDF DELIVERABLE TO (Name, Company, Office Location): Melissa Remiger - please see special instructions

PHONE NO.: 314-802-1207

E-MAIL: melissa.remiger@aecom.com

AECOM Other ID:

PROJECT CONTACT (Hardcopy or PDF Report to): Melissa Remiger, Mary Massa, Brett Howell

SAMPLER NAME(S) (Print): Mary Massa, Joe Mayer, Travis Jenkins

LAB USE ONLY

TELEPHONE:	FAX:	Bill To Contact E-MAIL:
314-429-0100	314-429-0462	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 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) __EDD_____

TEMPERATURE ON RECEIPT C°	Cooler #1	Cooler #2	Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :

Email reports to: melissa.remiger@aecom.com; mary.massa@aecom.com; brett.howell@aecom.com

* Please include "J" values on Reports.
* Please provide sample receipt upon login.
* Please send EQuIS EDDs to EDDSubmissions@aecomshell.com; loredana.filimon@aecom.com

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS
60697537 – 3.1.2

FIELD NOTES:

C: 0°C

TEMPERATURE ON RECEIPT C°

0.0°C IR9

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	8011 EDB + DBCP	SVOC 8270	PAH 8270LL
	TB-ROX-011123-8260-A	1/11/2023	0000	Water	2					2	X			
	TB-ROX-011123-8011-A	1/11/2023	0000	Water	2					2		X		
	MW3-ROX-011123	1/11/2023	0925	Water	6			2		8	X	X	X	X
	MW6C-ROX-011123	1/11/2023	1025	Water	6			2		8	X	X	X	X
	MW6A-ROX-011123	1/11/2023	1120	Water	6			2		8	X	X	X	X
	MW6D-ROX-011123	1/11/2023	1325	Water	6			2		8	X	X	X	X
	MW6B-ROX-011123	1/11/2023	1410	Water	6			2		8	X	X	X	X
	MW6B-ROX-011123-DUP	1/11/2023	1410	Water	6			2		8	X	X	X	X

400-231703 COC

1/11/23

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
MARY MASSA	FEDEX: 5564 3932 8580, 5564 3932 9965	1/11/2023	1600
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
	M	1-12-23	8:48
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Version: 13Oct22

CUSTODY SEALS: 1745816, 1745817, 1745818, 1745819

3/23/2023 (Rev. 2)

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 (_____)

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
Melissa Remiger	25278	DATE: 1/11/2023
PO #	**GSAP Project ID**	PAGE: 2 of 2
60697537 – 3.1.2	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 60697537 – 3.1.2
ADDRESS: 100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA
EDF DELIVERABLE TO (Name, Company, Office Location): Melissa Remiger - please see special instructions
PHONE NO.: 314-802-1207
E-MAIL: melissa.remiger@aecom.com
AECOM Other ID:
PROJECT CONTACT (Hardcopy or PDF Report to): Melissa Remiger, Mary Massa, Brett Howell
SAMPLER NAME(S) (Print): T. Jones, S. Beadle
LAB USE ONLY
TELEPHONE: 314-429-0100
FAX: 314-429-0462
Bill To Contact E-MAIL: 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 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) __EDD_____

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :

Email reports to: melissa.remiger@aecom.com; mary.massa@aecom.com; brett.howell@aecom.com

* Please include "J" values on Reports.
* Please provide sample receipt upon login.
* Please send EQuiS EDDs to EDDSubmissions@aecomsheil.com; loredana.filimon@aecom.com

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS
60697537 – 3.1.2

FIELD NOTES:

C-C°C.

TEMPERATURE ON RECEIPT C°: 0.0°C IR9

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	8011 EDB + DBCP	SVOC 8270	PAH 8270LL
	TB-ROX-011123-8260-B	1/11/2023	0000	Water	2					2	X			
	TB-ROX-011123-8011-B	1/11/2023	0000	Water	2					2		X		
	T12-ROX-011123	1/11/2023	0950	Water	6			2		8	X	X	X	X
	T12-ROX-011123-DUP	1/11/2023	0950	Water	6			2		8	X	X	X	X
	P59-ROX-011123	1/11/2023	1105	Water	6			2		8	X	X	X	X
	P59-ROX-011123-DUP	1/11/2023	1105	Water	6			2		8	X	X	X	X
	P93B-ROX-011123	1/11/2023	1240	Water	6			2		8	X	X	X	X

Sam Beadle 1/11/23

Relinquished by: (Signature) Sam Beadle	Received by: (Signature) FEDEX: See page 1	Date: 1/11/2023	Time: 1600
Relinquished by: (Signature)	Received by: (Signature)	Date: 1-12-23	Time: 8:48
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Version: 13Oct22

CUSTODY SEALS: See page 1

Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 400-231703-1

Login Number: 231703
List Number: 1
Creator: Whitley, Adrian

List Source: Eurofins 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.	N/A	
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	0.0, 0.0°C IR9
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.	N/A	
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. Job ID: 400-231703-1
Project/Site: ROXANA QUARTERLY GW

Laboratory: Eurofins Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	06-30-23
ANAB	ISO/IEC 17025	L2471	02-22-26
Arkansas DEQ	State	88-0689	09-01-23
California	State	2510	06-30-23
Florida	NELAP	E81010	06-30-23
Georgia	State	E81010(FL)	06-30-23
Illinois	NELAP	200041	10-09-23
Kansas	NELAP	E-10253	10-31-23
Kentucky (UST)	State	53	06-30-23
Louisiana (All)	NELAP	30976	06-30-23
Louisiana (DW)	State	LA017	12-31-23
Maryland	State	233	09-30-23
Michigan	State	9912	06-30-23
North Carolina (WW/SW)	State	314	12-31-23
Oklahoma	NELAP	9810	08-31-23
Pennsylvania	NELAP	68-00467	01-31-24
South Carolina	State	96026	06-30-23
Tennessee	State	TN02907	06-30-23
Texas	NELAP	T104704286	09-30-23
US Fish & Wildlife	US Federal Programs	A22340	06-30-23
USDA	US Federal Programs	P330-21-00056	05-17-24
USDA	US Federal Programs	FLGNV23001	01-08-26
Virginia	NELAP	460166	06-14-23
West Virginia DEP	State	136	03-05-23

Roxana Groundwater Quarterly – 1st Quarter 2023 Data Review

Laboratory SDG: 400-231766-1-Rev.2

Data Reviewer: Andrei Niculau

Peer Reviewer: Cheyana Cokley

Date Reviewed: 03/15/2023

Guidance: USEPA National Functional Guidelines for Organic Superfund Methods Data Review 2020

Sample Identification	Sample Identification
TB-ROX-011223-8260	MW10-ROX-011223
TB-ROX-011223-8011	MW24-ROX-011223
MW11-ROX-011223	--

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 that benzo[b]fluoranthene, indeno[1,2,3-cd]pyrene and phenanthrene in sample MW24-ROX-011223 were re-analyzed outside of holding time criteria. LCS/LCSD recoveries for 3,3'-dichlorobenzidine, benzenethiol, and 1,2-dibromo-3-chloropropane were outside evaluation criteria. The surrogate recovery for 2-fluorophenol in sample MW24-ROX-011223 and the SVOC method blank was outside criteria. Several VOC, SVOC and VOC by 8011 MS/MSD recoveries, or MS/MSD RPDs, were outside evaluation criteria in sample MW11-ROX-011223. These issues are addressed further in the appropriate sections of this data review. The laboratory report was revised on March 3, 2023, to correctly report Method 8270 SVOC data, and to report confirmation PAH results for sample MW24-ROX-011223; both original and reanalysis results are reported. The laboratory report was revised on March 24, 2023, to include a missing Method 8270LL PAH method blank and to remove incorrect B-flag qualifications.

Three of 70 (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?

No, PAHs in sample MW24-ROX-011223 were re-analyzed one (1) day after extraction time criteria (40 days) for confirmation due to initial analysis results that were not consistent with historical data. Both sets of data are reported. With regard to initial MW24-ROX-011223 PAH data, the laboratory issued a Corrective Action Report (CAR) stating that through confirmation analyses, many previous detections were not confirmed and were therefore deemed laboratory contamination. Based on professional judgement, the results from the re-analysis were used for the purposes of this report. Data requiring

qualification is summarized in the following table.

Sample ID	Parameter	Analyte	Qualification
MW24-ROX-011223 – RA	PAHs	Benzo[b]fluoranthene	**J**
MW24-ROX-011223 – RA	PAHs	Indeno[1,2,3-cd]pyrene	**J**
MW24-ROX-011223 – RA	PAHs	Phenanthrene	**UJ**

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 400-608912/2-A	SVOCs	3,3'-Dichlorobenzidine	**155**	-	36 - 132
LCS/LCSD 400-608912/7-A/8-A	SVOCs	Benzenethiol	**6/8**	18	10-120/30
LCS/LCSD 400-609811/2-A/3-A	VOCs by 8011	1,2-Dibromo-3-Chloropropane	**170/172**	1	60-140/30

Analytical data that required qualification based on LCS/LCSD data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Professional judgment was used to qualify, however not reject, data associated with benzenethiol below evaluation criteria; benzenethiol has been identified as a poor performing analyte under Method 8270.

Sample ID	Parameter	Analyte	Qualification
MW11-ROX-011223	SVOCs	Benzenethiol	**UJ**
MW10-ROX-011223	SVOCs	Benzenethiol	**UJ**
MW24-ROX-011223	SVOCs	Benzenethiol	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
MW24-ROX-011223	SVOCs	2-Fluorophenol	**8**	13-113
MB 400-608912/1-A	SVOCs	2-Fluorophenol	**11**	13-113

Qualifications due to surrogate recoveries were not required if only one of three base/neutral and/or acid surrogate recoveries were outside evaluation criteria. Method blanks are quality control samples and do not require qualification.

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

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

Yes, sample MW11-ROX-011223 was spiked and analyzed for VOCs, SVOCs, PAHs, and VOC by 8011.

Were MS/MSD recoveries within evaluation criteria?

No

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
MW11-ROX-011223 MS/MSD	VOCs	2-Chloroethyl vinyl ether	**0/0**	NC	10-150/50
MW11-ROX-011223 MS/MSD	VOCs	Hexachlorobutadiene	47/80	**52**	31-149/36
MW11-ROX-011223 MS/MSD	VOCs	n-Butylbenzene	57/86	**40**	41-142/31
MW11-ROX-011223 MS/MSD	VOCs	p-Isopropyltoluene	63/89	**33**	48-139/30
MW11-ROX-011223 MS/MSD	VOCs	sec-Butylbenzene	65/91	**33**	50-138/30
MW11-ROX-011223 MS/MSD	SVOCs	Aniline	108/**122**	9	10-120/63
MW11-ROX-011223 MS/MSD	SVOCs	Butyl benzyl phthalate	**128/134**	1	45-120/32
MW11-ROX-011223 MS/MSD	SVOCs	2,4-Dinitrotoluene	**121/134**	7	53-120/28
MW11-ROX-011223 MS/MSD	SVOCs	Quinoline	104/**122**	12	41-120/40
MW11-ROX-011223 MS/MSD	VOCs by 8011	1,2-Dibromo-3-Chloropropane	**158**/150	1	10-150/20
MW11-ROX-011223 MS/MSD	VOCs by 8011	1,2-Dibromoethane	**151**/150	0	10-150/20

Analytical data that required qualification based on MS/MSD data are included in the table below. Professional judgement was used to qualify; however, not reject the compound 2-chloroethyl vinyl ether due to acceptable LCS recoveries for this compound and to the acid reactive nature of 2-chloroethyl vinyl ether. Analytical data reported as non-detect and associated with MS/MSD recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Sample ID	Parameter	Analyte	Qualification
MW11-ROX-011223	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?

No

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 3/24/2023 8:03:30 AM Revision 2

JOB DESCRIPTION

ROXANA QUARTERLY GW

JOB NUMBER

400-231766-1

Eurofins Pensacola
3355 McLemore Drive
Pensacola FL 32514

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet all NELAP requirements for accredited parameters, unless otherwise noted, and relate only to the referenced samples. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval from the laboratory. For questions please contact the Project Manager at the e-mail address listed on this page, or the telephone number at the bottom of the page. Eurofins Environment Testing Southeast LLC, Pensacola Certifications and Approvals: Alabama (40150), Arizona (AZ0710), Arkansas (88-0689), Florida (E81010), Illinois (200041), Iowa (367), Kansas (E-10253), Kentucky UST (53), Louisiana (30748), Maryland (233), Massachusetts (M-FL094), Michigan (9912), New Hampshire (250510), New Jersey (FL006), North Carolina (314), Oklahoma (9810), Pennsylvania (68-00467), Rhode Island (LAO00307), South Carolina (96026), Tennessee (TN02907), Texas (T104704286-10-2), Virginia (00008), Washington (C2043), West Virginia (136), USDA Foreign Soil Permit (P330-08-00006).

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization

Generated
3/24/2023 8:03:30 AM
Revision 2

Authorized for release by
Leah Klingensmith, Senior Project Manager
Leah.Klingensmith@et.eurofinsus.com
(615)301-5038

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Job ID: 400-231766-1

Laboratory: Eurofins Pensacola

Narrative

Job Narrative
400-231766-1

Comments
Revised Report
Report revised to correct 8270LL method blank linking. Unnecessary "B" flags removed.
Supersedes report dated 3-3-2023.

Revised Report
Report revised to correct 8270 data.
Supersedes report dated 1-27-2023.

The 8270 data for this job was reviewed when it was determined the original results did not match historical data. Confirmation analyses of the initial extract and in some instances analysis of re-extracted samples were performed. The results of these re-analyses confirm in some cases and are reported again in the revision. The difference in a result that does not confirm is most likely due to trace level contamination. The result with the highest confidence level is currently reported when all results are in hold. In instances where a confirmation analysis was performed outside of holding time both the initial and out of hold results are reported.

Receipt
The samples were received on 1/13/2023 9:14 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.6º C.

GC/MS VOA
Method 8260B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 400-608743 were outside control limits for 2-Chloroethyl vinyl ether due to the acidic nature of the parent sample.

Method 8260B: The RPD for the MS/MSD for 2-chloroethyl vinyl ether was not calculable for analytical batch 400-608743 because the recoveries were below the reporting limit due to the acidic nature of the parent sample.

Method 8260B: The matrix spike / matrix spike duplicate (MS/MSD) precision for analytical batch 400-608743 was outside control limits. Sample matrix interference is suspected.

Method 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-011223-8260 (400-231766-1), MW11-ROX-011223 (400-231766-3), MW10-ROX-011223 (400-231766-4) and MW24-ROX-011223 (400-231766-5). The requested target analyte list includes 2-Chloroethyl vinyl ether, Acrolein and Acrylonitrile, which are acid-labile compounds 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 8270D: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 400-608912 and analytical batch 400-609136 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 8270D: The laboratory control sample (LCS) for preparation batch 400-608912 and analytical batch 400-609136 recovered outside control limits for the following analytes: 3,3'-Dichlorobenzidine. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method 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: MW24-ROX-011223 (400-231766-5) and (MB 400-608912/1-A). These results have been reported and qualified.

Method 8270D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 400-608912 and analytical batch

Job ID: 400-231766-1 (Continued)

Laboratory: Eurofins Pensacola (Continued)

400-609136 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8270D: The continuing calibration verification (CCV) associated with batch 400-609136 recovered above the upper control limit for Benzenethiol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8270D: The continuing calibration verification (CCV) associated with batch 400-609136 recovered above the upper control limit for Indene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8270D: The continuing calibration verification (CCV) associated with batch 400-609136 recovered above the upper control limit for Aniline, 2-Nitrophenol, Diethyl phthalate, Dimethyl phthalate, 2-Chloronaphthalene, 2,4,5-Trichlorophenol, 2,4,6-Tribromophenol, 2,6-Dinitrotoluene, 2,4-Dinitrotoluene, Bis(2-ethylhexyl) phthalate, Di-n-butyl phthalate, Butyl benzyl phthalate, 4-Chlorophenyl phenyl ether, 4-Chloro-3-methylphenol, Hexachlorobenzene, Hexachlorocyclopentadiene, N-Nitrosodi-n-propylamine, 2,4-Dichlorophenol and Dibenzofuran. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8270D LL: The initial calibration verification (ICV) analyzed in batch 400-609362 was outside method criteria for the following analyte(s): Acenaphthylene, Fluorene and Pyrene. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D LL: Reanalysis of the following sample(s) was performed outside of the analytical holding time to confirm the PAH detections in the sample extract.

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

GC Semi VOA

Method 8011: The continuing calibration verification (CCV) associated with batch 400-610064 recovered above the upper control limit for 1,2-Dibromo-3-Chloropropane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8011: The continuing calibration verification (CCV) associated with batch 400-610064 recovered above the upper control limit for Ethylene Dibromide and 1,2-Dibromo-3-Chloropropane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8011: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 400-609811 and analytical batch 400-610064 recovered outside control limits for the following analytes: 1,2-Dibromo-3-Chloropropane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8011: The matrix spike (MS) recoveries for preparation batch 400-609811 and analytical batch 400-610064 were outside control limits. Non-homogeneity is 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.

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 GW

Job ID: 400-231766-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-231766-1	TB-ROX-011223-8260	Water	01/12/23 12:00	01/13/23 09:14
400-231766-2	TB-ROX-011223-8011	Water	01/12/23 12:00	01/13/23 09:14
400-231766-3	MW11-ROX-011223	Water	01/12/23 09:30	01/13/23 09:14
400-231766-4	MW10-ROX-011223	Water	01/12/23 10:45	01/13/23 09:14
400-231766-5	MW24-ROX-011223	Water	01/12/23 13:55	01/13/23 09:14

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231766-1

Client Sample ID: TB-ROX-011223-8260 — Lab Sample ID: 400-231766-1

No Detections.

Client Sample ID: TB-ROX-011223-8011 — Lab Sample ID: 400-231766-2

No Detections.

Client Sample ID: MW11-ROX-011223 — Lab Sample ID: 400-231766-3

No Detections.

Client Sample ID: MW10-ROX-011223 — Lab Sample ID: 400-231766-4

No Detections.

Client Sample ID: MW24-ROX-011223 — Lab Sample ID: 400-231766-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	0.13	J	0.21	0.036	ug/L	1		8270D LL	Total/NA
Dibenz(a,h)anthracene	0.063	J	0.21	0.053	ug/L	1		8270D LL	Total/NA
Indeno[1,2,3-cd]pyrene	0.065	J	0.21	0.045	ug/L	1		8270D LL	Total/NA
Phenanthrene	0.066	J	0.21	0.038	ug/L	1		8270D LL	Total/NA
Benzo[b]fluoranthene - RA	0.086	J H	0.21	0.036	ug/L	1		8270D LL	Total/NA
Indeno[1,2,3-cd]pyrene - RA	0.13	J H	0.21	0.045	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 GW

Job ID: 400-231766-1

Client Sample ID: TB-ROX-011223-8260
Date Collected: 01/12/23 12:00
Date Received: 01/13/23 09:14

Lab Sample ID: 400-231766-1
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/17/23 17:10	1
Acrolein	ND		20	3.3	ug/L			01/17/23 17:10	1
Acrylonitrile	ND		10	2.8	ug/L			01/17/23 17:10	1
Benzene	ND		1.0	0.13	ug/L			01/17/23 17:10	1
Bromobenzene	ND		1.0	0.54	ug/L			01/17/23 17:10	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/17/23 17:10	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/17/23 17:10	1
Bromoform	ND		5.0	0.25	ug/L			01/17/23 17:10	1
Bromomethane	ND		1.0	0.98	ug/L			01/17/23 17:10	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/17/23 17:10	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/17/23 17:10	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/17/23 17:10	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/17/23 17:10	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/17/23 17:10	1
Chloroethane	ND		1.0	0.76	ug/L			01/17/23 17:10	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/17/23 17:10	1
Chloroform	ND		1.0	1.0	ug/L			01/17/23 17:10	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/17/23 17:10	1
Chloromethane	ND		1.0	0.32	ug/L			01/17/23 17:10	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/17/23 17:10	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/17/23 17:10	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/17/23 17:10	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/17/23 17:10	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/17/23 17:10	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/17/23 17:10	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/17/23 17:10	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/17/23 17:10	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/17/23 17:10	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/17/23 17:10	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/17/23 17:10	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/17/23 17:10	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/17/23 17:10	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/17/23 17:10	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/17/23 17:10	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/17/23 17:10	1
2-Hexanone	ND		25	1.4	ug/L			01/17/23 17:10	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/17/23 17:10	1
Methylene bromide	ND		5.0	0.22	ug/L			01/17/23 17:10	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/17/23 17:10	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/17/23 17:10	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/17/23 17:10	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/17/23 17:10	1
Naphthalene	ND		5.0	3.0	ug/L			01/17/23 17:10	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/17/23 17:10	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/17/23 17:10	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/17/23 17:10	1
o-Xylene	ND		5.0	0.60	ug/L			01/17/23 17:10	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/17/23 17:10	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/17/23 17:10	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231766-1

Client Sample ID: TB-ROX-011223-8260
Date Collected: 01/12/23 12:00
Date Received: 01/13/23 09:14

Lab Sample ID: 400-231766-1
Matrix: Water

Method: SW846 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			01/17/23 17:10	1
Styrene	ND		1.0	1.0	ug/L			01/17/23 17:10	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/17/23 17:10	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/17/23 17:10	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/17/23 17:10	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/17/23 17:10	1
Toluene	ND		1.0	0.41	ug/L			01/17/23 17:10	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/17/23 17:10	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/17/23 17:10	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/17/23 17:10	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/17/23 17:10	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/17/23 17:10	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/17/23 17:10	1
Trichloroethene	ND		1.0	0.15	ug/L			01/17/23 17:10	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/17/23 17:10	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/17/23 17:10	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/17/23 17:10	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/17/23 17:10	1
Vinyl acetate	ND		25	0.93	ug/L			01/17/23 17:10	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/17/23 17:10	1
Xylenes, Total	ND		10	1.6	ug/L			01/17/23 17:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*72 - 119*		*01/17/23 17:10*	*1*
Dibromofluoromethane	*109*		*75 - 126*		*01/17/23 17:10*	*1*
Toluene-d8 (Surr)	*91*		*64 - 132*		*01/17/23 17:10*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231766-1

Client Sample ID: TB-ROX-011223-8011
Date Collected: 01/12/23 12:00
Date Received: 01/13/23 09:14

Lab Sample ID: 400-231766-2
Matrix: Water

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.029	0.017	ug/L		01/25/23 10:29	01/26/23 21:36	1
1,2-D bromoethane	ND		0.019	0.015	ug/L		01/25/23 10:29	01/26/23 21:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*	*p*	*51 - 149*	*01/25/23 10:29*	*01/26/23 21:36*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231766-1

Client Sample ID: MW11-ROX-011223
Date Collected: 01/12/23 09:30
Date Received: 01/13/23 09:14

Lab Sample ID: 400-231766-3
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/17/23 15:00	1
Acrolein	ND		20	3.3	ug/L			01/17/23 15:00	1
Acrylonitrile	ND		10	2.8	ug/L			01/17/23 15:00	1
Benzene	ND		1.0	0.13	ug/L			01/17/23 15:00	1
Bromobenzene	ND		1.0	0.54	ug/L			01/17/23 15:00	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/17/23 15:00	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/17/23 15:00	1
Bromoform	ND		5.0	0.25	ug/L			01/17/23 15:00	1
Bromomethane	ND		1.0	0.98	ug/L			01/17/23 15:00	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/17/23 15:00	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/17/23 15:00	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/17/23 15:00	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/17/23 15:00	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/17/23 15:00	1
Chloroethane	ND		1.0	0.76	ug/L			01/17/23 15:00	1
2-Chloroethyl vinyl ether	ND	F1	5.0	2.0	ug/L			01/17/23 15:00	1
Chloroform	ND		1.0	1.0	ug/L			01/17/23 15:00	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/17/23 15:00	1
Chloromethane	ND		1.0	0.32	ug/L			01/17/23 15:00	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/17/23 15:00	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/17/23 15:00	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/17/23 15:00	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/17/23 15:00	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/17/23 15:00	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/17/23 15:00	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/17/23 15:00	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/17/23 15:00	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/17/23 15:00	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/17/23 15:00	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/17/23 15:00	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/17/23 15:00	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/17/23 15:00	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/17/23 15:00	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/17/23 15:00	1
Hexachlorobutadiene	ND	F2	5.0	0.90	ug/L			01/17/23 15:00	1
2-Hexanone	ND		25	1.4	ug/L			01/17/23 15:00	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/17/23 15:00	1
Methylene bromide	ND		5.0	0.22	ug/L			01/17/23 15:00	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/17/23 15:00	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/17/23 15:00	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/17/23 15:00	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/17/23 15:00	1
Naphthalene	ND		5.0	3.0	ug/L			01/17/23 15:00	1
n-Butylbenzene	ND	F2	1.0	0.76	ug/L			01/17/23 15:00	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/17/23 15:00	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/17/23 15:00	1
o-Xylene	ND		5.0	0.60	ug/L			01/17/23 15:00	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/17/23 15:00	1
p-Isopropyltoluene	ND	F2	1.0	0.71	ug/L			01/17/23 15:00	1

Client Sample ID: MW11-ROX-011223
Date Collected: 01/12/23 09:30
Date Received: 01/13/23 09:14

Lab Sample ID: 400-231766-3
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND	F2	1.0	0.70	ug/L			01/17/23 15:00	1
Styrene	ND		1.0	1.0	ug/L			01/17/23 15:00	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/17/23 15:00	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/17/23 15:00	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/17/23 15:00	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/17/23 15:00	1
Toluene	ND		1.0	0.41	ug/L			01/17/23 15:00	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/17/23 15:00	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/17/23 15:00	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/17/23 15:00	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/17/23 15:00	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/17/23 15:00	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/17/23 15:00	1
Trichloroethene	ND		1.0	0.15	ug/L			01/17/23 15:00	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/17/23 15:00	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/17/23 15:00	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/17/23 15:00	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/17/23 15:00	1
Vinyl acetate	ND		25	0.93	ug/L			01/17/23 15:00	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/17/23 15:00	1
Xylenes, Total	ND		10	1.6	ug/L			01/17/23 15:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*72 - 119*		*01/17/23 15:00*	*1*
Dibromofluoromethane	*111*		*75 - 126*		*01/17/23 15:00*	*1*
Toluene-d8 (Surr)	*91*		*64 - 132*		*01/17/23 15:00*	*1*

Method: SW846 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	0.033	ug/L		01/18/23 09:38	01/21/23 04:06	1
Acenaphthylene	ND		0.21	0.046	ug/L		01/18/23 09:38	01/21/23 04:06	1
Anthracene	ND		0.21	0.033	ug/L		01/18/23 09:38	01/21/23 04:06	1
Benzo[a]anthracene	ND		0.21	0.047	ug/L		01/18/23 09:38	02/08/23 19:24	1
Benzo[a]pyrene	ND		0.21	0.043	ug/L		01/18/23 09:38	01/21/23 04:06	1
Benzo[b]fluoranthene	ND		0.21	0.035	ug/L		01/18/23 09:38	02/08/23 19:24	1
Benzo[g,h,i]perylene	ND		0.21	0.13	ug/L		01/18/23 09:38	01/21/23 04:06	1
Benzo[k]fluoranthene	ND		0.21	0.10	ug/L		01/18/23 09:38	01/21/23 04:06	1
Chrysene	ND		0.21	0.076	ug/L		01/18/23 09:38	01/21/23 04:06	1
Dibenz(a,h)anthracene	ND		0 21	0 052	ug/L		01/18/23 09 38	01/21/23 04 06	1
Fluoranthene	ND		0.21	0.070	ug/L		01/18/23 09:38	01/21/23 04:06	1
Fluorene	ND		0.21	0.11	ug/L		01/18/23 09:38	01/21/23 04:06	1
Indeno[1,2,3-cd]pyrene	ND		0.21	0.044	ug/L		01/18/23 09:38	01/21/23 04:06	1
1-Methylnaphthalene	ND		0.21	0.076	ug/L		01/18/23 09:38	01/21/23 04:06	1
2-Methylnaphthalene	ND		0.21	0.062	ug/L		01/18/23 09:38	01/21/23 04:06	1
Phenanthrene	ND		0.21	0.037	ug/L		01/18/23 09:38	02/08/23 19:24	1
Pyrene	ND		0.21	0.041	ug/L		01/18/23 09:38	02/08/23 19:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*89*		*15 - 122*	*01/18/23 09:38*	*01/21/23 04:06*	*1*
Nitrobenzene-d5	*87*		*19 - 130*	*01/18/23 09:38*	*01/21/23 04:06*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231766-1

Client Sample ID: MW11-ROX-011223
Date Collected: 01/12/23 09:30
Date Received: 01/13/23 09:14

Lab Sample ID: 400-231766-3
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*115*		*33 - 138*	*01/18/23 09:38*	*01/21/23 04:06*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND	F1	10	3.9	ug/L		01/18/23 09:38	01/19/23 18:38	1
Benzenethiol	ND	*-	10	1.8	ug/L		01/18/23 09:38	01/19/23 18:38	1
Benzoic acid	ND		31	7.5	ug/L		01/18/23 09:38	01/19/23 18:38	1
Benzyl alcohol	ND		10	2.1	ug/L		01/18/23 09:38	01/19/23 18:38	1
Bis(2-chloroethoxy)methane	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 18:38	1
Bis(2-chloroethyl)ether	ND		10	2.8	ug/L		01/18/23 09:38	01/19/23 18:38	1
bis (2-chloroisopropyl) ether	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 18:38	1
Bis(2-ethylhexyl) phthalate	ND		10	5.2	ug/L		01/18/23 09:38	01/19/23 18:38	1
4-Bromophenyl phenyl ether	ND		10	0.21	ug/L		01/18/23 09:38	01/19/23 18:38	1
Butyl benzyl phthalate	ND	F1	10	0.20	ug/L		01/18/23 09:38	01/19/23 18:38	1
4-Chloroaniline	ND		10	3.5	ug/L		01/18/23 09:38	01/19/23 18:38	1
4-Chloro-3-methylphenol	ND		10	3.9	ug/L		01/18/23 09:38	01/19/23 18:38	1
2-Chloronaphthalene	ND		10	0.14	ug/L		01/18/23 09:38	01/19/23 18:38	1
2-Chlorophenol	ND		10	2.3	ug/L		01/18/23 09:38	01/19/23 18:38	1
4-Chlorophenyl phenyl ether	ND		10	2.1	ug/L		01/18/23 09:38	01/19/23 18:38	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 18:38	1
Dibenzofuran	ND		10	0.18	ug/L		01/18/23 09:38	01/19/23 18:38	1
3,3'-Dichlorobenzidine	ND	*+	10	2.7	ug/L		01/18/23 09:38	01/19/23 18:38	1
2,4-Dichlorophenol	ND		10	3.1	ug/L		01/18/23 09:38	01/19/23 18:38	1
Diethyl phthalate	ND		10	0.25	ug/L		01/18/23 09:38	01/19/23 18:38	1
2,4-Dimethylphenol	ND		10	3.6	ug/L		01/18/23 09:38	01/19/23 18:38	1
Dimethyl phthalate	ND		10	0.18	ug/L		01/18/23 09:38	01/19/23 18:38	1
Di-n-butyl phthalate	ND		10	2.8	ug/L		01/18/23 09:38	01/19/23 18:38	1
4,6-Dinitro-ortho-cresol	ND		10	1.7	ug/L		01/18/23 09:38	01/19/23 18:38	1
2,4-Dinitrophenol	ND		31	3.5	ug/L		01/18/23 09:38	01/19/23 18:38	1
2,4-Dinitrotoluene	ND	F1	10	2.0	ug/L		01/18/23 09:38	01/19/23 18:38	1
2,6-Dinitrotoluene	ND		10	2.0	ug/L		01/18/23 09:38	01/19/23 18:38	1
Di-n-octyl phthalate	ND		10	0.18	ug/L		01/18/23 09:38	01/19/23 18:38	1
1,4-Dioxane	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 18:38	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 18:38	1
Hexachlorobenzene	ND		10	0.18	ug/L		01/18/23 09:38	01/19/23 18:38	1
Hexachlorocyclopentadiene	ND		21	2.7	ug/L		01/18/23 09:38	01/19/23 18:38	1
Hexachloroethane	ND		10	4.3	ug/L		01/18/23 09:38	01/19/23 18:38	1
Indene	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 18:38	1
Isophorone	ND		10	0.14	ug/L		01/18/23 09:38	01/19/23 18:38	1
2-Methylphenol	ND		10	1.9	ug/L		01/18/23 09:38	01/19/23 18:38	1
3 & 4 Methylphenol	ND		21	0.40	ug/L		01/18/23 09:38	01/19/23 18:38	1
2-Nitroaniline	ND		10	2.3	ug/L		01/18/23 09:38	01/19/23 18:38	1
3-Nitroaniline	ND		10	1.9	ug/L		01/18/23 09:38	01/19/23 18:38	1
4-Nitroaniline	ND		10	1.5	ug/L		01/18/23 09:38	01/19/23 18:38	1
Nitrobenzene	ND		10	0.13	ug/L		01/18/23 09:38	01/19/23 18:38	1
2-Nitrophenol	ND		10	5.4	ug/L		01/18/23 09:38	01/19/23 18:38	1
4-Nitrophenol	ND		10	2.2	ug/L		01/18/23 09:38	01/19/23 18:38	1
N-Nitrosodimethylamine	ND		10	3.6	ug/L		01/18/23 09:38	01/19/23 18:38	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231766-1

Client Sample ID: MW11-ROX-011223
Date Collected: 01/12/23 09:30
Date Received: 01/13/23 09:14

Lab Sample ID: 400-231766-3
Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		10	3.4	ug/L		01/18/23 09:38	01/19/23 18:38	1
N-Nitrosodiphenylamine	ND		10	0.19	ug/L		01/18/23 09:38	01/19/23 18:38	1
Pentachlorophenol	ND		21	1.4	ug/L		01/18/23 09:38	01/19/23 18:38	1
Phenol	ND		10	2.7	ug/L		01/18/23 09:38	01/19/23 18:38	1
Pyridine	ND		10	3.3	ug/L		01/18/23 09:38	01/19/23 18:38	1
Quinoline	ND	F1	10	4.6	ug/L		01/18/23 09:38	01/19/23 18:38	1
2,4,5-Trichlorophenol	ND		10	3.8	ug/L		01/18/23 09:38	01/19/23 18:38	1
2,4,6-Trichlorophenol	ND		10	3.6	ug/L		01/18/23 09:38	01/19/23 18:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*107*		*46 - 124*	*01/18/23 09:38*	*01/19/23 18:38*	*1*
2-Fluorophenol	*51*		*13 - 113*	*01/18/23 09:38*	*01/19/23 18:38*	*1*
Nitrobenzene-d5	*106*		*36 - 126*	*01/18/23 09:38*	*01/19/23 18:38*	*1*
Phenol-d5	*90*		*17 - 127*	*01/18/23 09:38*	*01/19/23 18:38*	*1*
Terphenyl-d14	*148*		*44 - 149*	*01/18/23 09:38*	*01/19/23 18:38*	*1*
2,4,6-Tribromophenol	*81*		*26 - 150*	*01/18/23 09:38*	*01/19/23 18:38*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+ F1	0.030	0.017	ug/L		01/25/23 10:29	01/26/23 22:16	1
1,2-D bromoethane	ND	F1	0.020	0.015	ug/L		01/25/23 10:29	01/26/23 22:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*	*p*	*51 - 149*	*01/25/23 10:29*	*01/26/23 22:16*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231766-1

Client Sample ID: MW10-ROX-011223
Date Collected: 01/12/23 10:45
Date Received: 01/13/23 09:14

Lab Sample ID: 400-231766-4
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/17/23 18:03	1
Acrolein	ND		20	3.3	ug/L			01/17/23 18:03	1
Acrylonitrile	ND		10	2.8	ug/L			01/17/23 18:03	1
Benzene	ND		1.0	0.13	ug/L			01/17/23 18:03	1
Bromobenzene	ND		1.0	0.54	ug/L			01/17/23 18:03	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/17/23 18:03	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/17/23 18:03	1
Bromoform	ND		5.0	0.25	ug/L			01/17/23 18:03	1
Bromomethane	ND		1.0	0.98	ug/L			01/17/23 18:03	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/17/23 18:03	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/17/23 18:03	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/17/23 18:03	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/17/23 18:03	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/17/23 18:03	1
Chloroethane	ND		1.0	0.76	ug/L			01/17/23 18:03	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/17/23 18:03	1
Chloroform	ND		1.0	1.0	ug/L			01/17/23 18:03	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/17/23 18:03	1
Chloromethane	ND		1.0	0.32	ug/L			01/17/23 18:03	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/17/23 18:03	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/17/23 18:03	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/17/23 18:03	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/17/23 18:03	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/17/23 18:03	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/17/23 18:03	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/17/23 18:03	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/17/23 18:03	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/17/23 18:03	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/17/23 18:03	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/17/23 18:03	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/17/23 18:03	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/17/23 18:03	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/17/23 18:03	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/17/23 18:03	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/17/23 18:03	1
2-Hexanone	ND		25	1.4	ug/L			01/17/23 18:03	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/17/23 18:03	1
Methylene bromide	ND		5.0	0.22	ug/L			01/17/23 18:03	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/17/23 18:03	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/17/23 18:03	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/17/23 18:03	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/17/23 18:03	1
Naphthalene	ND		5.0	3.0	ug/L			01/17/23 18:03	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/17/23 18:03	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/17/23 18:03	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/17/23 18:03	1
o-Xylene	ND		5.0	0.60	ug/L			01/17/23 18:03	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/17/23 18:03	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/17/23 18:03	1

Client Sample ID: MW10-ROX-011223
Date Collected: 01/12/23 10:45
Date Received: 01/13/23 09:14

Lab Sample ID: 400-231766-4
Matrix: Water

Method: SW846 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			01/17/23 18:03	1
Styrene	ND		1.0	1.0	ug/L			01/17/23 18:03	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/17/23 18:03	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/17/23 18:03	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/17/23 18:03	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/17/23 18:03	1
Toluene	ND		1.0	0.41	ug/L			01/17/23 18:03	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/17/23 18:03	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/17/23 18:03	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/17/23 18:03	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/17/23 18:03	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/17/23 18:03	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/17/23 18:03	1
Trichloroethene	ND		1.0	0.15	ug/L			01/17/23 18:03	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/17/23 18:03	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/17/23 18:03	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/17/23 18:03	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/17/23 18:03	1
Vinyl acetate	ND		25	0.93	ug/L			01/17/23 18:03	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/17/23 18:03	1
Xylenes, Total	ND		10	1.6	ug/L			01/17/23 18:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*72 - 119*		*01/17/23 18:03*	*1*
Dibromofluoromethane	*111*		*75 - 126*		*01/17/23 18:03*	*1*
Toluene-d8 (Surr)	*91*		*64 - 132*		*01/17/23 18:03*	*1*

Method: SW846 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	0.033	ug/L		01/18/23 09:38	01/21/23 04:23	1
Acenaphthylene	ND		0.21	0.046	ug/L		01/18/23 09:38	01/21/23 04:23	1
Anthracene	ND		0.21	0.033	ug/L		01/18/23 09:38	01/21/23 04:23	1
Benzo[a]anthracene	ND		0.21	0.047	ug/L		01/18/23 09:38	01/21/23 04:23	1
Benzo[a]pyrene	ND		0.21	0.043	ug/L		01/18/23 09:38	01/21/23 04:23	1
Benzo[b]fluoranthene	ND		0.21	0.035	ug/L		01/18/23 09:38	01/21/23 04:23	1
Benzo[g,h,i]perylene	ND		0.21	0.13	ug/L		01/18/23 09:38	01/21/23 04:23	1
Benzo[k]fluoranthene	ND		0.21	0.10	ug/L		01/18/23 09:38	01/21/23 04:23	1
Chrysene	ND		0.21	0.076	ug/L		01/18/23 09:38	01/21/23 04:23	1
Dibenz(a,h)anthracene	ND		0 21	0 051	ug/L		01/18/23 09 38	01/21/23 04 23	1
Fluoranthene	ND		0.21	0.070	ug/L		01/18/23 09:38	01/21/23 04:23	1
Fluorene	ND		0.21	0.11	ug/L		01/18/23 09:38	01/21/23 04:23	1
Indeno[1,2,3-cd]pyrene	ND		0.21	0.044	ug/L		01/18/23 09:38	01/21/23 04:23	1
1-Methylnaphthalene	ND		0.21	0.076	ug/L		01/18/23 09:38	01/21/23 04:23	1
2-Methylnaphthalene	ND		0.21	0.062	ug/L		01/18/23 09:38	01/21/23 04:23	1
Phenanthrene	ND		0.21	0.037	ug/L		01/18/23 09:38	01/21/23 04:23	1
Pyrene	ND		0.21	0.041	ug/L		01/18/23 09:38	01/21/23 04:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*82*		*15 - 122*	*01/18/23 09:38*	*01/21/23 04:23*	*1*
Nitrobenzene-d5	*80*		*19 - 130*	*01/18/23 09:38*	*01/21/23 04:23*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231766-1

Client Sample ID: MW10-ROX-011223
Date Collected: 01/12/23 10:45
Date Received: 01/13/23 09:14

Lab Sample ID: 400-231766-4
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*106*		*33 - 138*	*01/18/23 09:38*	*01/21/23 04:23*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.9	ug/L		01/18/23 09:38	01/19/23 18:59	1
Benzenethiol	ND	*-	10	1.7	ug/L		01/18/23 09:38	01/19/23 18:59	1
Benzoic acid	ND		31	7.5	ug/L		01/18/23 09:38	01/19/23 18:59	1
Benzyl alcohol	ND		10	2.1	ug/L		01/18/23 09:38	01/19/23 18:59	1
Bis(2-chloroethoxy)methane	ND		10	0.16	ug/L		01/18/23 09:38	01/19/23 18:59	1
Bis(2-chloroethyl)ether	ND		10	2.8	ug/L		01/18/23 09:38	01/19/23 18:59	1
bis (2-chloroisopropyl) ether	ND		10	0.16	ug/L		01/18/23 09:38	01/19/23 18:59	1
Bis(2-ethylhexyl) phthalate	ND		10	5.1	ug/L		01/18/23 09:38	01/19/23 18:59	1
4-Bromophenyl phenyl ether	ND		10	0.21	ug/L		01/18/23 09:38	01/19/23 18:59	1
Butyl benzyl phthalate	ND		10	0.20	ug/L		01/18/23 09:38	01/19/23 18:59	1
4-Chloroaniline	ND		10	3.5	ug/L		01/18/23 09:38	01/19/23 18:59	1
4-Chloro-3-methylphenol	ND		10	3.9	ug/L		01/18/23 09:38	01/19/23 18:59	1
2-Chloronaphthalene	ND		10	0.14	ug/L		01/18/23 09:38	01/19/23 18:59	1
2-Chlorophenol	ND		10	2.3	ug/L		01/18/23 09:38	01/19/23 18:59	1
4-Chlorophenyl phenyl ether	ND		10	2.1	ug/L		01/18/23 09:38	01/19/23 18:59	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 18:59	1
Dibenzofuran	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 18:59	1
3,3'-Dichlorobenzidine	ND	*+	10	2.7	ug/L		01/18/23 09:38	01/19/23 18:59	1
2,4-Dichlorophenol	ND		10	3.1	ug/L		01/18/23 09:38	01/19/23 18:59	1
Diethyl phthalate	ND		10	0.25	ug/L		01/18/23 09:38	01/19/23 18:59	1
2,4-Dimethylphenol	ND		10	3.6	ug/L		01/18/23 09:38	01/19/23 18:59	1
Dimethyl phthalate	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 18:59	1
Di-n-butyl phthalate	ND		10	2.8	ug/L		01/18/23 09:38	01/19/23 18:59	1
4,6-Dinitro-ortho-cresol	ND		10	1.6	ug/L		01/18/23 09:38	01/19/23 18:59	1
2,4-Dinitrophenol	ND		31	3.5	ug/L		01/18/23 09:38	01/19/23 18:59	1
2,4-Dinitrotoluene	ND		10	2.0	ug/L		01/18/23 09:38	01/19/23 18:59	1
2,6-Dinitrotoluene	ND		10	2.0	ug/L		01/18/23 09:38	01/19/23 18:59	1
Di-n-octyl phthalate	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 18:59	1
1,4-Dioxane	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 18:59	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 18:59	1
Hexachlorobenzene	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 18:59	1
Hexachlorocyclopentadiene	ND		21	2.7	ug/L		01/18/23 09:38	01/19/23 18:59	1
Hexachloroethane	ND		10	4.3	ug/L		01/18/23 09:38	01/19/23 18:59	1
Indene	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 18:59	1
Isophorone	ND		10	0.14	ug/L		01/18/23 09:38	01/19/23 18:59	1
2-Methylphenol	ND		10	1.8	ug/L		01/18/23 09:38	01/19/23 18:59	1
3 & 4 Methylphenol	ND		21	0.40	ug/L		01/18/23 09:38	01/19/23 18:59	1
2-Nitroaniline	ND		10	2.3	ug/L		01/18/23 09:38	01/19/23 18:59	1
3-Nitroaniline	ND		10	1.8	ug/L		01/18/23 09:38	01/19/23 18:59	1
4-Nitroaniline	ND		10	1.5	ug/L		01/18/23 09:38	01/19/23 18:59	1
Nitrobenzene	ND		10	0.13	ug/L		01/18/23 09:38	01/19/23 18:59	1
2-Nitrophenol	ND		10	5.3	ug/L		01/18/23 09:38	01/19/23 18:59	1
4-Nitrophenol	ND		10	2.2	ug/L		01/18/23 09:38	01/19/23 18:59	1
N-Nitrosodimethylamine	ND		10	3.6	ug/L		01/18/23 09:38	01/19/23 18:59	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231766-1

Client Sample ID: MW10-ROX-011223
Date Collected: 01/12/23 10:45
Date Received: 01/13/23 09:14

Lab Sample ID: 400-231766-4
Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		10	3.4	ug/L		01/18/23 09:38	01/19/23 18:59	1
N-Nitrosodiphenylamine	ND		10	0.18	ug/L		01/18/23 09:38	01/19/23 18:59	1
Pentachlorophenol	ND		21	1.4	ug/L		01/18/23 09:38	01/19/23 18:59	1
Phenol	ND		10	2.7	ug/L		01/18/23 09:38	01/19/23 18:59	1
Pyridine	ND		10	3.3	ug/L		01/18/23 09:38	01/19/23 18:59	1
Quinoline	ND		10	4.6	ug/L		01/18/23 09:38	01/19/23 18:59	1
2,4,5-Trichlorophenol	ND		10	3.8	ug/L		01/18/23 09:38	01/19/23 18:59	1
2,4,6-Trichlorophenol	ND		10	3.6	ug/L		01/18/23 09:38	01/19/23 18:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*94*		*46 - 124*	*01/18/23 09:38*	*01/19/23 18:59*	*1*
2-Fluorophenol	*43*		*13 - 113*	*01/18/23 09:38*	*01/19/23 18:59*	*1*
Nitrobenzene-d5	*94*		*36 - 126*	*01/18/23 09:38*	*01/19/23 18:59*	*1*
Phenol-d5	*79*		*17 - 127*	*01/18/23 09:38*	*01/19/23 18:59*	*1*
Terphenyl-d14	*125*		*44 - 149*	*01/18/23 09:38*	*01/19/23 18:59*	*1*
2,4,6-Tribromophenol	*68*		*26 - 150*	*01/18/23 09:38*	*01/19/23 18:59*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.029	0.017	ug/L		01/25/23 10:29	01/26/23 23:17	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/25/23 10:29	01/26/23 23:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*	*p*	*51 - 149*	*01/25/23 10:29*	*01/26/23 23:17*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231766-1

Client Sample ID: MW24-ROX-011223
Date Collected: 01/12/23 13:55
Date Received: 01/13/23 09:14

Lab Sample ID: 400-231766-5
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/17/23 18:28	1
Acrolein	ND		20	3.3	ug/L			01/17/23 18:28	1
Acrylonitrile	ND		10	2.8	ug/L			01/17/23 18:28	1
Benzene	ND		1.0	0.13	ug/L			01/17/23 18:28	1
Bromobenzene	ND		1.0	0.54	ug/L			01/17/23 18:28	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/17/23 18:28	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/17/23 18:28	1
Bromoform	ND		5.0	0.25	ug/L			01/17/23 18:28	1
Bromomethane	ND		1.0	0.98	ug/L			01/17/23 18:28	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/17/23 18:28	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/17/23 18:28	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/17/23 18:28	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/17/23 18:28	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/17/23 18:28	1
Chloroethane	ND		1.0	0.76	ug/L			01/17/23 18:28	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/17/23 18:28	1
Chloroform	ND		1.0	1.0	ug/L			01/17/23 18:28	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/17/23 18:28	1
Chloromethane	ND		1.0	0.32	ug/L			01/17/23 18:28	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/17/23 18:28	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/17/23 18:28	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/17/23 18:28	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/17/23 18:28	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/17/23 18:28	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/17/23 18:28	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/17/23 18:28	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/17/23 18:28	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/17/23 18:28	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/17/23 18:28	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/17/23 18:28	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/17/23 18:28	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/17/23 18:28	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/17/23 18:28	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/17/23 18:28	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/17/23 18:28	1
2-Hexanone	ND		25	1.4	ug/L			01/17/23 18:28	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/17/23 18:28	1
Methylene bromide	ND		5.0	0.22	ug/L			01/17/23 18:28	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/17/23 18:28	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/17/23 18:28	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/17/23 18:28	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/17/23 18:28	1
Naphthalene	ND		5.0	3.0	ug/L			01/17/23 18:28	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/17/23 18:28	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/17/23 18:28	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/17/23 18:28	1
o-Xylene	ND		5.0	0.60	ug/L			01/17/23 18:28	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/17/23 18:28	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/17/23 18:28	1

Client Sample ID: MW24-ROX-011223
Date Collected: 01/12/23 13:55
Date Received: 01/13/23 09:14

Lab Sample ID: 400-231766-5
Matrix: Water

Method: SW846 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			01/17/23 18:28	1
Styrene	ND		1.0	1.0	ug/L			01/17/23 18:28	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/17/23 18:28	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/17/23 18:28	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/17/23 18:28	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/17/23 18:28	1
Toluene	ND		1.0	0.41	ug/L			01/17/23 18:28	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/17/23 18:28	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/17/23 18:28	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/17/23 18:28	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/17/23 18:28	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/17/23 18:28	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/17/23 18:28	1
Trichloroethene	ND		1.0	0.15	ug/L			01/17/23 18:28	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/17/23 18:28	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/17/23 18:28	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/17/23 18:28	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/17/23 18:28	1
Vinyl acetate	ND		25	0.93	ug/L			01/17/23 18:28	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/17/23 18:28	1
Xylenes, Total	ND		10	1.6	ug/L			01/17/23 18:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*72 - 119*		*01/17/23 18:28*	*1*
Dibromofluoromethane	*110*		*75 - 126*		*01/17/23 18:28*	*1*
Toluene-d8 (Surr)	*92*		*64 - 132*		*01/17/23 18:28*	*1*

Method: SW846 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	0.034	ug/L		01/18/23 09:38	01/21/23 04:40	1
Acenaphthylene	ND		0.21	0.047	ug/L		01/18/23 09:38	01/21/23 04:40	1
Anthracene	ND		0.21	0.034	ug/L		01/18/23 09:38	01/21/23 04:40	1
Benzo[a]anthracene	ND		0.21	0.048	ug/L		01/18/23 09:38	01/21/23 04:40	1
Benzo[a]pyrene	ND		0.21	0.044	ug/L		01/18/23 09:38	01/21/23 04:40	1
Benzo[b]fluoranthene	**0.13**	**J**	0.21	0.036	ug/L		01/18/23 09:38	01/21/23 04:40	1
Benzo[g,h,i]perylene	ND		0.21	0.14	ug/L		01/18/23 09:38	01/21/23 04:40	1
Benzo[k]fluoranthene	ND		0.21	0.11	ug/L		01/18/23 09:38	01/21/23 04:40	1
Chrysene	ND		0.21	0.078	ug/L		01/18/23 09:38	01/21/23 04:40	1
Dibenz(a,h)anthracene	**0.063**	**J**	0.21	0.053	ug/L		01/18/23 09:38	01/21/23 04:40	1
Fluoranthene	ND		0.21	0.071	ug/L		01/18/23 09:38	01/21/23 04:40	1
Fluorene	ND		0.21	0.12	ug/L		01/18/23 09:38	01/21/23 04:40	1
Indeno[1,2,3-cd]pyrene	**0.065**	**J**	0.21	0.045	ug/L		01/18/23 09:38	01/21/23 04:40	1
1-Methylnaphthalene	ND		0.21	0.078	ug/L		01/18/23 09:38	01/21/23 04:40	1
2-Methylnaphthalene	ND		0.21	0.063	ug/L		01/18/23 09:38	01/21/23 04:40	1
Phenanthrene	**0.066**	**J**	0.21	0.038	ug/L		01/18/23 09:38	01/21/23 04:40	1
Pyrene	ND		0.21	0.042	ug/L		01/18/23 09:38	01/21/23 04:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*77*		*15 - 122*	*01/18/23 09:38*	*01/21/23 04:40*	*1*
Nitrobenzene-d5	*74*		*19 - 130*	*01/18/23 09:38*	*01/21/23 04:40*	*1*

Client Sample ID: MW24-ROX-011223
Date Collected: 01/12/23 13:55
Date Received: 01/13/23 09:14

Lab Sample ID: 400-231766-5
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*99*		*33 - 138*	*01/18/23 09:38*	*01/21/23 04:40*	*1*

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	**0.086**	**J H**	0.21	0.036	ug/L		01/18/23 09:38	02/28/23 19:13	1
Indeno[1,2,3-cd]pyrene	**0.13**	**J H**	0.21	0.045	ug/L		01/18/23 09:38	02/28/23 19:13	1
Phenanthrene	ND	H	0.21	0.038	ug/L		01/18/23 09:38	02/28/23 19:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*83*		*15 - 122*	*01/18/23 09:38*	*02/28/23 19:13*	*1*
Nitrobenzene-d5	*84*		*19 - 130*	*01/18/23 09:38*	*02/28/23 19:13*	*1*
Terphenyl-d14	*97*		*33 - 138*	*01/18/23 09:38*	*02/28/23 19:13*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		11	4.0	ug/L		01/18/23 09:38	01/19/23 19:20	1
Benzenethiol	ND	*-	11	1.8	ug/L		01/18/23 09:38	01/19/23 19:20	1
Benzoic acid	ND		32	7.7	ug/L		01/18/23 09:38	01/19/23 19:20	1
Benzyl alcohol	ND		11	2.1	ug/L		01/18/23 09:38	01/19/23 19:20	1
Bis(2-chloroethoxy)methane	ND		11	0.17	ug/L		01/18/23 09:38	01/19/23 19:20	1
Bis(2-chloroethyl)ether	ND		11	2.8	ug/L		01/18/23 09:38	01/19/23 19:20	1
bis (2-chloroisopropyl) ether	ND		11	0.17	ug/L		01/18/23 09:38	01/19/23 19:20	1
Bis(2-ethylhexyl) phthalate	ND		11	5.3	ug/L		01/18/23 09:38	01/19/23 19:20	1
4-Bromophenyl phenyl ether	ND		11	0.21	ug/L		01/18/23 09:38	01/19/23 19:20	1
Butyl benzyl phthalate	ND		11	0.20	ug/L		01/18/23 09:38	01/19/23 19:20	1
4-Chloroaniline	ND		11	3.6	ug/L		01/18/23 09:38	01/19/23 19:20	1
4-Chloro-3-methylphenol	ND		11	4.0	ug/L		01/18/23 09:38	01/19/23 19:20	1
2-Chloronaphthalene	ND		11	0.15	ug/L		01/18/23 09:38	01/19/23 19:20	1
2-Chlorophenol	ND		11	2.3	ug/L		01/18/23 09:38	01/19/23 19:20	1
4-Chlorophenyl phenyl ether	ND		11	2.1	ug/L		01/18/23 09:38	01/19/23 19:20	1
Dibenz[a,h]acridine	ND		11	1.1	ug/L		01/18/23 09:38	01/19/23 19:20	1
Dibenzofuran	ND		11	0.18	ug/L		01/18/23 09:38	01/19/23 19:20	1
3,3'-Dichlorobenzidine	ND	*+	11	2.7	ug/L		01/18/23 09:38	01/19/23 19:20	1
2,4-Dichlorophenol	ND		11	3.2	ug/L		01/18/23 09:38	01/19/23 19:20	1
Diethyl phthalate	ND		11	0.25	ug/L		01/18/23 09:38	01/19/23 19:20	1
2,4-Dimethylphenol	ND		11	3.7	ug/L		01/18/23 09:38	01/19/23 19:20	1
Dimethyl phthalate	ND		11	0.18	ug/L		01/18/23 09:38	01/19/23 19:20	1
Di-n-butyl phthalate	ND		11	2.8	ug/L		01/18/23 09:38	01/19/23 19:20	1
4,6-Dinitro-ortho-cresol	ND		11	1.7	ug/L		01/18/23 09:38	01/19/23 19:20	1
2,4-Dinitrophenol	ND		32	3.6	ug/L		01/18/23 09:38	01/19/23 19:20	1
2,4-Dinitrotoluene	ND		11	2.0	ug/L		01/18/23 09:38	01/19/23 19:20	1
2,6-Dinitrotoluene	ND		11	2.0	ug/L		01/18/23 09:38	01/19/23 19:20	1
Di-n-octyl phthalate	ND		11	0.18	ug/L		01/18/23 09:38	01/19/23 19:20	1
1,4-Dioxane	ND		11	1.1	ug/L		01/18/23 09:38	01/19/23 19:20	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		11	1.1	ug/L		01/18/23 09:38	01/19/23 19:20	1
Hexachlorobenzene	ND		11	0.18	ug/L		01/18/23 09:38	01/19/23 19:20	1
Hexachlorocyclopentadiene	ND		21	2.7	ug/L		01/18/23 09:38	01/19/23 19:20	1
Hexachloroethane	ND		11	4.4	ug/L		01/18/23 09:38	01/19/23 19:20	1
Indene	ND		11	1.1	ug/L		01/18/23 09:38	01/19/23 19:20	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231766-1

Client Sample ID: MW24-ROX-011223
Date Collected: 01/12/23 13:55
Date Received: 01/13/23 09:14

Lab Sample ID: 400-231766-5
Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isophorone	ND		11	0.15	ug/L		01/18/23 09:38	01/19/23 19:20	1
2-Methylphenol	ND		11	1.9	ug/L		01/18/23 09:38	01/19/23 19:20	1
3 & 4 Methylphenol	ND		21	0.41	ug/L		01/18/23 09:38	01/19/23 19:20	1
2-Nitroaniline	ND		11	2.3	ug/L		01/18/23 09:38	01/19/23 19:20	1
3-Nitroaniline	ND		11	1.9	ug/L		01/18/23 09:38	01/19/23 19:20	1
4-Nitroaniline	ND		11	1.6	ug/L		01/18/23 09:38	01/19/23 19:20	1
Nitrobenzene	ND		11	0.14	ug/L		01/18/23 09:38	01/19/23 19:20	1
2-Nitrophenol	ND		11	5.5	ug/L		01/18/23 09:38	01/19/23 19:20	1
4-Nitrophenol	ND		11	2.2	ug/L		01/18/23 09:38	01/19/23 19:20	1
N-Nitrosodimethylamine	ND		11	3.7	ug/L		01/18/23 09:38	01/19/23 19:20	1
N-Nitrosodi-n-propylamine	ND		11	3.5	ug/L		01/18/23 09:38	01/19/23 19:20	1
N-Nitrosodiphenylamine	ND		11	0.19	ug/L		01/18/23 09:38	01/19/23 19:20	1
Pentachlorophenol	ND		21	1.5	ug/L		01/18/23 09:38	01/19/23 19:20	1
Phenol	ND		11	2.7	ug/L		01/18/23 09:38	01/19/23 19:20	1
Pyridine	ND		11	3.4	ug/L		01/18/23 09:38	01/19/23 19:20	1
Quinoline	ND		11	4.7	ug/L		01/18/23 09:38	01/19/23 19:20	1
2,4,5-Trichlorophenol	ND		11	3.9	ug/L		01/18/23 09:38	01/19/23 19:20	1
2,4,6-Trichlorophenol	ND		11	3.7	ug/L		01/18/23 09:38	01/19/23 19:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*101*		*46 - 124*	*01/18/23 09:38*	*01/19/23 19:20*	*1*
2-Fluorophenol	*8*	*S1-*	*13 - 113*	*01/18/23 09:38*	*01/19/23 19:20*	*1*
Nitrobenzene-d5	*99*		*36 - 126*	*01/18/23 09:38*	*01/19/23 19:20*	*1*
Phenol-d5	*32*		*17 - 127*	*01/18/23 09:38*	*01/19/23 19:20*	*1*
Terphenyl-d14	*129*		*44 - 149*	*01/18/23 09:38*	*01/19/23 19:20*	*1*
2,4,6-Tribromophenol	*31*		*26 - 150*	*01/18/23 09:38*	*01/19/23 19:20*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.030	0.017	ug/L		01/25/23 10:29	01/26/23 23:37	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/25/23 10:29	01/26/23 23:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*	*p*	*51 - 149*	*01/25/23 10:29*	*01/26/23 23:37*	*1*

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits

GC/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds 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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231766-1

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	(72-119)	(75-126)	(64-132)
400-231766-1	TB-ROX-011223-8260	96	109	91
400-231766-3	MW11-ROX-011223	96	111	91
400-231766-3 MS	MW11-ROX-011223	95	108	91
400-231766-3 MSD	MW11-ROX-011223	96	107	93
400-231766-4	MW10-ROX-011223	95	111	91
400-231766-5	MW24-ROX-011223	98	110	92
LCS 400-608743/1002	Lab Control Sample	97	108	92
MB 400-608743/4	Method Blank	96	108	92

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	(46-124)	(13-113)	(36-126)	(17-127)	(44-149)	(26-150)
400-231766-3	MW11-ROX-011223	107	51	106	90	148	81
400-231766-3 MS	MW11-ROX-011223	97	35	100	83	129	106
400-231766-3 MSD	MW11-ROX-011223	105	53	110	96	135	117
400-231766-4	MW10-ROX-011223	94	43	94	79	125	68
400-231766-5	MW24-ROX-011223	101	8 S1-	99	32	129	31
LCS 400-608912/2-A	Lab Control Sample	90	53	95	85	117	98
LCS 400-608912/7-A	Lab Control Sample	100	40	97	78	130	50
LCSD 400-608912/8-A	Lab Control Sample Dup	99	40	95	74	131	55
MB 400-608912/1-A	Method Blank	108	11 S1-	107	54	144	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)		
		FBP	NBZ	TPHL
Lab Sample ID	Client Sample ID	(15-122)	(19-130)	(33-138)
400-231766-3	MW11-ROX-011223	89	87	115
400-231766-3 MS	MW11-ROX-011223	79	47	94
400-231766-3 MSD	MW11-ROX-011223	82	68	90
400-231766-4	MW10-ROX-011223	82	80	106
400-231766-5	MW24-ROX-011223	77	74	99
400-231766-5 - RA	MW24-ROX-011223	83	84	97
LCS 400-608912/2-A	Lab Control Sample	75	54	83

Surrogate Summary

Client: AECOM Technical Services Inc. Job ID: 400-231766-1
Project/Site: ROXANA QUARTERLY GW

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	NBZ	TPHL
Lab Sample ID	Client Sample ID	(15-122)	(19-130)	(33-138)
MB 400-608912/1-A	Method Blank	80	77	102

Surrogate Legend

FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14

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)
400-231766-2	TB-ROX-011223-8011	101 p
400-231766-3	MW11-ROX-011223	97 p
400-231766-3 MS	MW11-ROX-011223	111 p
400-231766-3 MSD	MW11-ROX-011223	117 p
400-231766-4	MW10-ROX-011223	95 p
400-231766-5	MW24-ROX-011223	100 p
LCS 400-609811/2-A	Lab Control Sample	109
LCSD 400-609811/3-A	Lab Control Sample Dup	121
MB 400-609811/1-A	Method Blank	122

Surrogate Legend

BFB = 4-Bromofluorobenzene

Method Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231766-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	EET PEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	EET PEN
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	EET PEN
8011	EDB and DBCP in Water by Microextraction	EPA	EET PEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	EET PEN
5030B	Purge and Trap	SW846	EET PEN
8011	Microextraction	SW846	EET 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:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Client Sample ID: TB-ROX-011223-8260

Lab Sample ID: 400-231766-1

Date Collected: 01/12/23 12:00

Matrix: Water

Date Received: 01/13/23 09:14

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	608743	01/17/23 17:10	JE	EET PEN

Client Sample ID: TB-ROX-011223-8011

Lab Sample ID: 400-231766-2

Date Collected: 01/12/23 12:00

Matrix: Water

Date Received: 01/13/23 09:14

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			36 mL	35 mL	609811	01/25/23 10:29	DS	EET PEN
Total/NA	Analysis	8011		1			610064	01/26/23 21:36	DS	EET PEN

Client Sample ID: MW11-ROX-011223

Lab Sample ID: 400-231766-3

Date Collected: 01/12/23 09:30

Matrix: Water

Date Received: 01/13/23 09:14

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	608743	01/17/23 15:00	JE	EET PEN
Total/NA	Prep	3520C			242.2 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609136	01/19/23 18:38	S1B	EET PEN
Total/NA	Prep	3520C			242.2 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	609371	01/21/23 04:06	KJA	EET PEN
Total/NA	Prep	3520C			242.2 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	611624	02/08/23 19:24	PP1	EET PEN
Total/NA	Prep	8011			35.5 mL	35 mL	609811	01/25/23 10:29	DS	EET PEN
Total/NA	Analysis	8011		1			610064	01/26/23 22:16	DS	EET PEN

Client Sample ID: MW10-ROX-011223

Lab Sample ID: 400-231766-4

Date Collected: 01/12/23 10:45

Matrix: Water

Date Received: 01/13/23 09:14

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	608743	01/17/23 18:03	JE	EET PEN
Total/NA	Prep	3520C			243.4 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609136	01/19/23 18:59	S1B	EET PEN
Total/NA	Prep	3520C			243.4 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	609371	01/21/23 04:23	KJA	EET PEN
Total/NA	Prep	8011			35.7 mL	35 mL	609811	01/25/23 10:29	DS	EET PEN
Total/NA	Analysis	8011		1			610064	01/26/23 23:17	DS	EET PEN

Client Sample ID: MW24-ROX-011223

Lab Sample ID: 400-231766-5

Date Collected: 01/12/23 13:55

Matrix: Water

Date Received: 01/13/23 09:14

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	608743	01/17/23 18:28	JE	EET PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231766-1

Client Sample ID: MW24-ROX-011223

Lab Sample ID: 400-231766-5

Date Collected: 01/12/23 13:55

Matrix: Water

Date Received: 01/13/23 09:14

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			237.8 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609136	01/19/23 19:20	S1B	EET PEN
Total/NA	Prep	3520C			237.8 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	609371	01/21/23 04:40	KJA	EET PEN
Total/NA	Prep	3520C	RA		237.8 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL	RA	1	0.4 mL	0.4 mL	614365	02/28/23 19:13	PP1	EET PEN
Total/NA	Prep	8011			35.1 mL	35 mL	609811	01/25/23 10:29	DS	EET PEN
Total/NA	Analysis	8011		1			610064	01/26/23 23:37	DS	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-608743/4

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	608743	01/17/23 12:24	JE	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-608912/1-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			250 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609136	01/19/23 16:35	S1B	EET PEN
Total/NA	Prep	3520C			250 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	609371	01/21/23 02:57	KJA	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-609811/1-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	609811	01/25/23 10:29	DS	EET PEN
Total/NA	Analysis	8011		1			610064	01/26/23 18:33	DS	EET PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-608743/1002

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	608743	01/17/23 11:23	JE	EET PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-608912/2-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			250 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609136	01/19/23 17:37	S1B	EET PEN
Total/NA	Prep	3520C			250 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL		5	0.4 mL	0.4 mL	609371	01/21/23 03:14	KJA	EET PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-608912/7-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			250 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609136	01/19/23 16:55	S1B	EET PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-609811/2-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	609811	01/25/23 10:29	DS	EET PEN
Total/NA	Analysis	8011		1			610064	01/26/23 18:53	DS	EET PEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-608912/8-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			250 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609136	01/19/23 17:16	S1B	EET PEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-609811/3-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	609811	01/25/23 10:29	DS	EET PEN
Total/NA	Analysis	8011		1			610064	01/26/23 19:14	DS	EET PEN

Client Sample ID: MW11-ROX-011223
Lab Sample ID: 400-231766-3 MS
Date Collected: 01/12/23 09:30
Matrix: Water
Date Received: 01/13/23 09:14

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	608743	01/17/23 15:52	JE	EET PEN
Total/NA	Prep	3520C			237.2 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609136	01/19/23 17:57	S1B	EET PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231766-1

Client Sample ID: MW11-ROX-011223
Date Collected: 01/12/23 09:30
Date Received: 01/13/23 09:14

Lab Sample ID: 400-231766-3 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			237.2 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL		5	0.4 mL	0.4 mL	609371	01/21/23 03:31	KJA	EET PEN
Total/NA	Prep	8011			36.1 mL	35 mL	609811	01/25/23 10:29	DS	EET PEN
Total/NA	Analysis	8011		1			610064	01/26/23 22:37	DS	EET PEN

Client Sample ID: MW11-ROX-011223
Date Collected: 01/12/23 09:30
Date Received: 01/13/23 09:14

Lab Sample ID: 400-231766-3 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	608743	01/17/23 16:18	JE	EET PEN
Total/NA	Prep	3520C			245.8 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609136	01/19/23 18:18	S1B	EET PEN
Total/NA	Prep	3520C			245.8 mL	1 mL	608912	01/18/23 09:38	KWS	EET PEN
Total/NA	Analysis	8270D LL		5	0.4 mL	0.4 mL	609371	01/21/23 03:49	KJA	EET PEN
Total/NA	Prep	8011			36 mL	35 mL	609811	01/25/23 10:29	DS	EET PEN
Total/NA	Analysis	8011		1			610064	01/26/23 22:57	DS	EET PEN

Laboratory References:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

QC Association Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231766-1

GC/MS VOA

Analysis Batch: 608743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231766-1	TB-ROX-011223-8260	Total/NA	Water	8260B	
400-231766-3	MW11-ROX-011223	Total/NA	Water	8260B	
400-231766-4	MW10-ROX-011223	Total/NA	Water	8260B	
400-231766-5	MW24-ROX-011223	Total/NA	Water	8260B	
MB 400-608743/4	Method Blank	Total/NA	Water	8260B	
LCS 400-608743/1002	Lab Control Sample	Total/NA	Water	8260B	
400-231766-3 MS	MW11-ROX-011223	Total/NA	Water	8260B	
400-231766-3 MSD	MW11-ROX-011223	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 608912

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231766-3	MW11-ROX-011223	Total/NA	Water	3520C	
400-231766-4	MW10-ROX-011223	Total/NA	Water	3520C	
400-231766-5 - RA	MW24-ROX-011223	Total/NA	Water	3520C	
400-231766-5	MW24-ROX-011223	Total/NA	Water	3520C	
MB 400-608912/1-A	Method Blank	Total/NA	Water	3520C	
LCS 400-608912/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 400-608912/7-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-608912/8-A	Lab Control Sample Dup	Total/NA	Water	3520C	
400-231766-3 MS	MW11-ROX-011223	Total/NA	Water	3520C	
400-231766-3 MSD	MW11-ROX-011223	Total/NA	Water	3520C	

Analysis Batch: 609136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231766-3	MW11-ROX-011223	Total/NA	Water	8270D	608912
400-231766-4	MW10-ROX-011223	Total/NA	Water	8270D	608912
400-231766-5	MW24-ROX-011223	Total/NA	Water	8270D	608912
MB 400-608912/1-A	Method Blank	Total/NA	Water	8270D	608912
LCS 400-608912/2-A	Lab Control Sample	Total/NA	Water	8270D	608912
LCS 400-608912/7-A	Lab Control Sample	Total/NA	Water	8270D	608912
LCSD 400-608912/8-A	Lab Control Sample Dup	Total/NA	Water	8270D	608912
400-231766-3 MS	MW11-ROX-011223	Total/NA	Water	8270D	608912
400-231766-3 MSD	MW11-ROX-011223	Total/NA	Water	8270D	608912

Analysis Batch: 609371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231766-3	MW11-ROX-011223	Total/NA	Water	8270D LL	608912
400-231766-4	MW10-ROX-011223	Total/NA	Water	8270D LL	608912
400-231766-5	MW24-ROX-011223	Total/NA	Water	8270D LL	608912
MB 400-608912/1-A	Method Blank	Total/NA	Water	8270D LL	608912
LCS 400-608912/2-A	Lab Control Sample	Total/NA	Water	8270D LL	608912
400-231766-3 MS	MW11-ROX-011223	Total/NA	Water	8270D LL	608912
400-231766-3 MSD	MW11-ROX-011223	Total/NA	Water	8270D LL	608912

Analysis Batch: 611624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231766-3	MW11-ROX-011223	Total/NA	Water	8270D LL	608912

QC Association Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231766-1

GC/MS Semi VOA

Analysis Batch: 614365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231766-5 - RA	MW24-ROX-011223	Total/NA	Water	8270D LL	608912

GC Semi VOA

Prep Batch: 609811

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231766-2	TB-ROX-011223-8011	Total/NA	Water	8011	
400-231766-3	MW11-ROX-011223	Total/NA	Water	8011	
400-231766-4	MW10-ROX-011223	Total/NA	Water	8011	
400-231766-5	MW24-ROX-011223	Total/NA	Water	8011	
MB 400-609811/1-A	Method Blank	Total/NA	Water	8011	
LCS 400-609811/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 400-609811/3-A	Lab Control Sample Dup	Total/NA	Water	8011	
400-231766-3 MS	MW11-ROX-011223	Total/NA	Water	8011	
400-231766-3 MSD	MW11-ROX-011223	Total/NA	Water	8011	

Analysis Batch: 610064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231766-2	TB-ROX-011223-8011	Total/NA	Water	8011	609811
400-231766-3	MW11-ROX-011223	Total/NA	Water	8011	609811
400-231766-4	MW10-ROX-011223	Total/NA	Water	8011	609811
400-231766-5	MW24-ROX-011223	Total/NA	Water	8011	609811
MB 400-609811/1-A	Method Blank	Total/NA	Water	8011	609811
LCS 400-609811/2-A	Lab Control Sample	Total/NA	Water	8011	609811
LCSD 400-609811/3-A	Lab Control Sample Dup	Total/NA	Water	8011	609811
400-231766-3 MS	MW11-ROX-011223	Total/NA	Water	8011	609811
400-231766-3 MSD	MW11-ROX-011223	Total/NA	Water	8011	609811

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-608743/4
Matrix: Water
Analysis Batch: 608743

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			01/17/23 12:24	1
Acrolein	ND		20	3.3	ug/L			01/17/23 12:24	1
Acrylonitrile	ND		10	2.8	ug/L			01/17/23 12:24	1
Benzene	ND		1.0	0.13	ug/L			01/17/23 12:24	1
Bromobenzene	ND		1.0	0.54	ug/L			01/17/23 12:24	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/17/23 12:24	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/17/23 12:24	1
Bromoform	ND		5.0	0.25	ug/L			01/17/23 12:24	1
Bromomethane	ND		1.0	0.98	ug/L			01/17/23 12:24	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/17/23 12:24	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/17/23 12:24	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/17/23 12:24	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/17/23 12:24	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/17/23 12:24	1
Chloroethane	ND		1.0	0.76	ug/L			01/17/23 12:24	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/17/23 12:24	1
Chloroform	ND		1.0	1.0	ug/L			01/17/23 12:24	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/17/23 12:24	1
Chloromethane	ND		1.0	0.32	ug/L			01/17/23 12:24	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/17/23 12:24	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/17/23 12:24	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/17/23 12:24	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/17/23 12:24	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/17/23 12:24	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/17/23 12:24	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/17/23 12:24	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/17/23 12:24	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/17/23 12:24	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/17/23 12:24	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/17/23 12:24	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/17/23 12:24	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/17/23 12:24	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/17/23 12:24	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/17/23 12:24	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/17/23 12:24	1
2-Hexanone	ND		25	1.4	ug/L			01/17/23 12:24	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/17/23 12:24	1
Methylene bromide	ND		5.0	0.22	ug/L			01/17/23 12:24	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/17/23 12:24	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/17/23 12:24	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/17/23 12:24	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/17/23 12:24	1
Naphthalene	ND		5.0	3.0	ug/L			01/17/23 12:24	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/17/23 12:24	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/17/23 12:24	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/17/23 12:24	1
o-Xylene	ND		5.0	0.60	ug/L			01/17/23 12:24	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/17/23 12:24	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-608743/4
Matrix: Water
Analysis Batch: 608743

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			01/17/23 12:24	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			01/17/23 12:24	1
Styrene	ND		1.0	1.0	ug/L			01/17/23 12:24	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/17/23 12:24	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/17/23 12:24	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/17/23 12:24	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/17/23 12:24	1
Toluene	ND		1.0	0.41	ug/L			01/17/23 12:24	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/17/23 12:24	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/17/23 12:24	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/17/23 12:24	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/17/23 12:24	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/17/23 12:24	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/17/23 12:24	1
Trichloroethene	ND		1.0	0.15	ug/L			01/17/23 12:24	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/17/23 12:24	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/17/23 12:24	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/17/23 12:24	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/17/23 12:24	1
Vinyl acetate	ND		25	0.93	ug/L			01/17/23 12:24	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/17/23 12:24	1
Xylenes, Total	ND		10	1.6	ug/L			01/17/23 12:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*72 - 119*		*01/17/23 12:24*	*1*
Dibromofluoromethane	*108*		*75 - 126*		*01/17/23 12:24*	*1*
Toluene-d8 (Surr)	*92*		*64 - 132*		*01/17/23 12:24*	*1*

Lab Sample ID: LCS 400-608743/1002
Matrix: Water
Analysis Batch: 608743

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	200	203		ug/L		101	43 - 160
Acrolein	500	460		ug/L		92	38 - 160
Acrylonitrile	500	503		ug/L		101	64 - 142
Benzene	50.0	55.5		ug/L		111	70 - 130
Bromobenzene	50.0	49.2		ug/L		98	70 - 132
Bromochloromethane	50.0	56.6		ug/L		113	70 - 130
Bromodichloromethane	50.0	54.8		ug/L		110	67 - 133
Bromoform	50.0	44.2		ug/L		88	57 - 140
Bromomethane	50.0	53.2		ug/L		106	10 - 160
2-Butanone (MEK)	200	198		ug/L		99	61 - 145
Carbon disulfide	50.0	55.6		ug/L		111	61 - 137
Carbon tetrachloride	50.0	56.9		ug/L		114	61 - 137
Chlorobenzene	50.0	51.0		ug/L		102	70 - 130
Dibromochloromethane	50.0	48.3		ug/L		97	67 - 135
Chloroethane	50.0	49.5		ug/L		99	55 - 141

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-608743/1002
Matrix: Water
Analysis Batch: 608743

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	44.2		ug/L		88	10 - 160
Chloroform	50.0	55.7		ug/L		111	69 - 130
1-Chlorohexane	50.0	53.3		ug/L		107	69 - 130
Chloromethane	50.0	47.8		ug/L		96	58 - 137
cis-1,2-Dichloroethene	50.0	55.8		ug/L		112	68 - 130
cis-1,3-Dichloropropene	50.0	54.1		ug/L		108	69 - 132
1,2-Dichlorobenzene	50.0	49.9		ug/L		100	67 - 130
1,3-Dichlorobenzene	50.0	51.0		ug/L		102	70 - 130
1,4-Dichlorobenzene	50.0	50.9		ug/L		102	70 - 130
Dichlorodifluoromethane	50.0	47.5		ug/L		95	41 - 146
1,1-Dichloroethane	50.0	55.1		ug/L		110	70 - 130
1,2-Dichloroethane	50.0	54.8		ug/L		110	69 - 130
1,1-Dichloroethene	50.0	57.3		ug/L		115	63 - 134
1,2-Dichloropropane	50.0	54.7		ug/L		109	70 - 130
1,3-Dichloropropane	50.0	47.2		ug/L		94	70 - 130
2,2-Dichloropropane	50.0	55.0		ug/L		110	52 - 135
1,1-Dichloropropene	50.0	56.7		ug/L		113	70 - 130
Ethylbenzene	50.0	51.7		ug/L		103	70 - 130
Ethyl methacrylate	50.0	45.6		ug/L		91	68 - 130
Hexachlorobutadiene	50.0	53.9		ug/L		108	53 - 140
2-Hexanone	200	176		ug/L		88	65 - 137
Isopropy benzene	50.0	53.4		ug/L		107	70 - 130
Methylene bromide	50.0	54.2		ug/L		108	70 - 130
Methylene Chloride	50.0	54.8		ug/L		110	66 - 135
4-Methyl-2-pentanone (MIBK)	200	196		ug/L		98	69 - 138
Methyl tert-butyl ether	50.0	52.6		ug/L		105	66 - 130
m-Xylene & p-Xylene	50.0	51.2		ug/L		102	70 - 130
Naphthalene	50.0	45.4		ug/L		91	47 - 149
n-Butylbenzene	50.0	54.4		ug/L		109	67 - 130
N-Propylbenzene	50.0	51.5		ug/L		103	70 - 130
o-Chlorotoluene	50.0	50.2		ug/L		100	70 - 130
o-Xylene	50.0	51.4		ug/L		103	70 - 130
p-Chlorotoluene	50.0	49.8		ug/L		100	70 - 130
p-Isopropyltoluene	50.0	53.7		ug/L		107	65 - 130
sec-Butylbenzene	50.0	52.6		ug/L		105	66 - 130
Styrene	50.0	50.7		ug/L		101	70 - 130
tert-Butylbenzene	50.0	49.7		ug/L		99	64 - 139
1,1,1,2-Tetrachloroethane	50.0	49.6		ug/L		99	67 - 131
1,1,2,2-Tetrachloroethane	50.0	44.1		ug/L		88	70 - 131
Tetrachloroethene	50.0	53.0		ug/L		106	65 - 130
Toluene	50.0	50.1		ug/L		100	70 - 130
trans-1,2-Dichloroethene	50.0	56.8		ug/L		114	70 - 130
trans-1,3-Dichloropropene	50.0	47.8		ug/L		96	63 - 130
1,2,3-Trichlorobenzene	50.0	50.9		ug/L		102	60 - 138
1,2,4-Trichlorobenzene	50.0	52.0		ug/L		104	60 - 140
1,1,1-Trichloroethane	50.0	56.6		ug/L		113	68 - 130
1,1,2-Trichloroethane	50.0	47.4		ug/L		95	70 - 130
Trichloroethene	50.0	58.0		ug/L		116	70 - 130
Trichlorofluoromethane	50.0	52.5		ug/L		105	65 - 138

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-608743/1002
Matrix: Water
Analysis Batch: 608743

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	50.0	43.9		ug/L		88	70 - 130
1,2,4-Trimethy benzene	50.0	50.7		ug/L		101	70 - 130
1,3,5-Trimethy benzene	50.0	50.7		ug/L		101	69 - 130
Vinyl acetate	100	104		ug/L		104	26 - 160
Vinyl chloride	50.0	49.7		ug/L		99	59 - 136
Xylenes, Total	100	103		ug/L		103	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*97*		*72 - 119*
Dibromofluoromethane	*108*		*75 - 126*
Toluene-d8 (Surr)	*92*		*64 - 132*

Lab Sample ID: 400-231766-3 MS
Matrix: Water
Analysis Batch: 608743

Client Sample ID: MW11-ROX-011223
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	ND		200	252		ug/L		126	43 - 150
Acrolein	ND		500	567		ug/L		113	38 - 150
Acrylonitrile	ND		500	634		ug/L		127	62 - 149
Benzene	ND		50.0	59.0		ug/L		118	56 - 142
Bromobenzene	ND		50.0	42.9		ug/L		86	59 - 136
Bromochloromethane	ND		50.0	63.7		ug/L		127	64 - 140
Bromodichloromethane	ND		50.0	58.5		ug/L		117	59 - 143
Bromoform	ND		50.0	47.9		ug/L		96	50 - 140
Bromomethane	ND		50.0	34.1		ug/L		68	10 - 150
2-Butanone (MEK)	ND		200	248		ug/L		124	55 - 150
Carbon disulfide	ND		50.0	58.9		ug/L		118	48 - 150
Carbon tetrachloride	ND		50.0	58.2		ug/L		116	55 - 145
Chlorobenzene	ND		50.0	45.7		ug/L		91	64 - 130
Dibromochloromethane	ND		50.0	51.9		ug/L		104	56 - 143
Chloroethane	ND		50.0	53.3		ug/L		107	50 - 150
2-Chloroethyl vinyl ether	ND	F1	50.0	ND	F1	ug/L		0	10 - 150
Chloroform	ND		50.0	60.7		ug/L		121	60 - 141
1-Chlorohexane	ND		50.0	40.2		ug/L		80	56 - 136
Chloromethane	ND		50.0	52.3		ug/L		105	49 - 148
cis-1,2-Dichloroethene	ND		50.0	56.2		ug/L		112	59 - 143
cis-1,3-Dichloropropene	ND		50.0	57.3		ug/L		115	57 - 140
1,2-Dichlorobenzene	ND		50.0	41.1		ug/L		82	52 - 137
1,3-Dichlorobenzene	ND		50.0	38.4		ug/L		77	54 - 135
1,4-Dichlorobenzene	ND		50.0	38.1		ug/L		76	53 - 135
Dichlorodifluoromethane	ND		50.0	52.3		ug/L		105	16 - 150
1,1-Dichloroethane	ND		50.0	59.9		ug/L		120	61 - 144
1,2-Dichloroethane	ND		50.0	61.4		ug/L		123	60 - 141
1,1-Dichloroethene	ND		50.0	60.6		ug/L		121	54 - 147
1,2-Dichloropropane	ND		50.0	58.9		ug/L		118	66 - 137
1,3-Dichloropropane	ND		50.0	52.1		ug/L		104	66 - 133
2,2-Dichloropropane	ND		50.0	58.4		ug/L		117	42 - 144

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231766-3 MS
Matrix: Water
Analysis Batch: 608743

Client Sample ID: MW11-ROX-011223
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloropropene	ND		50.0	57.7		ug/L		115	65 - 136
Ethylbenzene	ND		50.0	43.2		ug/L		86	58 - 131
Ethyl methacrylate	ND		50.0	52.5		ug/L		105	64 - 130
Hexachlorobutadiene	ND	F2	50.0	23.6		ug/L		47	31 - 149
2-Hexanone	ND		200	216		ug/L		108	65 - 140
Isopropy benzene	ND		50.0	40.4		ug/L		81	56 - 133
Methylene bromide	ND		50.0	61.4		ug/L		123	63 - 138
Methylene Chloride	ND		50.0	60.3		ug/L		121	60 - 146
4-Methyl-2-pentanone (MIBK)	ND		200	248		ug/L		124	63 - 146
Methyl tert-butyl ether	ND		50.0	62.9		ug/L		126	59 - 137
m-Xylene & p-Xylene	ND		50.0	41.9		ug/L		84	57 - 130
Naphthalene	ND		50.0	45.3		ug/L		91	25 - 150
n-Butylbenzene	ND	F2	50.0	28.4		ug/L		57	41 - 142
N-Propylbenzene	ND		50.0	34.3		ug/L		69	51 - 138
o-Chlorotoluene	ND		50.0	37.2		ug/L		74	53 - 134
o-Xylene	ND		50.0	43.9		ug/L		88	61 - 130
p-Chlorotoluene	ND		50.0	36.2		ug/L		72	54 - 133
p-Isopropyltoluene	ND	F2	50.0	31.6		ug/L		63	48 - 139
sec-Butylbenzene	ND	F2	50.0	32.6		ug/L		65	50 - 138
Styrene	ND		50.0	44.4		ug/L		89	58 - 131
tert-Butylbenzene	ND		50.0	34.4		ug/L		69	54 - 146
1,1,1,2-Tetrachloroethane	ND		50.0	49.4		ug/L		99	59 - 137
1,1,2,2-Tetrachloroethane	ND		50.0	49.8		ug/L		100	66 - 135
Tetrachloroethene	ND		50.0	45.9		ug/L		92	52 - 133
Toluene	ND		50.0	47.6		ug/L		95	65 - 130
trans-1,2-Dichloroethene	ND		50.0	60.4		ug/L		121	61 - 143
trans-1,3-Dichloropropene	ND		50.0	49.9		ug/L		100	53 - 133
1,2,3-Trichlorobenzene	ND		50.0	39.9		ug/L		80	43 - 145
1,2,4-Trichlorobenzene	ND		50.0	37.4		ug/L		75	39 - 148
1,1,1-Trichloroethane	ND		50.0	59.8		ug/L		120	57 - 142
1,1,2-Trichloroethane	ND		50.0	53.6		ug/L		107	66 - 131
Trichloroethene	ND		50.0	58.1		ug/L		116	64 - 136
Trichlorofluoromethane	ND		50.0	57.0		ug/L		114	54 - 150
1,2,3-Trichloropropane	ND		50.0	50.8		ug/L		102	65 - 133
1,2,4-Trimethy benzene	ND		50.0	36.0		ug/L		72	50 - 139
1,3,5-Trimethy benzene	ND		50.0	35.7		ug/L		71	52 - 135
Vinyl acetate	ND		100	119		ug/L		119	26 - 150
Vinyl chloride	ND		50.0	53.9		ug/L		108	46 - 150
Xylenes, Total	ND		100	85.9		ug/L		86	59 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*95*		*72 - 119*
Dibromofluoromethane	*108*		*75 - 126*
Toluene-d8 (Surr)	*91*		*64 - 132*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231766-3 MSD
Matrix: Water
Analysis Batch: 608743

Client Sample ID: MW11-ROX-011223
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	258		ug/L		129	43 - 150	2	30
Acrolein	ND		500	574		ug/L		115	38 - 150	1	31
Acrylonitrile	ND		500	648		ug/L		130	62 - 149	2	30
Benzene	ND		50.0	60.6		ug/L		121	56 - 142	3	30
Bromobenzene	ND		50.0	48.0		ug/L		96	59 - 136	11	30
Bromochloromethane	ND		50.0	64.9		ug/L		130	64 - 140	2	30
Bromodichloromethane	ND		50.0	60.9		ug/L		122	59 - 143	4	30
Bromoform	ND		50.0	50.2		ug/L		100	50 - 140	5	30
Bromomethane	ND		50.0	30.6		ug/L		61	10 - 150	11	50
2-Butanone (MEK)	ND		200	254		ug/L		127	55 - 150	3	30
Carbon disulfide	ND		50.0	60.9		ug/L		122	48 - 150	3	30
Carbon tetrachloride	ND		50.0	61.6		ug/L		123	55 - 145	6	30
Chlorobenzene	ND		50.0	51.3		ug/L		103	64 - 130	11	30
Dibromochloromethane	ND		50.0	54.2		ug/L		108	56 - 143	4	30
Chloroethane	ND		50.0	53.9		ug/L		108	50 - 150	1	30
2-Chloroethyl vinyl ether	ND	F1	50.0	ND	F1	ug/L		0	10 - 150	NC	50
Chloroform	ND		50.0	62.1		ug/L		124	60 - 141	2	30
1-Chlorohexane	ND		50.0	50.0		ug/L		100	56 - 136	22	30
Chloromethane	ND		50.0	52.4		ug/L		105	49 - 148	0	31
cis-1,2-Dichloroethene	ND		50.0	57.0		ug/L		114	59 - 143	1	30
cis-1,3-Dichloropropene	ND		50.0	59.3		ug/L		119	57 - 140	3	30
1,2-Dichlorobenzene	ND		50.0	47.2		ug/L		94	52 - 137	14	30
1,3-Dichlorobenzene	ND		50.0	46.2		ug/L		92	54 - 135	18	30
1,4-Dichlorobenzene	ND		50.0	45.7		ug/L		91	53 - 135	18	30
Dichlorodifluoromethane	ND		50.0	52.9		ug/L		106	16 - 150	1	31
1,1-Dichloroethane	ND		50.0	60.9		ug/L		122	61 - 144	2	30
1,2-Dichloroethane	ND		50.0	62.2		ug/L		124	60 - 141	1	30
1,1-Dichloroethene	ND		50.0	63.2		ug/L		126	54 - 147	4	30
1,2-Dichloropropane	ND		50.0	60.4		ug/L		121	66 - 137	3	30
1,3-Dichloropropane	ND		50.0	53.9		ug/L		108	66 - 133	3	30
2,2-Dichloropropane	ND		50.0	59.4		ug/L		119	42 - 144	2	31
1,1-Dichloropropene	ND		50.0	61.1		ug/L		122	65 - 136	6	30
Ethylbenzene	ND		50.0	50.3		ug/L		101	58 - 131	15	30
Ethyl methacrylate	ND		50.0	54.6		ug/L		109	64 - 130	4	30
Hexachlorobutadiene	ND	F2	50.0	40.0	F2	ug/L		80	31 - 149	52	36
2-Hexanone	ND		200	225		ug/L		112	65 - 140	4	30
Isopropy benzene	ND		50.0	50.3		ug/L		101	56 - 133	22	30
Methylene bromide	ND		50.0	62.2		ug/L		124	63 - 138	1	30
Methylene Chloride	ND		50.0	61.0		ug/L		122	60 - 146	1	32
4-Methyl-2-pentanone (MIBK)	ND		200	254		ug/L		127	63 - 146	2	30
Methyl tert-butyl ether	ND		50.0	63.5		ug/L		127	59 - 137	1	30
m-Xylene & p-Xylene	ND		50.0	49.7		ug/L		99	57 - 130	17	30
Naphthalene	ND		50.0	49.5		ug/L		99	25 - 150	9	30
n-Butylbenzene	ND	F2	50.0	42.9	F2	ug/L		86	41 - 142	40	31
N-Propylbenzene	ND		50.0	45.2		ug/L		90	51 - 138	27	30
o-Chlorotoluene	ND		50.0	45.4		ug/L		91	53 - 134	20	30
o-Xylene	ND		50.0	50.7		ug/L		101	61 - 130	14	30
p-Chlorotoluene	ND		50.0	44.6		ug/L		89	54 - 133	21	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231766-3 MSD
Matrix: Water
Analysis Batch: 608743

Client Sample ID: MW11-ROX-011223
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	F2	50.0	44.3	F2	ug/L		89	48 - 139	33	30
sec-Butylbenzene	ND	F2	50.0	45.5	F2	ug/L		91	50 - 138	33	30
Styrene	ND		50.0	50.5		ug/L		101	58 - 131	13	30
tert-Butylbenzene	ND		50.0	45.0		ug/L		90	54 - 146	27	30
1,1,1,2-Tetrachloroethane	ND		50.0	52.8		ug/L		106	59 - 137	7	30
1,1,2,2-Tetrachloroethane	ND		50.0	51.7		ug/L		103	66 - 135	4	30
Tetrachloroethene	ND		50.0	52.5		ug/L		105	52 - 133	13	30
Toluene	ND		50.0	51.9		ug/L		104	65 - 130	9	30
trans-1,2-Dichloroethene	ND		50.0	61.6		ug/L		123	61 - 143	2	30
trans-1,3-Dichloropropene	ND		50.0	52.6		ug/L		105	53 - 133	5	30
1,2,3-Trichlorobenzene	ND		50.0	46.4		ug/L		93	43 - 145	15	30
1,2,4-Trichlorobenzene	ND		50.0	43.9		ug/L		88	39 - 148	16	30
1,1,1-Trichloroethane	ND		50.0	61.9		ug/L		124	57 - 142	4	30
1,1,2-Trichloroethane	ND		50.0	55.0		ug/L		110	66 - 131	3	30
Trichloroethene	ND		50.0	61.7		ug/L		123	64 - 136	6	30
Trichlorofluoromethane	ND		50.0	57.2		ug/L		114	54 - 150	0	30
1,2,3-Trichloropropane	ND		50.0	53.1		ug/L		106	65 - 133	4	30
1,2,4-Trimethy benzene	ND		50.0	45.4		ug/L		91	50 - 139	23	30
1,3,5-Trimethy benzene	ND		50.0	45.1		ug/L		90	52 - 135	23	30
Vinyl acetate	ND		100	121		ug/L		121	26 - 150	2	33
Vinyl chloride	ND		50.0	54.7		ug/L		109	46 - 150	2	30
Xylenes, Total	ND		100	100		ug/L		100	59 - 130	16	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*96*		*72 - 119*
Dibromofluoromethane	*107*		*75 - 126*
Toluene-d8 (Surr)	*93*		*64 - 132*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-608912/1-A
Matrix: Water
Analysis Batch: 609136

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 608912

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		10	3.8	ug/L		01/18/23 09:38	01/19/23 16:35	1
Benzenethiol	ND		10	1.7	ug/L		01/18/23 09:38	01/19/23 16:35	1
Benzoic acid	ND		30	7.3	ug/L		01/18/23 09:38	01/19/23 16:35	1
Benzyl alcohol	ND		10	2.0	ug/L		01/18/23 09:38	01/19/23 16:35	1
Bis(2-chloroethoxy)methane	ND		10	0.16	ug/L		01/18/23 09:38	01/19/23 16:35	1
Bis(2-chloroethyl)ether	ND		10	2.7	ug/L		01/18/23 09:38	01/19/23 16:35	1
bis (2-chloroisopropyl) ether	ND		10	0.16	ug/L		01/18/23 09:38	01/19/23 16:35	1
Bis(2-ethylhexyl) phthalate	ND		10	5.0	ug/L		01/18/23 09:38	01/19/23 16:35	1
4-Bromophenyl phenyl ether	ND		10	0.20	ug/L		01/18/23 09:38	01/19/23 16:35	1
Butyl benzyl phthalate	ND		10	0.19	ug/L		01/18/23 09:38	01/19/23 16:35	1
4-Chloroaniline	ND		10	3.4	ug/L		01/18/23 09:38	01/19/23 16:35	1
4-Chloro-3-methylphenol	ND		10	3.8	ug/L		01/18/23 09:38	01/19/23 16:35	1
2-Chloronaphthalene	ND		10	0.14	ug/L		01/18/23 09:38	01/19/23 16:35	1
2-Chlorophenol	ND		10	2.2	ug/L		01/18/23 09:38	01/19/23 16:35	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-608912/1-A
Matrix: Water
Analysis Batch: 609136

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 608912

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		01/18/23 09:38	01/19/23 16:35	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 16:35	1
Dibenzofuran	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 16:35	1
3,3'-Dichlorobenzidine	ND		10	2.6	ug/L		01/18/23 09:38	01/19/23 16:35	1
2,4-Dichlorophenol	ND		10	3.0	ug/L		01/18/23 09:38	01/19/23 16:35	1
Diethyl phthalate	ND		10	0.24	ug/L		01/18/23 09:38	01/19/23 16:35	1
2,4-Dimethylphenol	ND		10	3.5	ug/L		01/18/23 09:38	01/19/23 16:35	1
Dimethyl phthalate	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 16:35	1
Di-n-butyl phthalate	ND		10	2.7	ug/L		01/18/23 09:38	01/19/23 16:35	1
4,6-Dinitro-ortho-cresol	ND		10	1.6	ug/L		01/18/23 09:38	01/19/23 16:35	1
2,4-Dinitrophenol	ND		30	3.4	ug/L		01/18/23 09:38	01/19/23 16:35	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		01/18/23 09:38	01/19/23 16:35	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		01/18/23 09:38	01/19/23 16:35	1
Di-n-octyl phthalate	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 16:35	1
1,4-Dioxane	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 16:35	1
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 16:35	1
Hexachlorobenzene	ND		10	0.17	ug/L		01/18/23 09:38	01/19/23 16:35	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		01/18/23 09:38	01/19/23 16:35	1
Hexachloroethane	ND		10	4.2	ug/L		01/18/23 09:38	01/19/23 16:35	1
Indene	ND		10	1.0	ug/L		01/18/23 09:38	01/19/23 16:35	1
Isophorone	ND		10	0.14	ug/L		01/18/23 09:38	01/19/23 16:35	1
2-Methylphenol	ND		10	1.8	ug/L		01/18/23 09:38	01/19/23 16:35	1
3 & 4 Methylphenol	ND		20	0.39	ug/L		01/18/23 09:38	01/19/23 16:35	1
2-Nitroaniline	ND		10	2.2	ug/L		01/18/23 09:38	01/19/23 16:35	1
3-Nitroaniline	ND		10	1.8	ug/L		01/18/23 09:38	01/19/23 16:35	1
4-Nitroaniline	ND		10	1.5	ug/L		01/18/23 09:38	01/19/23 16:35	1
Nitrobenzene	ND		10	0.13	ug/L		01/18/23 09:38	01/19/23 16:35	1
2-Nitrophenol	ND		10	5.2	ug/L		01/18/23 09:38	01/19/23 16:35	1
4-Nitrophenol	ND		10	2.1	ug/L		01/18/23 09:38	01/19/23 16:35	1
N-Nitrosodimethylamine	ND		10	3.5	ug/L		01/18/23 09:38	01/19/23 16:35	1
N-Nitrosodi-n-propylamine	ND		10	3.3	ug/L		01/18/23 09:38	01/19/23 16:35	1
N-Nitrosodiphenylamine	ND		10	0.18	ug/L		01/18/23 09:38	01/19/23 16:35	1
Pentachlorophenol	ND		20	1.4	ug/L		01/18/23 09:38	01/19/23 16:35	1
Phenol	ND		10	2.6	ug/L		01/18/23 09:38	01/19/23 16:35	1
Pyridine	ND		10	3.2	ug/L		01/18/23 09:38	01/19/23 16:35	1
Quinoline	ND		10	4.5	ug/L		01/18/23 09:38	01/19/23 16:35	1
2,4,5-Trichlorophenol	ND		10	3.7	ug/L		01/18/23 09:38	01/19/23 16:35	1
2,4,6-Trichlorophenol	ND		10	3.5	ug/L		01/18/23 09:38	01/19/23 16:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*108*		*46 - 124*	*01/18/23 09:38*	*01/19/23 16:35*	*1*
2-Fluorophenol	*11*	*S1-*	*13 - 113*	*01/18/23 09:38*	*01/19/23 16:35*	*1*
Nitrobenzene-d5	*107*		*36 - 126*	*01/18/23 09:38*	*01/19/23 16:35*	*1*
Phenol-d5	*54*		*17 - 127*	*01/18/23 09:38*	*01/19/23 16:35*	*1*
Terphenyl-d14	*144*		*44 - 149*	*01/18/23 09:38*	*01/19/23 16:35*	*1*
2,4,6-Tribromophenol	*77*		*26 - 150*	*01/18/23 09:38*	*01/19/23 16:35*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-608912/2-A
Matrix: Water
Analysis Batch: 609136

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 608912

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aniline	120	120		ug/L		100	21 - 120
Benzoic acid	554	337		ug/L		61	10 - 144
Benzyl alcohol	120	113		ug/L		95	28 - 120
Bis(2-chloroethoxy)methane	120	96.7		ug/L		81	47 - 120
Bis(2-chloroethyl)ether	120	101		ug/L		84	44 - 120
bis (2-chloroisopropyl) ether	120	101		ug/L		84	33 - 121
Bis(2-ethylhexyl) phthalate	120	120		ug/L		100	52 - 147
4-Bromophenyl phenyl ether	120	111		ug/L		93	54 - 122
Butyl benzyl phthalate	120	136		ug/L		114	54 - 133
4-Chloroaniline	120	94.2		ug/L		79	26 - 120
4-Chloro-3-methylphenol	120	117		ug/L		98	48 - 131
2-Chloronaphthalene	120	112		ug/L		93	52 - 121
2-Chlorophenol	120	89.7		ug/L		75	40 - 120
4-Chlorophenyl phenyl ether	120	119		ug/L		100	56 - 125
Dibenz[a,h]acridine	120	108		ug/L		90	31 - 150
Dibenzofuran	120	118		ug/L		98	56 - 122
3,3'-Dichlorobenzidine	160	248	*+	ug/L		155	36 - 132
2,4-Dichlorophenol	120	101		ug/L		84	49 - 120
Diethyl phthalate	120	116		ug/L		96	50 - 137
2,4-Dimethylphenol	120	103		ug/L		86	48 - 120
Dimethyl phthalate	120	111		ug/L		92	57 - 124
Di-n-butyl phthalate	120	122		ug/L		102	58 - 126
4,6-Dinitro-ortho-cresol	240	175		ug/L		73	23 - 148
2,4-Dinitrophenol	240	201		ug/L		84	10 - 150
2,4-Dinitrotoluene	120	134		ug/L		111	54 - 142
2,6-Dinitrotoluene	120	120		ug/L		100	55 - 130
Di-n-octyl phthalate	120	114		ug/L		95	57 - 138
1,4-Dioxane	120	67.9		ug/L		57	31 - 120
1,2-Diphenylhydrazine (as Azobenzene)	120	112		ug/L		94	45 - 124
Hexachlorobenzene	120	117		ug/L		97	52 - 129
Hexachlorocyclopentadiene	120	91.8		ug/L		77	10 - 134
Hexachloroethane	120	108		ug/L		90	20 - 120
Indene	120	110		ug/L		91	49 - 120
Isophorone	120	99.5		ug/L		83	48 - 120
2-Methylphenol	120	107		ug/L		89	46 - 124
3 & 4 Methylphenol	120	103		ug/L		86	45 - 120
2-Nitroaniline	120	118		ug/L		98	51 - 145
3-Nitroaniline	120	117		ug/L		97	37 - 127
4-Nitroaniline	120	128		ug/L		106	36 - 137
Nitrobenzene	120	99.3		ug/L		83	45 - 120
2-Nitrophenol	120	94.4		ug/L		79	40 - 124
4-Nitrophenol	240	208		ug/L		86	23 - 146
N-Nitrosodimethylamine	120	88.1		ug/L		73	29 - 137
N-Nitrosodi-n-propylamine	120	105		ug/L		88	45 - 120
N-Nitrosodiphenylamine	119	105		ug/L		88	54 - 120
Pentachlorophenol	240	222		ug/L		92	31 - 130
Phenol	120	96.0		ug/L		80	11 - 120
Pyridine	240	184		ug/L		77	16 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-608912/2-A
Matrix: Water
Analysis Batch: 609136

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 608912

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Quinoline	120	117		ug/L		97	49 - 130
2,4,5-Trichlorophenol	120	120		ug/L		100	51 - 136
2,4,6-Trichlorophenol	120	117		ug/L		98	50 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*90*		*46 - 124*
2-Fluorophenol	*53*		*13 - 113*
Nitrobenzene-d5	*95*		*36 - 126*
Phenol-d5	*85*		*17 - 127*
Terphenyl-d14	*117*		*44 - 149*
2,4,6-Tribromophenol	*98*		*26 - 150*

Lab Sample ID: LCS 400-608912/7-A
Matrix: Water
Analysis Batch: 609136

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 608912

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzenethiol	120	7.79	J *-	ug/L		6	10 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*100*		*46 - 124*
2-Fluorophenol	*40*		*13 - 113*
Nitrobenzene-d5	*97*		*36 - 126*
Phenol-d5	*78*		*17 - 127*
Terphenyl-d14	*130*		*44 - 149*
2,4,6-Tribromophenol	*50*		*26 - 150*

Lab Sample ID: LCSD 400-608912/8-A
Matrix: Water
Analysis Batch: 609136

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 608912

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzenethiol	120	9.37	J *-	ug/L		8	10 - 120	18	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*99*		*46 - 124*
2-Fluorophenol	*40*		*13 - 113*
Nitrobenzene-d5	*95*		*36 - 126*
Phenol-d5	*74*		*17 - 127*
Terphenyl-d14	*131*		*44 - 149*
2,4,6-Tribromophenol	*55*		*26 - 150*

Lab Sample ID: 400-231766-3 MS
Matrix: Water
Analysis Batch: 609136

Client Sample ID: MW11-ROX-011223
Prep Type: Total/NA
Prep Batch: 608912

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Aniline	ND	F1	126	137		ug/L		108	10 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231766-3 MS
Matrix: Water
Analysis Batch: 609136

Client Sample ID: MW11-ROX-011223
Prep Type: Total/NA
Prep Batch: 608912

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzoic acid	ND		584	350		ug/L		60	10 - 149
Benzyl alcohol	ND		126	125		ug/L		99	33 - 120
Bis(2-chloroethoxy)methane	ND		126	109		ug/L		86	26 - 120
Bis(2-chloroethyl)ether	ND		126	113		ug/L		90	42 - 120
bis (2-chloroisopropyl) ether	ND		126	111		ug/L		88	28 - 120
Bis(2-ethylhexyl) phthalate	ND		126	149		ug/L		118	39 - 120
4-Bromophenyl phenyl ether	ND		126	128		ug/L		102	40 - 120
Butyl benzyl phthalate	ND	F1	126	162	F1	ug/L		128	45 - 120
4-Chloroaniline	ND		126	113		ug/L		89	10 - 120
4-Chloro-3-methylphenol	ND		126	129		ug/L		102	34 - 120
2-Chloronaphthalene	ND		126	130		ug/L		102	39 - 120
2-Chlorophenol	ND		126	90.4		ug/L		71	25 - 120
4-Chlorophenyl phenyl ether	ND		126	135		ug/L		107	44 - 120
Dibenz[a,h]acridine	ND		126	135		ug/L		107	50 - 150
Dibenzofuran	ND		126	137		ug/L		108	25 - 130
3,3'-Dichlorobenzidine	ND	*+	169	199		ug/L		118	10 - 120
2,4-Dichlorophenol	ND		126	112		ug/L		89	31 - 120
Diethyl phthalate	ND		126	135		ug/L		107	46 - 120
2,4-Dimethylphenol	ND		126	117		ug/L		93	21 - 120
Dimethyl phthalate	ND		126	128		ug/L		102	38 - 120
Di-n-butyl phthalate	ND		126	146		ug/L		116	49 - 120
4,6-Dinitro-ortho-cresol	ND		253	208		ug/L		82	25 - 120
2,4-Dinitrophenol	ND		253	221		ug/L		88	15 - 140
2,4-Dinitrotoluene	ND	F1	126	153	F1	ug/L		121	53 - 120
2,6-Dinitrotoluene	ND		126	137		ug/L		108	43 - 120
Di-n-octyl phthalate	ND		126	143		ug/L		113	35 - 121
1,4-Dioxane	ND		126	88.3		ug/L		70	50 - 150
1,2-Diphenylhydrazine (as Azobenzene)	ND		126	133		ug/L		105	50 - 150
Hexachlorobenzene	ND		126	137		ug/L		108	38 - 122
Hexachlorocyclopentadiene	ND		126	103		ug/L		82	10 - 120
Hexachloroethane	ND		126	117		ug/L		93	10 - 150
Indene	ND		126	123		ug/L		97	50 - 150
Isophorone	ND		126	114		ug/L		90	42 - 120
2-Methylphenol	ND		126	122		ug/L		97	28 - 120
3 & 4 Methylphenol	ND		126	117		ug/L		92	31 - 120
2-Nitroaniline	ND		126	102		ug/L		81	45 - 120
3-Nitroaniline	ND		126	122		ug/L		97	10 - 130
4-Nitroaniline	ND		126	81.1		ug/L		64	10 - 132
Nitrobenzene	ND		126	133		ug/L		105	39 - 120
2-Nitrophenol	ND		126	108		ug/L		85	33 - 120
4-Nitrophenol	ND		253	237		ug/L		94	10 - 120
N-Nitrosodimethylamine	ND		126	94.1		ug/L		74	10 - 139
N-Nitrosodi-n-propylamine	ND		126	117		ug/L		92	37 - 124
N-Nitrosodiphenylamine	ND		125	124		ug/L		99	10 - 150
Pentachlorophenol	ND		253	259		ug/L		102	29 - 130
Phenol	ND		126	101		ug/L		80	10 - 150
Pyridine	ND		253	204		ug/L		80	10 - 120
Quinoline	ND	F1	126	131		ug/L		104	51 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231766-3 MS
Matrix: Water
Analysis Batch: 609136

Client Sample ID: MW11-ROX-011223
Prep Type: Total/NA
Prep Batch: 608912

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2,4,5-Trichlorophenol	ND		126	135		ug/L		107	34 - 120
2,4,6-Trichlorophenol	ND		126	133		ug/L		105	33 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl	*97*		*46 - 124*
2-Fluorophenol	*35*		*13 - 113*
Nitrobenzene-d5	*100*		*36 - 126*
Phenol-d5	*83*		*17 - 127*
Terphenyl-d14	*129*		*44 - 149*
2,4,6-Tribromophenol	*106*		*26 - 150*

Lab Sample ID: 400-231766-3 MSD
Matrix: Water
Analysis Batch: 609136

Client Sample ID: MW11-ROX-011223
Prep Type: Total/NA
Prep Batch: 608912

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aniline	ND	F1	122	149	F1	ug/L		122	10 - 120	9	63
Benzoic acid	ND		563	535		ug/L		95	10 - 149	42	49
Benzyl alcohol	ND		122	134		ug/L		110	33 - 120	7	37
Bis(2-chloroethoxy)methane	ND		122	114		ug/L		93	26 - 120	4	70
Bis(2-chloroethyl)ether	ND		122	115		ug/L		94	42 - 120	1	42
bis (2-chloroisopropyl) ether	ND		122	116		ug/L		95	28 - 120	4	41
Bis(2-ethylhexyl) phthalate	ND		122	147		ug/L		120	39 - 120	1	35
4-Bromophenyl phenyl ether	ND		122	133		ug/L		109	40 - 120	3	30
Butyl benzyl phthalate	ND	F1	122	163	F1	ug/L		134	45 - 120	1	32
4-Chloroaniline	ND		122	116		ug/L		95	10 - 120	2	94
4-Chloro-3-methylphenol	ND		122	137		ug/L		113	34 - 120	6	40
2-Chloronaphthalene	ND		122	136		ug/L		111	39 - 120	5	29
2-Chlorophenol	ND		122	104		ug/L		85	25 - 120	14	42
4-Chlorophenyl phenyl ether	ND		122	143		ug/L		118	44 - 120	6	27
Dibenz[a,h]acridine	ND		122	139		ug/L		114	50 - 150	2	40
Dibenzofuran	ND		122	143		ug/L		118	25 - 130	5	29
3,3'-Dichlorobenzidine	ND	*+	163	169		ug/L		104	10 - 120	17	58
2,4-Dichlorophenol	ND		122	118		ug/L		97	31 - 120	5	43
Diethyl phthalate	ND		122	138		ug/L		113	46 - 120	3	40
2,4-Dimethylphenol	ND		122	121		ug/L		99	21 - 120	3	47
Dimethyl phthalate	ND		122	133		ug/L		109	38 - 120	4	36
Di-n-butyl phthalate	ND		122	147		ug/L		120	49 - 120	0	32
4,6-Dinitro-ortho-cresol	ND		244	241		ug/L		99	25 - 120	14	42
2,4-Dinitrophenol	ND		244	271		ug/L		111	15 - 140	20	36
2,4-Dinitrotoluene	ND	F1	122	164	F1	ug/L		134	53 - 120	7	28
2,6-Dinitrotoluene	ND		122	145		ug/L		119	43 - 120	6	28
Di-n-octyl phthalate	ND		122	142		ug/L		116	35 - 121	1	35
1,4-Dioxane	ND		122	79.7		ug/L		65	50 - 150	10	40
1,2-Diphenylhydrazine (as Azobenzene)	ND		122	134		ug/L		110	50 - 150	1	40
Hexachlorobenzene	ND		122	141		ug/L		116	38 - 122	3	33
Hexachlorocyclopentadiene	ND		122	109		ug/L		89	10 - 120	5	50
Hexachloroethane	ND		122	124		ug/L		102	10 - 150	6	41

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-231766-3 MSD
Matrix: Water
Analysis Batch: 609136

Client Sample ID: MW11-ROX-011223
Prep Type: Total/NA
Prep Batch: 608912

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Indene	ND		122	128		ug/L		105	50 - 150	4	40
Isophorone	ND		122	117		ug/L		96	42 - 120	3	33
2-Methylphenol	ND		122	128		ug/L		105	28 - 120	4	47
3 & 4 Methylphenol	ND		122	123		ug/L		101	31 - 120	5	47
2-Nitroaniline	ND		122	90.1		ug/L		74	45 - 120	13	33
3-Nitroaniline	ND		122	126		ug/L		103	10 - 130	3	39
4-Nitroaniline	ND		122	76.9		ug/L		63	10 - 132	5	50
Nitrobenzene	ND		122	136		ug/L		112	39 - 120	2	35
2-Nitrophenol	ND		122	115		ug/L		94	33 - 120	7	43
4-Nitrophenol	ND		244	248		ug/L		102	10 - 120	4	82
N-Nitrosodimethylamine	ND		122	107		ug/L		87	10 - 139	13	62
N-Nitrosodi-n-propylamine	ND		122	124		ug/L		102	37 - 124	6	36
N-Nitrosodiphenylamine	ND		121	125		ug/L		103	10 - 150	1	34
Pentachlorophenol	ND		244	271		ug/L		111	29 - 130	5	42
Phenol	ND		122	112		ug/L		92	10 - 150	11	52
Pyridine	ND		244	215		ug/L		88	10 - 120	6	55
Quinoline	ND	F1	122	148	F1	ug/L		122	51 - 120	12	40
2,4,5-Trichlorophenol	ND		122	144		ug/L		118	34 - 120	7	42
2,4,6-Trichlorophenol	ND		122	142		ug/L		116	33 - 120	6	44

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl	*105*		*46 - 124*
2-Fluorophenol	*53*		*13 - 113*
Nitrobenzene-d5	*110*		*36 - 126*
Phenol-d5	*96*		*17 - 127*
Terphenyl-d14	*135*		*44 - 149*
2,4,6-Tribromophenol	*117*		*26 - 150*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 400-608912/1-A
Matrix: Water
Analysis Batch: 609371

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 608912

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.032	ug/L		01/18/23 09:38	01/21/23 02:57	1
Acenaphthylene	ND		0.20	0.045	ug/L		01/18/23 09:38	01/21/23 02:57	1
Anthracene	ND		0.20	0.032	ug/L		01/18/23 09:38	01/21/23 02:57	1
Benzo[a]anthracene	ND		0.20	0.046	ug/L		01/18/23 09:38	01/21/23 02:57	1
Benzo[a]pyrene	ND		0.20	0.042	ug/L		01/18/23 09:38	01/21/23 02:57	1
Benzo[b]fluoranthene	ND		0.20	0.034	ug/L		01/18/23 09:38	01/21/23 02:57	1
Benzo[g,h,i]perylene	ND		0.20	0.13	ug/L		01/18/23 09:38	01/21/23 02:57	1
Benzo[k]fluoranthene	ND		0.20	0.10	ug/L		01/18/23 09:38	01/21/23 02:57	1
Chrysene	ND		0.20	0.074	ug/L		01/18/23 09:38	01/21/23 02:57	1
Dibenz(a,h)anthracene	ND		0.20	0.050	ug/L		01/18/23 09:38	01/21/23 02:57	1
Fluoranthene	ND		0.20	0.068	ug/L		01/18/23 09:38	01/21/23 02:57	1
Fluorene	ND		0.20	0.11	ug/L		01/18/23 09:38	01/21/23 02:57	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.043	ug/L		01/18/23 09:38	01/21/23 02:57	1
1-Methylnaphthalene	ND		0.20	0.074	ug/L		01/18/23 09:38	01/21/23 02:57	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: MB 400-608912/1-A
Matrix: Water
Analysis Batch: 609371

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 608912

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		0.20	0.060	ug/L		01/18/23 09:38	01/21/23 02:57	1
Phenanthrene	ND		0.20	0.036	ug/L		01/18/23 09:38	01/21/23 02:57	1
Pyrene	ND		0.20	0.040	ug/L		01/18/23 09:38	01/21/23 02:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*80*		*15 - 122*	*01/18/23 09:38*	*01/21/23 02:57*	*1*
Nitrobenzene-d5	*77*		*19 - 130*	*01/18/23 09:38*	*01/21/23 02:57*	*1*
Terphenyl-d14	*102*		*33 - 138*	*01/18/23 09:38*	*01/21/23 02:57*	*1*

Lab Sample ID: LCS 400-608912/2-A
Matrix: Water
Analysis Batch: 609371

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 608912

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	120	97.9		ug/L		82	41 - 120
Acenaphthylene	120	103		ug/L		86	44 - 120
Anthracene	120	99.2		ug/L		83	49 - 120
Benzo[a]anthracene	120	103		ug/L		86	61 - 135
Benzo[a]pyrene	120	92.6		ug/L		77	52 - 120
Benzo[b]fluoranthene	120	97.8		ug/L		82	53 - 134
Benzo[g,h,i]perylene	120	83.0		ug/L		69	47 - 133
Benzo[k]fluoranthene	120	102		ug/L		85	57 - 134
Chrysene	120	100		ug/L		83	55 - 122
Dibenz(a,h)anthracene	120	85.4		ug/L		71	48 - 146
Fluoranthene	120	117		ug/L		97	54 - 128
Fluorene	120	115		ug/L		96	45 - 125
Indeno[1,2,3-cd]pyrene	120	83.5		ug/L		70	43 - 142
1-Methylnaphthalene	120	78.1		ug/L		65	41 - 120
2-Methylnaphthalene	120	77.9		ug/L		65	32 - 124
Phenanthrene	120	98.7		ug/L		82	48 - 120
Pyrene	120	108		ug/L		90	48 - 132

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*75*		*15 - 122*
Nitrobenzene-d5	*54*		*19 - 130*
Terphenyl-d14	*83*		*33 - 138*

Lab Sample ID: 400-231766-3 MS
Matrix: Water
Analysis Batch: 609371

Client Sample ID: MW11-ROX-011223
Prep Type: Total/NA
Prep Batch: 608912

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	ND		126	106		ug/L		84	35 - 113
Acenaphthylene	ND		126	114		ug/L		90	41 - 118
Anthracene	ND		126	113		ug/L		89	45 - 122
Benzo[a]anthracene	0.16	J	126	120		ug/L		95	55 - 133
Benzo[a]pyrene	ND		126	107		ug/L		85	50 - 108
Benzo[b]fluoranthene	0.16	J	126	114		ug/L		90	50 - 128

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: 400-231766-3 MS
Matrix: Water
Analysis Batch: 609371

Client Sample ID: MW11-ROX-011223
Prep Type: Total/NA
Prep Batch: 608912

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzo[g,h,i]perylene	ND		126	88.5		ug/L		70	46 - 133
Benzo[k]fluoranthene	ND		126	113		ug/L		89	52 - 128
Chrysene	ND		126	117		ug/L		93	52 - 116
Dibenz(a,h)anthracene	ND		126	96.9		ug/L		77	52 - 143
Fluoranthene	ND		126	136		ug/L		107	32 - 150
Fluorene	ND		126	122		ug/L		96	15 - 150
Indeno[1,2,3-cd]pyrene	ND		126	91.0		ug/L		72	41 - 141
1-Methylnaphthalene	ND		126	92.4		ug/L		73	10 - 150
2-Methylnaphthalene	ND		126	90.6		ug/L		72	10 - 150
Phenanthrene	0.080	J	126	113		ug/L		89	36 - 125
Pyrene	0.050	J	126	128		ug/L		101	41 - 127

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl	*79*		*15 - 122*
Nitrobenzene-d5	*47*		*19 - 130*
Terphenyl-d14	*94*		*33 - 138*

Lab Sample ID: 400-231766-3 MSD
Matrix: Water
Analysis Batch: 609371

Client Sample ID: MW11-ROX-011223
Prep Type: Total/NA
Prep Batch: 608912

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene	ND		122	106		ug/L		87	35 - 113	1	49
Acenaphthylene	ND		122	112		ug/L		92	41 - 118	2	48
Anthracene	ND		122	115		ug/L		94	45 - 122	2	56
Benzo[a]anthracene	0.16	J	122	116		ug/L		95	55 - 133	4	57
Benzo[a]pyrene	ND		122	103		ug/L		84	50 - 108	4	59
Benzo[b]fluoranthene	0.16	J	122	122		ug/L		100	50 - 128	7	62
Benzo[g,h,i]perylene	ND		122	85.2		ug/L		70	46 - 133	4	58
Benzo[k]fluoranthene	ND		122	109		ug/L		89	52 - 128	3	58
Chrysene	ND		122	111		ug/L		91	52 - 116	6	59
Dibenz(a,h)anthracene	ND		122	90.6		ug/L		74	52 - 143	7	60
Fluoranthene	ND		122	140		ug/L		115	32 - 150	3	59
Fluorene	ND		122	123		ug/L		101	15 - 150	1	49
Indeno[1,2,3-cd]pyrene	ND		122	88.6		ug/L		73	41 - 141	3	58
1-Methylnaphthalene	ND		122	89.6		ug/L		73	10 - 150	3	66
2-Methylnaphthalene	ND		122	87.4		ug/L		72	10 - 150	4	66
Phenanthrene	0.080	J	122	113		ug/L		92	36 - 125	0	69
Pyrene	0.050	J	122	116		ug/L		95	41 - 127	9	58

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl	*82*		*15 - 122*
Nitrobenzene-d5	*68*		*19 - 130*
Terphenyl-d14	*90*		*33 - 138*

Method: 8011 - EDB and DBCP in Water by Microextraction

Lab Sample ID: MB 400-609811/1-A
Matrix: Water
Analysis Batch: 610064

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 609811

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND		0.030	0.017	ug/L		01/25/23 10:29	01/26/23 18:33	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/25/23 10:29	01/26/23 18:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*122*		*51 - 149*	*01/25/23 10:29*	*01/26/23 18:33*	*1*

Lab Sample ID: LCS 400-609811/2-A
Matrix: Water
Analysis Batch: 610064

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 609811

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,2-D bromo-3-Chloropropane			0.101	0.171	*+	ug/L		170	60 - 140		
1,2-D bromoethane			0.101	0.130		ug/L		129	60 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*109*		*51 - 149*

Lab Sample ID: LCSD 400-609811/3-A
Matrix: Water
Analysis Batch: 610064

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 609811

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-D bromo-3-Chloropropane			0.101	0.173	*+	ug/L		172	60 - 140	1	30
1,2-D bromoethane			0.101	0.140		ug/L		139	60 - 140	3	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*121*		*51 - 149*

Lab Sample ID: 400-231766-3 MS
Matrix: Water
Analysis Batch: 610064

Client Sample ID: MW11-ROX-011223
Prep Type: Total/NA
Prep Batch: 609811

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
1,2-D bromo-3-Chloropropane	ND	F1 *+	0.0974	0.154	F1	ug/L		158	10 - 150		
1,2-D bromoethane	ND		0.0977	0.147	F1	ug/L		151	39 - 150		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*111*	*p*	*51 - 149*

Lab Sample ID: 400-231766-3 MSD
Matrix: Water
Analysis Batch: 610064

Client Sample ID: MW11-ROX-011223
Prep Type: Total/NA
Prep Batch: 609811

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-D bromo-3-Chloropropane	ND	*+ F1	0.0977	0.147		ug/L		150	10 - 150	1	20
1,2-D bromoethane	ND		0.0980	0.147		ug/L		150	39 - 150	0	20

Method: 8011 - EDB and DBCP in Water by Microextraction (Continued)

Lab Sample ID: 400-231766-3 MSD
Matrix: Water
Analysis Batch: 610064

Client Sample ID: MW11-ROX-011223
Prep Type: Total/NA
Prep Batch: 609811

Surrogate	MSD %Recovery	MSD 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 (_____)

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
Melissa Remiger	25278	DATE: 1/12/2023
PO #	**GSAP Project ID**	PAGE: 1 of 1
60697537 – 3.1.2	USPC/00114/R/02	

SAMPLING COMPANY:	LOG CODE:	SITE ADDRESS: Street and City	State	AECOM Project / Task Number:
AECOM		900 South Central Ave; ROXANA	IL	Roxana Quarterly GW 60697537 – 3.1.2

ADDRESS:	EDF DELIVERABLE TO (Name, Company, Office Location):	PHONE NO.:	E-MAIL:	AECOM Other ID:
100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA	Melissa Remiger - please see special instructions	314-802-1207	melissa.remiger@aecom.com	

PROJECT CONTACT (Hardcopy or PDF Report to):	SAMPLER NAME(S) (Print):	LAB USE ONLY
Melissa Remiger, Mary Massa, Brett Howell	Mary Massa, Joe Mayer, Travis Jenkins	

TELEPHONE:	FAX:	Bill To Contact E-MAIL:
314-429-0100	314-429-0462	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 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT C°	Cooler #1	Cooler #2	Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :

Email reports to: melissa.remiger@aecom.com; mary.massa@aecom.com; brett.howell@aecom.com

Please include "J" values on Reports.
Please provide sample receipt upon login.
Please send EQuiS EDDs to EDDSubmissions@aecomshell.com; loredana.filimon@aecom.com

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS
60697537 – 3.1.2

FIELD NOTES:

TEMPERATURE ON RECEIPT C°: 1.6 IR9

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	8011 EDB + DBCP	SVOC 8270	PAH 8270LL
	TB-ROX-011223-8260	1/12/2023	0000	Water	2					2	X			
	TB-ROX-011223-8011	1/12/2023	0000	Water	2					2		X		
	MW11-ROX-011223	1/12/2023	0930	Water	6			2		8	X	X	X	X
	MW11-ROX-011223-MS	1/12/2023	0930	Water	6			2		8	X	X	X	X
	MW11-ROX-011223-MSD	1/12/2023	0930	Water	6			2		8	X	X	X	X
	MW10-ROX-011223	1/12/2023	1045	Water	6			2		8	X	X	X	X
	MW24-ROX-011223	1/12/2023	1355	Water	6			2		8	X	X	X	X

400-231766 COC

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
MARY MASSA	FEDEX: 5564 3932 9954	1/12/2023	1600
Relinquished by: (Signature)	Received by: (Signature)	Date: 1.13.23	Time: 09:14
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Version: 13Oct22

CUSTODY SEALS: 1745820, 1745821

3/24/2023 (Rev. 2)

Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 400-231766-1

Login Number: 231766
List Number: 1
Creator: Whitley, Adrian

List Source: Eurofins 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.	N/A	
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 IR9
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.	N/A	
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. Job ID: 400-231766-1
Project/Site: ROXANA QUARTERLY GW

Laboratory: Eurofins Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	06-30-23
ANAB	ISO/IEC 17025	L2471	02-22-26
Arkansas DEQ	State	88-0689	09-01-23
California	State	2510	06-30-23
Florida	NELAP	E81010	06-30-23
Georgia	State	E81010(FL)	06-30-23
Illinois	NELAP	200041	10-09-23
Kansas	NELAP	E-10253	10-31-23
Kentucky (UST)	State	53	06-30-23
Louisiana (All)	NELAP	30976	06-30-23
Louisiana (DW)	State	LA017	12-31-23
Maryland	State	233	09-30-23
Michigan	State	9912	06-30-23
North Carolina (WW/SW)	State	314	12-31-23
Oklahoma	NELAP	9810	08-31-23
Pennsylvania	NELAP	68-00467	01-31-24
South Carolina	State	96026	06-30-23
Tennessee	State	TN02907	06-30-23
Texas	NELAP	T104704286	09-30-23
US Fish & Wildlife	US Federal Programs	A22340	06-30-23
USDA	US Federal Programs	P330-21-00056	05-17-24
USDA	US Federal Programs	FLGNV23001	01-08-26
Virginia	NELAP	460166	06-14-23
West Virginia DEP	State	136	03-05-23

Roxana Groundwater Quarterly – 1st Quarter 2023 Data Review

Laboratory SDG: 400-231800-1-Rev.1

Data Reviewer: Andreia Vladimirescu

Peer Reviewer: Cheyana Cokley

Date Reviewed: 03/16/2023

Guidance: USEPA National Functional Guidelines for Organic Superfund Methods Data Review 2020

Sample Identification	Sample Identification
TB-ROX-011323-8260	TB-ROX-011323-8011
MW1-ROX-011323	MW2-ROX-011323
ROST4PZC-ROX-011323	

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 that PAHs in sample MW1-ROX-011323 were re-extracted outside of the extraction time criteria. Several SVOC LCS/LCSD recoveries, or SVOC LCS/LCSD RPDs were outside evaluation criteria. The continuing calibration verification (CCV) for dibenzofuran, and dibenz(a,h)anthracene was outside evaluation criteria, biased high. The continuing calibration verification (CCV) for benzo[k]fluoranthene was outside evaluation criteria, biased low. These issues are addressed further in the appropriate sections of this data review. The laboratory report was revised on March 3, 2023 to correct 8270 data. The laboratory report was revised on March 24, 2023, to include missing ICV data.

Three of 70 (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?

No, several PAHs in sample MW1-ROX-011323 were re-extracted 25 days outside extraction time criteria (7 days) and then re-analyzed due to initial analysis results that were not consistent with historical data; the re-extracted and re-analyzed samples were out of hold time and the results were non-detect. Both sets of data are reported. With regard to initial MW1-ROX-011323 PAH data, the laboratory issued a Corrective Action Report (CAR) stating that through confirmation analyses, many previous detections were not confirmed and were therefore deemed laboratory contamination. Based on professional judgement, the results from the re-analysis were used for the purposes of this report. Data requiring qualification is summarized in the following table.

Sample ID	Parameter	Analyte	Qualification
MW1-ROX-011323 - RE	PAHs	Benzo[a]anthracene	**UJ**
MW1-ROX-011323 - RE	PAHs	Benzo[a]pyrene	**UJ**
MW1-ROX-011323 - RE	PAHs	Benzo[b]fluoranthene	**UJ**
MW1-ROX-011323 - RE	PAHs	Benzo[g,h,i]perylene	**UJ**
MW1-ROX-011323 - RE	PAHs	Benzo[k]fluoranthene	**UJ**
MW1-ROX-011323 - RE	PAHs	Chrysene	**UJ**
MW1-ROX-011323 - RE	PAHs	Dibenz(a,h)anthracene	**UJ**
MW1-ROX-011323 - RE	PAHs	Fluoranthene	**UJ**
MW1-ROX-011323 - RE	PAHs	Indeno[1,2,3-cd]pyrene	**UJ**
MW1-ROX-011323 - RE	PAHs	Phenanthrene	**UJ**
MW1-ROX-011323 - RE	PAHs	Pyrene	**UJ**

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 400-609111/6-A/7-A	SVOCs	Benzenethiol	**5/6**	20	10-120/30
LCS/LCSD 400-609111/2-A/3-A	SVOCs	3,3'-Dichlorobenzidine	**173/177**	2	36-132/30
LCS/LCSD 400-609111/2-A/3-A	SVOCs	Benzoic acid	92/64	**35**	10-144/30
LCS/LCSD 400-609811/2-A/3-A	VOCs by 8011	1,2-Dibromo-3-Chloropropane	**170/172**	1	60-140/30

Analytical data that required qualification based on LCS/LCSD data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Professional judgment was used to qualify, however not reject, data associated with benzenethiol below evaluation criteria; benzenethiol has been identified as a poor performing analyte under Method 8270. Analytical data associated with LCS/LCSD RPD alone outside evaluation criteria did not require qualification.

Sample ID	Parameter	Analyte	Qualification
MW1-ROX-011323	SVOCs	Benzenethiol	**UJ**
MW2-ROX-011323	SVOCs	Benzenethiol	**UJ**
ROST4PZC-ROX-011323	SVOCs	Benzenethiol	**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 verification for dibenzofuran and dibenz(a,h)anthracene was outside evaluation criteria, biased high. The continuing calibration verification for benzo[k]fluoranthene was outside evaluation criteria, biased low. Benzo[k]fluoranthene in sample MW1-ROX-011323-RE was previously qualified in Section 3.0 of this data review due to exceedance of holding time criteria; no further qualification is required. Dibenz(a,h)anthracene in sample MW1-ROX-011323 was reported from the confirmation run due to laboratory contamination in the initial run; no further qualification is required. Analytes are qualified as summarized in the following table.

Sample ID	Parameter	Analyte	Qualification
ROST4PZC-ROX-011323	SVOCs	Dibenzofuran	**J**
MW2-ROX-011323	PAHs	Benzo[k]fluoranthene	**UJ**
ROST4PZC-ROX-011323	PAHs	Benzo[k]fluoranthene	**UJ**

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 3/3/2023 5:40:22 PM Revision 1

JOB DESCRIPTION

ROXANA QUARTERLY GW

JOB NUMBER

400-231800-1

Eurofins Pensacola
3355 McLemore Drive
Pensacola FL 32514

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet all NELAP requirements for accredited parameters, unless otherwise noted, and relate only to the referenced samples. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval from the laboratory. For questions please contact the Project Manager at the e-mail address listed on this page, or the telephone number at the bottom of the page. Eurofins Environment Testing Southeast LLC, Pensacola Certifications and Approvals: Alabama (40150), Arizona (AZ0710), Arkansas (88-0689), Florida (E81010), Illinois (200041), Iowa (367), Kansas (E-10253), Kentucky UST (53), Louisiana (30748), Maryland (233), Massachusetts (M-FL094), Michigan (9912), New Hampshire (250510), New Jersey (FL006), North Carolina (314), Oklahoma (9810), Pennsylvania (68-00467), Rhode Island (LAO00307), South Carolina (96026), Tennessee (TN02907), Texas (T104704286-10-2), Virginia (00008), Washington (C2043), West Virginia (136), USDA Foreign Soil Permit (P330-08-00006).

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization

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Revision 1

Authorized for release by
Leah Klingensmith, Senior Project Manager
Leah.Klingensmith@et.eurofinsus.com
(615)301-5038

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Job ID: 400-231800-1

Laboratory: Eurofins Pensacola

Narrative

Job Narrative
400-231800-1

Comments
Revised Report
Report revised to correct 8270 data.
Supersedes report dated 1-27-2023.

The 8270 data for this job was reviewed when it was determined the original results did not match historical data. Confirmation analyses of the initial extract and in some instances analysis of re-extracted samples were performed. The results of these re-analyses confirm in some cases and are reported again in the revision. The difference in a result that does not confirm is most likely due to trace level contamination. The result with the highest confidence level is currently reported when all results are in hold. In instances where a confirmation analysis was performed outside of holding time both the initial and out of hold results are reported.

Receipt
The samples were received on 1/14/2023 9:02 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.4º C.

GC/MS VOA
Method 8260B: The continuing calibration verification (CCV) associated with batch 400-608910 recovered above the upper control limit for Chloroform. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 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-011323-8260 (400-231800-1), MW1-ROX-011323 (400-231800-3), MW2-ROX-011323 (400-231800-4) and ROST4PZC-ROX-011323 (400-231800-5). 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 8270D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 400-609111 and 400-609111 and analytical batch 400-609551 recovered outside control limits for the following analyte(s): 3,3'-Dichlorobenzidine. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 400-609111 and analytical batch 400-609551 recovered outside control limits for the following analytes: Benzoic acid.

Method 8270D: The continuing calibration verification (CCV) associated with batch 400-609551 recovered above the upper control limit for 2-Chloronaphthalene, Bis(2-ethylhexyl) phthalate, Di-n-butyl phthalate, Butyl benzyl phthalate, 4-Chloro-3-methylphenol, 2,4-Dinitrotoluene, 4,6-Dinitro-2-methylphenol, Dibenzofuran and Di-n-octyl phthalate. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8270D: The continuing calibration verification (CCV) associated with batch 400-609551 recovered above the upper control limit for Benzenethiol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8270D LL: The continuing calibration verification (CCV) associated with batch 400-609585 recovered above the upper control limit for Fluoranthene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8270D LL: The initial calibration verification (ICV) analyzed in batch 400-609362 was outside method criteria for the following analyte(s): Acenaphthylene, Fluorene and Pyrene. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Job ID: 400-231800-1 (Continued)

Laboratory: Eurofins Pensacola (Continued)

Method 8270D LL: The initial calibration verification (ICV) analyzed in batch 400-609874 was outside method criteria for the following analyte(s): Dibenz(a,h)anthracene and Indeno[1,2,3-cd]pyrene. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated. A confirmation ICV was reanalyzed and are within limits therefore the data are reported.

Method 8270D LL: The following sample was re-prepared outside of preparation holding time to confirm PAH detections in the original analysis: MW1-ROX-011323 (400-231800-3). The original results were not confirmed. Carry-over and/or contamination of the original extract is suspected.

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

GC Semi VOA

Method 8011: The continuing calibration verification (CCV) associated with batch 400-610064 recovered above the upper control limit for 1,2-Dibromo-3-Chloropropane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8011: The continuing calibration verification (CCV) associated with batch 400-610064 recovered above the upper control limit for Ethylene Dibromide and 1,2-Dibromo-3-Chloropropane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8011: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 400-609811 and analytical batch 400-610064 recovered outside control limits for the following analytes: 1,2-Dibromo-3-Chloropropane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

Organic Prep

No additional analytical or quality issues were noted, other than those described above or 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 GW

Job ID: 400-231800-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-231800-1	TB-ROX-011323-8260	Water	01/13/23 12:00	01/14/23 09:02
400-231800-2	TB-ROX-011323-8011	Water	01/13/23 12:00	01/14/23 09:02
400-231800-3	MW1-ROX-011323	Water	01/13/23 10:00	01/14/23 09:02
400-231800-4	MW2-ROX-011323	Water	01/13/23 11:00	01/14/23 09:02
400-231800-5	ROST4PZC-ROX-011323	Water	01/13/23 12:10	01/14/23 09:02

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231800-1

Client Sample ID: TB-ROX-011323-8260 — Lab Sample ID: 400-231800-1

No Detections.

Client Sample ID: TB-ROX-011323-8011 — Lab Sample ID: 400-231800-2

No Detections.

Client Sample ID: MW1-ROX-011323 — Lab Sample ID: 400-231800-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	0.14	J	0.21	0.047	ug/L	1		8270D LL	Total/NA
Benzo[a]pyrene	0.16	J	0.21	0.043	ug/L	1		8270D LL	Total/NA
Benzo[b]fluoranthene	0.29		0.21	0.035	ug/L	1		8270D LL	Total/NA
Benzo[g,h,i]perylene	0.26		0.21	0.13	ug/L	1		8270D LL	Total/NA
Benzo[k]fluoranthene	0.17	J	0.21	0.10	ug/L	1		8270D LL	Total/NA
Chrysene	0.23		0.21	0.076	ug/L	1		8270D LL	Total/NA
Dibenz(a,h)anthracene	0.18	J	0.21	0.052	ug/L	1		8270D LL	Total/NA
Fluoranthene	0.23		0.21	0.070	ug/L	1		8270D LL	Total/NA
Indeno[1,2,3-cd]pyrene	0.25		0.21	0.044	ug/L	1		8270D LL	Total/NA
Phenanthrene	0.080	J	0.21	0.037	ug/L	1		8270D LL	Total/NA
Pyrene	0.14	J	0.21	0.041	ug/L	1		8270D LL	Total/NA

Client Sample ID: MW2-ROX-011323 — Lab Sample ID: 400-231800-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.6		1.0	0.13	ug/L	1		8260B	Total/NA
2-Butanone (MEK)	33		25	2.6	ug/L	1		8260B	Total/NA
Carbon disulfide	0.63	J	1.0	0.50	ug/L	1		8260B	Total/NA
Ethylbenzene	36		1.0	0.50	ug/L	1		8260B	Total/NA
Isopropy benzene	37		1.0	0.53	ug/L	1		8260B	Total/NA
m-Xylene & p-Xylene	15		5.0	0.63	ug/L	1		8260B	Total/NA
Naphthalene	10		5.0	3.0	ug/L	1		8260B	Total/NA
n-Butylbenzene	4.0		1.0	0.76	ug/L	1		8260B	Total/NA
N-Propylbenzene	58		1.0	0.69	ug/L	1		8260B	Total/NA
o-Xylene	1.7	J	5.0	0.60	ug/L	1		8260B	Total/NA
p-Isopropyltoluene	3.9		1.0	0.71	ug/L	1		8260B	Total/NA
sec-Butylbenzene	4.6		1.0	0.70	ug/L	1		8260B	Total/NA
tert-Butylbenzene	0.63	J	1.0	0.63	ug/L	1		8260B	Total/NA
Toluene	3.2		1.0	0.41	ug/L	1		8260B	Total/NA
1,2,4-Trimethy benzene	5.7		1.0	0.82	ug/L	1		8260B	Total/NA
1,3,5-Trimethy benzene	11		1.0	0.56	ug/L	1		8260B	Total/NA
Xylenes, Total	16		10	1.6	ug/L	1		8260B	Total/NA
1-Methylnaphthalene	9.1		0.21	0.078	ug/L	1		8270D LL	Total/NA
2-Methylnaphthalene	13		0.21	0.063	ug/L	1		8270D LL	Total/NA
Phenanthrene	0.039	J	0.21	0.038	ug/L	1		8270D LL	Total/NA
Diethyl phthalate	0.60	J	11	0.25	ug/L	1		8270D	Total/NA

Client Sample ID: ROST4PZC-ROX-011323 — Lab Sample ID: 400-231800-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	2.8	J	25	2.6	ug/L	1		8260B	Total/NA
Carbon disulfide	0.90	J	1.0	0.50	ug/L	1		8260B	Total/NA
Isopropy benzene	0.94	J	1.0	0.53	ug/L	1		8260B	Total/NA
N-Propylbenzene	2.0		1.0	0.69	ug/L	1		8260B	Total/NA
Acenaphthene	0.80		0.21	0.033	ug/L	1		8270D LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: ROST4PZC-ROX-011323 (Continued)

Lab Sample ID: 400-231800-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Anthracene	0.38		0.21	0.033	ug/L	1		8270D LL	Total/NA
Fluorene	0.80		0.21	0.11	ug/L	1		8270D LL	Total/NA
1-Methylnaphthalene	4.8		0.21	0.076	ug/L	1		8270D LL	Total/NA
Phenanthrene	2.4		0.21	0.037	ug/L	1		8270D LL	Total/NA
Pyrene	0.092	J	0.21	0.041	ug/L	1		8270D LL	Total/NA
Dibenzofuran	0.41	J	10	0.18	ug/L	1		8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231800-1

Client Sample ID: TB-ROX-011323-8260
Date Collected: 01/13/23 12:00
Date Received: 01/14/23 09:02

Lab Sample ID: 400-231800-1
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/18/23 14:58	1
Acrolein	ND		20	3.3	ug/L			01/18/23 14:58	1
Acrylonitrile	ND		10	2.8	ug/L			01/18/23 14:58	1
Benzene	ND		1.0	0.13	ug/L			01/18/23 14:58	1
Bromobenzene	ND		1.0	0.54	ug/L			01/18/23 14:58	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/18/23 14:58	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/18/23 14:58	1
Bromoform	ND		5.0	0.25	ug/L			01/18/23 14:58	1
Bromomethane	ND		1.0	0.98	ug/L			01/18/23 14:58	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/18/23 14:58	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/18/23 14:58	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/18/23 14:58	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/18/23 14:58	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/18/23 14:58	1
Chloroethane	ND		1.0	0.76	ug/L			01/18/23 14:58	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/18/23 14:58	1
Chloroform	ND		1.0	1.0	ug/L			01/18/23 14:58	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/18/23 14:58	1
Chloromethane	ND		1.0	0.32	ug/L			01/18/23 14:58	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/18/23 14:58	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/18/23 14:58	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/18/23 14:58	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/18/23 14:58	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/18/23 14:58	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/18/23 14:58	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/18/23 14:58	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/18/23 14:58	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/18/23 14:58	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/18/23 14:58	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/18/23 14:58	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/18/23 14:58	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/18/23 14:58	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/18/23 14:58	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/18/23 14:58	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/18/23 14:58	1
2-Hexanone	ND		25	1.4	ug/L			01/18/23 14:58	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/18/23 14:58	1
Methylene bromide	ND		5.0	0.22	ug/L			01/18/23 14:58	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/18/23 14:58	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/18/23 14:58	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/18/23 14:58	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/18/23 14:58	1
Naphthalene	ND		5.0	3.0	ug/L			01/18/23 14:58	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/18/23 14:58	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/18/23 14:58	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/18/23 14:58	1
o-Xylene	ND		5.0	0.60	ug/L			01/18/23 14:58	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/18/23 14:58	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/18/23 14:58	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231800-1

Client Sample ID: TB-ROX-011323-8260
Date Collected: 01/13/23 12:00
Date Received: 01/14/23 09:02

Lab Sample ID: 400-231800-1
Matrix: Water

Method: SW846 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			01/18/23 14:58	1
Styrene	ND		1.0	1.0	ug/L			01/18/23 14:58	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/18/23 14:58	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/18/23 14:58	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/18/23 14:58	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/18/23 14:58	1
Toluene	ND		1.0	0.41	ug/L			01/18/23 14:58	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/18/23 14:58	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/18/23 14:58	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/18/23 14:58	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/18/23 14:58	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/18/23 14:58	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/18/23 14:58	1
Trichloroethene	ND		1.0	0.15	ug/L			01/18/23 14:58	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/18/23 14:58	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/18/23 14:58	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/18/23 14:58	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/18/23 14:58	1
Vinyl acetate	ND		25	0.93	ug/L			01/18/23 14:58	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/18/23 14:58	1
Xylenes, Total	ND		10	1.6	ug/L			01/18/23 14:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*72 - 119*		*01/18/23 14:58*	*1*
Dibromofluoromethane	*109*		*75 - 126*		*01/18/23 14:58*	*1*
Toluene-d8 (Surr)	*92*		*64 - 132*		*01/18/23 14:58*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231800-1

Client Sample ID: TB-ROX-011323-8011
Date Collected: 01/13/23 12:00
Date Received: 01/14/23 09:02

Lab Sample ID: 400-231800-2
Matrix: Water

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.029	0.017	ug/L		01/25/23 10:29	01/26/23 23:58	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/25/23 10:29	01/26/23 23:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*	*p*	*51 - 149*	*01/25/23 10:29*	*01/26/23 23:58*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231800-1

Client Sample ID: MW1-ROX-011323
Date Collected: 01/13/23 10:00
Date Received: 01/14/23 09:02

Lab Sample ID: 400-231800-3
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/18/23 16:15	1
Acrolein	ND		20	3.3	ug/L			01/18/23 16:15	1
Acrylonitrile	ND		10	2.8	ug/L			01/18/23 16:15	1
Benzene	ND		1.0	0.13	ug/L			01/18/23 16:15	1
Bromobenzene	ND		1.0	0.54	ug/L			01/18/23 16:15	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/18/23 16:15	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/18/23 16:15	1
Bromoform	ND		5.0	0.25	ug/L			01/18/23 16:15	1
Bromomethane	ND		1.0	0.98	ug/L			01/18/23 16:15	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/18/23 16:15	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/18/23 16:15	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/18/23 16:15	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/18/23 16:15	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/18/23 16:15	1
Chloroethane	ND		1.0	0.76	ug/L			01/18/23 16:15	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/18/23 16:15	1
Chloroform	ND		1.0	1.0	ug/L			01/18/23 16:15	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/18/23 16:15	1
Chloromethane	ND		1.0	0.32	ug/L			01/18/23 16:15	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/18/23 16:15	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/18/23 16:15	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/18/23 16:15	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/18/23 16:15	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/18/23 16:15	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/18/23 16:15	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/18/23 16:15	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/18/23 16:15	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/18/23 16:15	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/18/23 16:15	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/18/23 16:15	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/18/23 16:15	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/18/23 16:15	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/18/23 16:15	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/18/23 16:15	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/18/23 16:15	1
2-Hexanone	ND		25	1.4	ug/L			01/18/23 16:15	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/18/23 16:15	1
Methylene bromide	ND		5.0	0.22	ug/L			01/18/23 16:15	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/18/23 16:15	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/18/23 16:15	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/18/23 16:15	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/18/23 16:15	1
Naphthalene	ND		5.0	3.0	ug/L			01/18/23 16:15	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/18/23 16:15	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/18/23 16:15	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/18/23 16:15	1
o-Xylene	ND		5.0	0.60	ug/L			01/18/23 16:15	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/18/23 16:15	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/18/23 16:15	1

Client Sample ID: MW1-ROX-011323
Date Collected: 01/13/23 10:00
Date Received: 01/14/23 09:02

Lab Sample ID: 400-231800-3
Matrix: Water

Method: SW846 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			01/18/23 16:15	1
Styrene	ND		1.0	1.0	ug/L			01/18/23 16:15	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/18/23 16:15	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/18/23 16:15	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/18/23 16:15	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/18/23 16:15	1
Toluene	ND		1.0	0.41	ug/L			01/18/23 16:15	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/18/23 16:15	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/18/23 16:15	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/18/23 16:15	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/18/23 16:15	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/18/23 16:15	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/18/23 16:15	1
Trichloroethene	ND		1.0	0.15	ug/L			01/18/23 16:15	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/18/23 16:15	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/18/23 16:15	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/18/23 16:15	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/18/23 16:15	1
Vinyl acetate	ND		25	0.93	ug/L			01/18/23 16:15	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/18/23 16:15	1
Xylenes, Total	ND		10	1.6	ug/L			01/18/23 16:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*72 - 119*		*01/18/23 16:15*	*1*
Dibromofluoromethane	*112*		*75 - 126*		*01/18/23 16:15*	*1*
Toluene-d8 (Surr)	*91*		*64 - 132*		*01/18/23 16:15*	*1*

Method: SW846 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	0.033	ug/L		01/19/23 10:57	02/08/23 19:06	1
Acenaphthylene	ND		0.21	0.046	ug/L		01/19/23 10:57	02/08/23 19:06	1
Anthracene	ND		0.21	0.033	ug/L		01/19/23 10:57	02/08/23 19:06	1
Benzo[a]anthracene	**0.14**	**J**	0.21	0.047	ug/L		01/19/23 10:57	02/08/23 19:06	1
Benzo[a]pyrene	**0.16**	**J**	0.21	0.043	ug/L		01/19/23 10:57	02/08/23 19:06	1
Benzo[b]fluoranthene	**0.29**		0.21	0.035	ug/L		01/19/23 10:57	02/08/23 19:06	1
Benzo[g,h,i]perylene	**0.26**		0.21	0.13	ug/L		01/19/23 10:57	02/08/23 19:06	1
Benzo[k]fluoranthene	**0.17**	**J**	0.21	0.10	ug/L		01/19/23 10:57	02/08/23 19:06	1
Chrysene	**0.23**		0.21	0.076	ug/L		01/19/23 10:57	02/08/23 19:06	1
Dibenz(a,h)anthracene	**0.18**	**J**	0.21	0.052	ug/L		01/19/23 10:57	02/08/23 19:06	1
Fluoranthene	**0.23**		0.21	0.070	ug/L		01/19/23 10:57	02/08/23 19:06	1
Fluorene	ND		0.21	0.11	ug/L		01/19/23 10:57	02/08/23 19:06	1
Indeno[1,2,3-cd]pyrene	**0.25**		0.21	0.044	ug/L		01/19/23 10:57	02/08/23 19:06	1
1-Methylnaphthalene	ND		0.21	0.076	ug/L		01/19/23 10:57	02/08/23 19:06	1
2-Methylnaphthalene	ND		0.21	0.062	ug/L		01/19/23 10:57	02/08/23 19:06	1
Phenanthrene	**0.080**	**J**	0.21	0.037	ug/L		01/19/23 10:57	02/08/23 19:06	1
Pyrene	**0.14**	**J**	0.21	0.041	ug/L		01/19/23 10:57	02/08/23 19:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*109*		*15 - 122*	*01/19/23 10:57*	*02/08/23 19:06*	*1*
Nitrobenzene-d5	*96*		*19 - 130*	*01/19/23 10:57*	*02/08/23 19:06*	*1*

Client Sample ID: MW1-ROX-011323
Date Collected: 01/13/23 10:00
Date Received: 01/14/23 09:02

Lab Sample ID: 400-231800-3
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*94*		*33 - 138*	*01/19/23 10:57*	*02/08/23 19:06*	*1*

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND	H	0.20	0.047	ug/L		02/14/23 15:10	02/28/23 21:48	1
Benzo[a]pyrene	ND	H	0.20	0.043	ug/L		02/14/23 15:10	02/28/23 21:48	1
Benzo[b]fluoranthene	ND	H	0.20	0.035	ug/L		02/14/23 15:10	02/28/23 21:48	1
Benzo[g,h,i]perylene	ND	H	0.20	0.13	ug/L		02/14/23 15:10	02/28/23 21:48	1
Benzo[k]fluoranthene	ND	H	0.20	0.10	ug/L		02/14/23 15:10	02/28/23 21:48	1
Chrysene	ND	H	0.20	0.075	ug/L		02/14/23 15:10	02/28/23 21:48	1
Dibenz(a,h)anthracene	ND	H	0.20	0.051	ug/L		02/14/23 15:10	02/28/23 21:48	1
Fluoranthene	ND	H	0.20	0.069	ug/L		02/14/23 15:10	02/28/23 21:48	1
Indeno[1,2,3-cd]pyrene	ND	H	0.20	0.044	ug/L		02/14/23 15:10	02/28/23 21:48	1
Phenanthrene	ND	H	0.20	0.037	ug/L		02/14/23 15:10	02/28/23 21:48	1
Pyrene	ND	H	0.20	0.041	ug/L		02/14/23 15:10	02/28/23 21:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*97*		*15 - 122*	*02/14/23 15:10*	*02/28/23 21:48*	*1*
Nitrobenzene-d5	*97*		*19 - 130*	*02/14/23 15:10*	*02/28/23 21:48*	*1*
Terphenyl-d14	*106*		*33 - 138*	*02/14/23 15:10*	*02/28/23 21:48*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/19/23 10:57	01/23/23 16:22	1
1,4-Dioxane	ND		10	1.0	ug/L		01/19/23 10:57	01/20/23 23:18	1
2,4,5-Trichlorophenol	ND		10	3.8	ug/L		01/19/23 10:57	01/20/23 23:18	1
2,4,6-Trichlorophenol	ND		10	3.6	ug/L		01/19/23 10:57	01/20/23 23:18	1
2,4-Dichlorophenol	ND		10	3.1	ug/L		01/19/23 10:57	01/20/23 23:18	1
2,4-Dimethylphenol	ND		10	3.6	ug/L		01/19/23 10:57	01/20/23 23:18	1
2,4-Dinitrophenol	ND		31	3.5	ug/L		01/19/23 10:57	01/20/23 23:18	1
2,4-Dinitrotoluene	ND		10	2.0	ug/L		01/19/23 10:57	01/23/23 16:22	1
2,6-Dinitrotoluene	ND		10	2.0	ug/L		01/19/23 10:57	01/20/23 23:18	1
2-Chloronaphthalene	ND		10	0.14	ug/L		01/19/23 10:57	01/23/23 16:22	1
2-Chlorophenol	ND		10	2.3	ug/L		01/19/23 10:57	01/20/23 23:18	1
2-Methylphenol	ND		10	1.9	ug/L		01/19/23 10:57	01/23/23 16:22	1
2-Nitroaniline	ND		10	2.3	ug/L		01/19/23 10:57	01/20/23 23:18	1
2-Nitrophenol	ND		10	5.4	ug/L		01/19/23 10:57	01/20/23 23:18	1
3 & 4 Methylphenol	ND		21	0.40	ug/L		01/19/23 10:57	01/23/23 16:22	1
3,3'-Dichlorobenzidine	ND	*+	10	2.7	ug/L		01/19/23 10:57	01/20/23 23:18	1
3-Nitroaniline	ND		10	1.9	ug/L		01/19/23 10:57	01/23/23 16:22	1
4,6-Dinitro-ortho-cresol	ND		10	1.6	ug/L		01/19/23 10:57	01/23/23 16:22	1
4-Bromophenyl phenyl ether	ND		10	0.21	ug/L		01/19/23 10:57	01/20/23 23:18	1
4-Chloro-3-methylphenol	ND		10	3.9	ug/L		01/19/23 10:57	01/23/23 16:22	1
4-Chloroaniline	ND		10	3.5	ug/L		01/19/23 10:57	01/23/23 16:22	1
4-Chlorophenyl phenyl ether	ND		10	2.1	ug/L		01/19/23 10:57	01/20/23 23:18	1
4-Nitroaniline	ND		10	1.5	ug/L		01/19/23 10:57	01/20/23 23:18	1
4-Nitrophenol	ND		10	2.2	ug/L		01/19/23 10:57	01/20/23 23:18	1
Aniline	ND		10	3.9	ug/L		01/19/23 10:57	01/23/23 16:22	1
Benzenethiol	ND		10	1.8	ug/L		01/19/23 10:57	01/23/23 16:22	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231800-1

Client Sample ID: MW1-ROX-011323
Date Collected: 01/13/23 10:00
Date Received: 01/14/23 09:02

Lab Sample ID: 400-231800-3
Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzoic acid	ND	*1	31	7.5	ug/L		01/19/23 10:57	01/20/23 23:18	1
Benzyl alcohol	ND		10	2.1	ug/L		01/19/23 10:57	01/20/23 23:18	1
bis (2-chloroisopropyl) ether	ND		10	0.16	ug/L		01/19/23 10:57	01/20/23 23:18	1
Bis(2-chloroethoxy)methane	ND		10	0.16	ug/L		01/19/23 10:57	01/23/23 16:22	1
Bis(2-chloroethyl)ether	ND		10	2.8	ug/L		01/19/23 10:57	01/23/23 16:22	1
Bis(2-ethylhexyl) phthalate	ND		10	5.2	ug/L		01/19/23 10:57	01/23/23 16:22	1
Butyl benzyl phthalate	ND		10	0.20	ug/L		01/19/23 10:57	01/23/23 16:22	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/19/23 10:57	01/20/23 23:18	1
Dibenzofuran	ND		10	0.18	ug/L		01/19/23 10:57	01/23/23 16:22	1
Diethyl phthalate	ND		10	0.25	ug/L		01/19/23 10:57	01/20/23 23:18	1
Dimethyl phthalate	ND		10	0.18	ug/L		01/19/23 10:57	01/20/23 23:18	1
Di-n-butyl phthalate	ND		10	2.8	ug/L		01/19/23 10:57	01/23/23 16:22	1
Di-n-octyl phthalate	ND		10	0.18	ug/L		01/19/23 10:57	01/23/23 16:22	1
Hexachlorobenzene	ND		10	0.18	ug/L		01/19/23 10:57	01/20/23 23:18	1
Hexachlorocyclopentadiene	ND		21	2.7	ug/L		01/19/23 10:57	01/20/23 23:18	1
Hexachloroethane	ND		10	4.3	ug/L		01/19/23 10:57	01/20/23 23:18	1
Indene	ND		10	1.0	ug/L		01/19/23 10:57	01/23/23 16:22	1
Isophorone	ND		10	0.14	ug/L		01/19/23 10:57	01/23/23 16:22	1
Nitrobenzene	ND		10	0.13	ug/L		01/19/23 10:57	01/23/23 16:22	1
N-Nitrosodimethylamine	ND		10	3.6	ug/L		01/19/23 10:57	01/23/23 16:22	1
N-Nitrosodi-n-propylamine	ND		10	3.4	ug/L		01/19/23 10:57	01/23/23 16:22	1
N-Nitrosodiphenylamine	ND		10	0.19	ug/L		01/19/23 10:57	01/20/23 23:18	1
Pentachlorophenol	ND		21	1.4	ug/L		01/19/23 10:57	01/20/23 23:18	1
Phenol	ND		10	2.7	ug/L		01/19/23 10:57	01/23/23 16:22	1
Pyridine	ND		10	3.3	ug/L		01/19/23 10:57	01/23/23 16:22	1
Quinoline	ND		10	4.6	ug/L		01/19/23 10:57	01/23/23 16:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*113*		*46 - 124*	*01/19/23 10:57*	*01/20/23 23:18*	*1*
2-Fluorophenol	*13*		*13 - 113*	*01/19/23 10:57*	*01/20/23 23:18*	*1*
Nitrobenzene-d5	*100*		*36 - 126*	*01/19/23 10:57*	*01/20/23 23:18*	*1*
Phenol-d5	*52*		*17 - 127*	*01/19/23 10:57*	*01/20/23 23:18*	*1*
Terphenyl-d14	*113*		*44 - 149*	*01/19/23 10:57*	*01/20/23 23:18*	*1*
2,4,6-Tribromophenol	*65*		*26 - 150*	*01/19/23 10:57*	*01/20/23 23:18*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.029	0.017	ug/L		01/25/23 10:29	01/27/23 00:18	1
1,2-D bromoethane	ND		0 019	0 015	ug/L		01/25/23 10 29	01/27/23 00 18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*	*p*	*51 - 149*	*01/25/23 10:29*	*01/27/23 00:18*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231800-1

Client Sample ID: MW2-ROX-011323
Date Collected: 01/13/23 11:00
Date Received: 01/14/23 09:02

Lab Sample ID: 400-231800-4
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/18/23 16:41	1
Acrolein	ND		20	3.3	ug/L			01/18/23 16:41	1
Acrylonitrile	ND		10	2.8	ug/L			01/18/23 16:41	1
Benzene	**1.6**		1.0	0.13	ug/L			01/18/23 16:41	1
Bromobenzene	ND		1.0	0.54	ug/L			01/18/23 16:41	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/18/23 16:41	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/18/23 16:41	1
Bromoform	ND		5.0	0.25	ug/L			01/18/23 16:41	1
Bromomethane	ND		1.0	0.98	ug/L			01/18/23 16:41	1
2-Butanone (MEK)	**33**		25	2.6	ug/L			01/18/23 16:41	1
Carbon disulfide	**0.63**	**J**	1.0	0.50	ug/L			01/18/23 16:41	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/18/23 16:41	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/18/23 16:41	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/18/23 16:41	1
Chloroethane	ND		1.0	0.76	ug/L			01/18/23 16:41	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/18/23 16:41	1
Chloroform	ND		1.0	1.0	ug/L			01/18/23 16:41	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/18/23 16:41	1
Chloromethane	ND		1.0	0.32	ug/L			01/18/23 16:41	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/18/23 16:41	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/18/23 16:41	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/18/23 16:41	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/18/23 16:41	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/18/23 16:41	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/18/23 16:41	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/18/23 16:41	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/18/23 16:41	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/18/23 16:41	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/18/23 16:41	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/18/23 16:41	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/18/23 16:41	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/18/23 16:41	1
Ethylbenzene	**36**		1.0	0.50	ug/L			01/18/23 16:41	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/18/23 16:41	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/18/23 16:41	1
2-Hexanone	ND		25	1.4	ug/L			01/18/23 16:41	1
Isopropylbenzene	**37**		1.0	0.53	ug/L			01/18/23 16:41	1
Methylene bromide	ND		5.0	0.22	ug/L			01/18/23 16:41	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/18/23 16:41	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/18/23 16:41	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/18/23 16:41	1
m-Xylene & p-Xylene	**15**		5.0	0.63	ug/L			01/18/23 16:41	1
Naphthalene	**10**		5.0	3.0	ug/L			01/18/23 16:41	1
n-Butylbenzene	**4.0**		1.0	0.76	ug/L			01/18/23 16:41	1
N-Propylbenzene	**58**		1.0	0.69	ug/L			01/18/23 16:41	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/18/23 16:41	1
o-Xylene	**1.7**	**J**	5.0	0.60	ug/L			01/18/23 16:41	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/18/23 16:41	1
p-Isopropyltoluene	**3.9**		1.0	0.71	ug/L			01/18/23 16:41	1

Client Sample ID: MW2-ROX-011323
Date Collected: 01/13/23 11:00
Date Received: 01/14/23 09:02

Lab Sample ID: 400-231800-4
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	**4.6**		1.0	0.70	ug/L			01/18/23 16:41	1
Styrene	ND		1.0	1.0	ug/L			01/18/23 16:41	1
tert-Butylbenzene	**0.63**	**J**	1.0	0.63	ug/L			01/18/23 16:41	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/18/23 16:41	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/18/23 16:41	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/18/23 16:41	1
Toluene	**3.2**		1.0	0.41	ug/L			01/18/23 16:41	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/18/23 16:41	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/18/23 16:41	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/18/23 16:41	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/18/23 16:41	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/18/23 16:41	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/18/23 16:41	1
Trichloroethene	ND		1.0	0.15	ug/L			01/18/23 16:41	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/18/23 16:41	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/18/23 16:41	1
1,2,4-Trimethylbenzene	**5.7**		1.0	0.82	ug/L			01/18/23 16:41	1
1,3,5-Trimethylbenzene	**11**		1.0	0.56	ug/L			01/18/23 16:41	1
Vinyl acetate	ND		25	0.93	ug/L			01/18/23 16:41	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/18/23 16:41	1
Xylenes, Total	**16**		10	1.6	ug/L			01/18/23 16:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*72 - 119*		*01/18/23 16:41*	*1*
Dibromofluoromethane	*112*		*75 - 126*		*01/18/23 16:41*	*1*
Toluene-d8 (Surr)	*96*		*64 - 132*		*01/18/23 16:41*	*1*

Method: SW846 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	0.034	ug/L		01/19/23 10:57	02/28/23 20:57	1
Acenaphthylene	ND		0.21	0.047	ug/L		01/19/23 10:57	02/28/23 20:57	1
Anthracene	ND		0.21	0.034	ug/L		01/19/23 10:57	02/28/23 20:57	1
Benzo[a]anthracene	ND		0.21	0.049	ug/L		01/19/23 10:57	02/28/23 20:57	1
Benzo[a]pyrene	ND		0.21	0.044	ug/L		01/19/23 10:57	02/28/23 20:57	1
Benzo[b]fluoranthene	ND		0.21	0.036	ug/L		01/19/23 10:57	02/28/23 20:57	1
Benzo[g,h,i]perylene	ND		0.21	0.14	ug/L		01/19/23 10:57	02/28/23 20:57	1
Benzo[k]fluoranthene	ND		0.21	0.11	ug/L		01/19/23 10:57	02/28/23 20:57	1
Chrysene	ND		0.21	0.078	ug/L		01/19/23 10:57	02/28/23 20:57	1
Dibenz(a,h)anthracene	ND		0 21	0 053	ug/L		01/19/23 10 57	02/28/23 20 57	1
Fluoranthene	ND		0.21	0.072	ug/L		01/19/23 10:57	02/28/23 20:57	1
Fluorene	ND		0.21	0.12	ug/L		01/19/23 10:57	02/28/23 20:57	1
Indeno[1,2,3-cd]pyrene	ND		0.21	0.045	ug/L		01/19/23 10:57	02/28/23 20:57	1
1-Methylnaphthalene	**9.1**		0.21	0.078	ug/L		01/19/23 10:57	02/28/23 20:57	1
2-Methylnaphthalene	**13**		0.21	0.063	ug/L		01/19/23 10:57	02/28/23 20:57	1
Phenanthrene	**0.039**	**J**	0.21	0.038	ug/L		01/19/23 10:57	02/28/23 20:57	1
Pyrene	ND		0.21	0.042	ug/L		01/19/23 10:57	02/28/23 20:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*89*		*15 - 122*	*01/19/23 10:57*	*02/28/23 20:57*	*1*
Nitrobenzene-d5	*96*		*19 - 130*	*01/19/23 10:57*	*02/28/23 20:57*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231800-1

Client Sample ID: MW2-ROX-011323
Date Collected: 01/13/23 11:00
Date Received: 01/14/23 09:02

Lab Sample ID: 400-231800-4
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*70*		*33 - 138*	*01/19/23 10:57*	*02/28/23 20:57*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Diphenylhydrazine (as Azobenzene)	ND		11	1.1	ug/L		01/19/23 10:57	01/23/23 16:43	1
1,4-Dioxane	ND		11	1.1	ug/L		01/19/23 10:57	01/20/23 23:40	1
2,4,5-Trichlorophenol	ND		11	3.9	ug/L		01/19/23 10:57	01/20/23 23:40	1
2,4,6-Trichlorophenol	ND		11	3.7	ug/L		01/19/23 10:57	01/20/23 23:40	1
2,4-Dichlorophenol	ND		11	3.2	ug/L		01/19/23 10:57	01/20/23 23:40	1
2,4-Dimethylphenol	ND		11	3.7	ug/L		01/19/23 10:57	01/20/23 23:40	1
2,4-Dinitrophenol	ND		32	3.6	ug/L		01/19/23 10:57	01/20/23 23:40	1
2,4-Dinitrotoluene	ND		11	2.0	ug/L		01/19/23 10:57	01/23/23 16:43	1
2,6-Dinitrotoluene	ND		11	2.0	ug/L		01/19/23 10:57	01/20/23 23:40	1
2-Chloronaphthalene	ND		11	0.15	ug/L		01/19/23 10:57	01/23/23 16:43	1
2-Chlorophenol	ND		11	2.3	ug/L		01/19/23 10:57	01/20/23 23:40	1
2-Methylphenol	ND		11	1.9	ug/L		01/19/23 10:57	01/23/23 16:43	1
2-Nitroaniline	ND		11	2.3	ug/L		01/19/23 10:57	01/20/23 23:40	1
2-Nitrophenol	ND		11	5.5	ug/L		01/19/23 10:57	01/20/23 23:40	1
3 & 4 Methylphenol	ND		21	0.41	ug/L		01/19/23 10:57	01/23/23 16:43	1
3,3'-Dichlorobenzidine	ND	*+	11	2.7	ug/L		01/19/23 10:57	01/20/23 23:40	1
3-Nitroaniline	ND		11	1.9	ug/L		01/19/23 10:57	01/23/23 16:43	1
4,6-Dinitro-ortho-cresol	ND		11	1.7	ug/L		01/19/23 10:57	01/23/23 16:43	1
4-Bromophenyl phenyl ether	ND		11	0.21	ug/L		01/19/23 10:57	01/20/23 23:40	1
4-Chloro-3-methylphenol	ND		11	4.0	ug/L		01/19/23 10:57	01/23/23 16:43	1
4-Chloroaniline	ND		11	3.6	ug/L		01/19/23 10:57	01/23/23 16:43	1
4-Chlorophenyl phenyl ether	ND		11	2.1	ug/L		01/19/23 10:57	01/20/23 23:40	1
4-Nitroaniline	ND		11	1.6	ug/L		01/19/23 10:57	01/20/23 23:40	1
4-Nitrophenol	ND		11	2.2	ug/L		01/19/23 10:57	01/20/23 23:40	1
Aniline	ND		11	4.0	ug/L		01/19/23 10:57	01/23/23 16:43	1
Benzenethiol	ND		11	1.8	ug/L		01/19/23 10:57	01/23/23 16:43	1
Benzoic acid	ND	*1	32	7.7	ug/L		01/19/23 10:57	01/20/23 23:40	1
Benzyl alcohol	ND		11	2.1	ug/L		01/19/23 10:57	01/20/23 23:40	1
bis (2-chloroisopropyl) ether	ND		11	0.17	ug/L		01/19/23 10:57	01/20/23 23:40	1
Bis(2-chloroethoxy)methane	ND		11	0.17	ug/L		01/19/23 10:57	01/23/23 16:43	1
Bis(2-chloroethyl)ether	ND		11	2.8	ug/L		01/19/23 10:57	01/23/23 16:43	1
Bis(2-ethylhexyl) phthalate	ND		11	5.3	ug/L		01/19/23 10:57	01/23/23 16:43	1
Butyl benzyl phthalate	ND		11	0.20	ug/L		01/19/23 10:57	01/23/23 16:43	1
Dibenz[a,h]acridine	ND		11	1.1	ug/L		01/19/23 10:57	01/20/23 23:40	1
Dibenzofuran	ND		11	0.18	ug/L		01/19/23 10:57	01/23/23 16:43	1
Diethyl phthalate	**0.60**	**J**	11	0.25	ug/L		01/19/23 10:57	01/20/23 23:40	1
Dimethyl phthalate	ND		11	0.18	ug/L		01/19/23 10:57	01/20/23 23:40	1
Di-n-butyl phthalate	ND		11	2.8	ug/L		01/19/23 10:57	01/23/23 16:43	1
Di-n-octyl phthalate	ND		11	0.18	ug/L		01/19/23 10:57	01/23/23 16:43	1
Hexachlorobenzene	ND		11	0.18	ug/L		01/19/23 10:57	01/20/23 23:40	1
Hexachlorocyclopentadiene	ND		21	2.7	ug/L		01/19/23 10:57	01/20/23 23:40	1
Hexachloroethane	ND		11	4.4	ug/L		01/19/23 10:57	01/20/23 23:40	1
Indene	ND		11	1.1	ug/L		01/19/23 10:57	01/23/23 16:43	1
Isophorone	ND		11	0.15	ug/L		01/19/23 10:57	01/23/23 16:43	1

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231800-1

Client Sample ID: MW2-ROX-011323
Date Collected: 01/13/23 11:00
Date Received: 01/14/23 09:02

Lab Sample ID: 400-231800-4
Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrobenzene	ND		11	0.14	ug/L		01/19/23 10:57	01/23/23 16:43	1
N-Nitrosodimethylamine	ND		11	3.7	ug/L		01/19/23 10:57	01/23/23 16:43	1
N-Nitrosodi-n-propylamine	ND		11	3.5	ug/L		01/19/23 10:57	01/23/23 16:43	1
N-Nitrosodiphenylamine	ND		11	0.19	ug/L		01/19/23 10:57	01/20/23 23:40	1
Pentachlorophenol	ND		21	1.5	ug/L		01/19/23 10:57	01/20/23 23:40	1
Phenol	ND		11	2.7	ug/L		01/19/23 10:57	01/23/23 16:43	1
Pyridine	ND		11	3.4	ug/L		01/19/23 10:57	01/23/23 16:43	1
Quinoline	ND		11	4.7	ug/L		01/19/23 10:57	01/23/23 16:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*103*		*46 - 124*	*01/19/23 10:57*	*01/20/23 23:40*	*1*
2-Fluorophenol	*50*		*13 - 113*	*01/19/23 10:57*	*01/20/23 23:40*	*1*
Nitrobenzene-d5	*101*		*36 - 126*	*01/19/23 10:57*	*01/20/23 23:40*	*1*
Phenol-d5	*91*		*17 - 127*	*01/19/23 10:57*	*01/20/23 23:40*	*1*
Terphenyl-d14	*79*		*44 - 149*	*01/19/23 10:57*	*01/20/23 23:40*	*1*
2,4,6-Tribromophenol	*92*		*26 - 150*	*01/19/23 10:57*	*01/20/23 23:40*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.030	0.017	ug/L		01/25/23 10:29	01/27/23 00:38	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/25/23 10:29	01/27/23 00:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*	*p*	*51 - 149*	*01/25/23 10:29*	*01/27/23 00:38*	*1*

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231800-1

Client Sample ID: ROST4PZC-ROX-011323
Date Collected: 01/13/23 12:10
Date Received: 01/14/23 09:02

Lab Sample ID: 400-231800-5
Matrix: Water

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25	10	ug/L			01/18/23 17:07	1
Acrolein	ND		20	3.3	ug/L			01/18/23 17:07	1
Acrylonitrile	ND		10	2.8	ug/L			01/18/23 17:07	1
Benzene	ND		1.0	0.13	ug/L			01/18/23 17:07	1
Bromobenzene	ND		1.0	0.54	ug/L			01/18/23 17:07	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/18/23 17:07	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/18/23 17:07	1
Bromoform	ND		5.0	0.25	ug/L			01/18/23 17:07	1
Bromomethane	ND		1.0	0.98	ug/L			01/18/23 17:07	1
2-Butanone (MEK)	**2.8**	**J**	25	2.6	ug/L			01/18/23 17:07	1
Carbon disulfide	**0.90**	**J**	1.0	0.50	ug/L			01/18/23 17:07	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/18/23 17:07	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/18/23 17:07	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/18/23 17:07	1
Chloroethane	ND		1.0	0.76	ug/L			01/18/23 17:07	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/18/23 17:07	1
Chloroform	ND		1.0	1.0	ug/L			01/18/23 17:07	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/18/23 17:07	1
Chloromethane	ND		1.0	0.32	ug/L			01/18/23 17:07	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/18/23 17:07	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/18/23 17:07	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/18/23 17:07	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/18/23 17:07	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/18/23 17:07	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/18/23 17:07	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/18/23 17:07	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/18/23 17:07	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/18/23 17:07	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/18/23 17:07	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/18/23 17:07	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/18/23 17:07	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/18/23 17:07	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/18/23 17:07	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/18/23 17:07	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/18/23 17:07	1
2-Hexanone	ND		25	1.4	ug/L			01/18/23 17:07	1
Isopropylbenzene	**0.94**	**J**	1.0	0.53	ug/L			01/18/23 17:07	1
Methylene bromide	ND		5.0	0.22	ug/L			01/18/23 17:07	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/18/23 17:07	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/18/23 17:07	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/18/23 17:07	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/18/23 17:07	1
Naphthalene	ND		5.0	3.0	ug/L			01/18/23 17:07	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/18/23 17:07	1
N-Propylbenzene	**2.0**		1.0	0.69	ug/L			01/18/23 17:07	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/18/23 17:07	1
o-Xylene	ND		5.0	0.60	ug/L			01/18/23 17:07	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/18/23 17:07	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			01/18/23 17:07	1

Client Sample ID: ROST4PZC-ROX-011323
Date Collected: 01/13/23 12:10
Date Received: 01/14/23 09:02

Lab Sample ID: 400-231800-5
Matrix: Water

Method: SW846 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			01/18/23 17:07	1
Styrene	ND		1.0	1.0	ug/L			01/18/23 17:07	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/18/23 17:07	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/18/23 17:07	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/18/23 17:07	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/18/23 17:07	1
Toluene	ND		1.0	0.41	ug/L			01/18/23 17:07	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/18/23 17:07	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/18/23 17:07	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/18/23 17:07	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/18/23 17:07	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/18/23 17:07	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/18/23 17:07	1
Trichloroethene	ND		1.0	0.15	ug/L			01/18/23 17:07	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/18/23 17:07	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/18/23 17:07	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/18/23 17:07	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/18/23 17:07	1
Vinyl acetate	ND		25	0.93	ug/L			01/18/23 17:07	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/18/23 17:07	1
Xylenes, Total	ND		10	1.6	ug/L			01/18/23 17:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*72 - 119*		*01/18/23 17:07*	*1*
Dibromofluoromethane	*110*		*75 - 126*		*01/18/23 17:07*	*1*
Toluene-d8 (Surr)	*92*		*64 - 132*		*01/18/23 17:07*	*1*

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**0.80**		0.21	0.033	ug/L		01/19/23 10:57	02/28/23 21:14	1
Acenaphthylene	ND		0.21	0.046	ug/L		01/19/23 10:57	02/28/23 21:14	1
Anthracene	**0.38**		0.21	0.033	ug/L		01/19/23 10:57	02/28/23 21:14	1
Benzo[a]anthracene	ND		0.21	0.047	ug/L		01/19/23 10:57	02/28/23 21:14	1
Benzo[a]pyrene	ND		0.21	0.043	ug/L		01/19/23 10:57	02/28/23 21:14	1
Benzo[b]fluoranthene	ND		0.21	0.035	ug/L		01/19/23 10:57	02/28/23 21:14	1
Benzo[g,h,i]perylene	ND		0.21	0.13	ug/L		01/19/23 10:57	02/28/23 21:14	1
Benzo[k]fluoranthene	ND		0.21	0.10	ug/L		01/19/23 10:57	02/28/23 21:14	1
Chrysene	ND		0.21	0.076	ug/L		01/19/23 10:57	02/28/23 21:14	1
Dibenz(a,h)anthracene	ND		0 21	0 052	ug/L		01/19/23 10 57	02/28/23 21 14	1
Fluoranthene	ND		0.21	0.070	ug/L		01/19/23 10:57	02/28/23 21:14	1
Fluorene	**0.80**		0.21	0.11	ug/L		01/19/23 10:57	02/28/23 21:14	1
Indeno[1,2,3-cd]pyrene	ND		0.21	0.044	ug/L		01/19/23 10:57	02/28/23 21:14	1
1-Methylnaphthalene	**4.8**		0.21	0.076	ug/L		01/19/23 10:57	02/28/23 21:14	1
2-Methylnaphthalene	ND		0.21	0.062	ug/L		01/19/23 10:57	02/28/23 21:14	1
Phenanthrene	**2.4**		0.21	0.037	ug/L		01/19/23 10:57	02/28/23 21:14	1
Pyrene	**0.092**	**J**	0.21	0.041	ug/L		01/19/23 10:57	02/28/23 21:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*92*		*15 - 122*	*01/19/23 10:57*	*02/28/23 21:14*	*1*
Nitrobenzene-d5	*94*		*19 - 130*	*01/19/23 10:57*	*02/28/23 21:14*	*1*

Client Sample ID: ROST4PZC-ROX-011323
Date Collected: 01/13/23 12:10
Date Received: 01/14/23 09:02

Lab Sample ID: 400-231800-5
Matrix: Water

Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*106*		*33 - 138*	*01/19/23 10:57*	*02/28/23 21:14*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/19/23 10:57	01/23/23 17:03	1
1,4-Dioxane	ND		10	1.0	ug/L		01/19/23 10:57	01/21/23 00:01	1
2,4,5-Trichlorophenol	ND		10	3.8	ug/L		01/19/23 10:57	01/21/23 00:01	1
2,4,6-Trichlorophenol	ND		10	3.6	ug/L		01/19/23 10:57	01/21/23 00:01	1
2,4-Dichlorophenol	ND		10	3.1	ug/L		01/19/23 10:57	01/21/23 00:01	1
2,4-Dimethylphenol	ND		10	3.6	ug/L		01/19/23 10:57	01/21/23 00:01	1
2,4-Dinitrophenol	ND		31	3.5	ug/L		01/19/23 10:57	01/21/23 00:01	1
2,4-Dinitrotoluene	ND		10	2.0	ug/L		01/19/23 10:57	01/23/23 17:03	1
2,6-Dinitrotoluene	ND		10	2.0	ug/L		01/19/23 10:57	01/21/23 00:01	1
2-Chloronaphthalene	ND		10	0.14	ug/L		01/19/23 10:57	01/23/23 17:03	1
2-Chlorophenol	ND		10	2.3	ug/L		01/19/23 10:57	01/21/23 00:01	1
2-Methylphenol	ND		10	1.9	ug/L		01/19/23 10:57	01/23/23 17:03	1
2-Nitroaniline	ND		10	2.3	ug/L		01/19/23 10:57	01/21/23 00:01	1
2-Nitrophenol	ND		10	5.4	ug/L		01/19/23 10:57	01/21/23 00:01	1
3 & 4 Methylphenol	ND		21	0.40	ug/L		01/19/23 10:57	01/23/23 17:03	1
3,3'-Dichlorobenzidine	ND	*+	10	2.7	ug/L		01/19/23 10:57	01/21/23 00:01	1
3-Nitroaniline	ND		10	1.9	ug/L		01/19/23 10:57	01/23/23 17:03	1
4,6-Dinitro-ortho-cresol	ND		10	1.7	ug/L		01/19/23 10:57	01/23/23 17:03	1
4-Bromophenyl phenyl ether	ND		10	0.21	ug/L		01/19/23 10:57	01/21/23 00:01	1
4-Chloro-3-methylphenol	ND		10	3.9	ug/L		01/19/23 10:57	01/23/23 17:03	1
4-Chloroaniline	ND		10	3.5	ug/L		01/19/23 10:57	01/23/23 17:03	1
4-Chlorophenyl phenyl ether	ND		10	2.1	ug/L		01/19/23 10:57	01/21/23 00:01	1
4-Nitroaniline	ND		10	1.5	ug/L		01/19/23 10:57	01/21/23 00:01	1
4-Nitrophenol	ND		10	2.2	ug/L		01/19/23 10:57	01/21/23 00:01	1
Aniline	ND		10	3.9	ug/L		01/19/23 10:57	01/23/23 17:03	1
Benzenethiol	ND		10	1.8	ug/L		01/19/23 10:57	01/23/23 17:03	1
Benzoic acid	ND	*1	31	7.5	ug/L		01/19/23 10:57	01/21/23 00:01	1
Benzyl alcohol	ND		10	2.1	ug/L		01/19/23 10:57	01/21/23 00:01	1
bis (2-chloroisopropyl) ether	ND		10	0.17	ug/L		01/19/23 10:57	01/21/23 00:01	1
Bis(2-chloroethoxy)methane	ND		10	0.17	ug/L		01/19/23 10:57	01/23/23 17:03	1
Bis(2-chloroethyl)ether	ND		10	2.8	ug/L		01/19/23 10:57	01/23/23 17:03	1
Bis(2-ethylhexyl) phthalate	ND		10	5.2	ug/L		01/19/23 10:57	01/23/23 17:03	1
Butyl benzyl phthalate	ND		10	0.20	ug/L		01/19/23 10:57	01/23/23 17:03	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/19/23 10:57	01/21/23 00:01	1
Dibenzofuran	**0.41**	**J**	10	0.18	ug/L		01/19/23 10:57	01/23/23 17:03	1
Diethyl phthalate	ND		10	0.25	ug/L		01/19/23 10:57	01/21/23 00:01	1
Dimethyl phthalate	ND		10	0.18	ug/L		01/19/23 10:57	01/21/23 00:01	1
Di-n-butyl phthalate	ND		10	2.8	ug/L		01/19/23 10:57	01/23/23 17:03	1
Di-n-octyl phthalate	ND		10	0.18	ug/L		01/19/23 10:57	01/23/23 17:03	1
Hexachlorobenzene	ND		10	0.18	ug/L		01/19/23 10:57	01/21/23 00:01	1
Hexachlorocyclopentadiene	ND		21	2.7	ug/L		01/19/23 10:57	01/21/23 00:01	1
Hexachloroethane	ND		10	4.3	ug/L		01/19/23 10:57	01/21/23 00:01	1
Indene	ND		10	1.0	ug/L		01/19/23 10:57	01/23/23 17:03	1
Isophorone	ND		10	0.14	ug/L		01/19/23 10:57	01/23/23 17:03	1

Client Sample ID: ROST4PZC-ROX-011323
Date Collected: 01/13/23 12:10
Date Received: 01/14/23 09:02

Lab Sample ID: 400-231800-5
Matrix: Water

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrobenzene	ND		10	0.13	ug/L		01/19/23 10:57	01/23/23 17:03	1
N-Nitrosodimethylamine	ND		10	3.6	ug/L		01/19/23 10:57	01/23/23 17:03	1
N-Nitrosodi-n-propylamine	ND		10	3.4	ug/L		01/19/23 10:57	01/23/23 17:03	1
N-Nitrosodiphenylamine	ND		10	0.19	ug/L		01/19/23 10:57	01/21/23 00:01	1
Pentachlorophenol	ND		21	1.4	ug/L		01/19/23 10:57	01/21/23 00:01	1
Phenol	ND		10	2.7	ug/L		01/19/23 10:57	01/23/23 17:03	1
Pyridine	ND		10	3.3	ug/L		01/19/23 10:57	01/23/23 17:03	1
Quinoline	ND		10	4.6	ug/L		01/19/23 10:57	01/23/23 17:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*113*		*46 - 124*	*01/19/23 10:57*	*01/21/23 00:01*	*1*
2-Fluorophenol	*31*		*13 - 113*	*01/19/23 10:57*	*01/21/23 00:01*	*1*
Nitrobenzene-d5	*105*		*36 - 126*	*01/19/23 10:57*	*01/21/23 00:01*	*1*
Phenol-d5	*77*		*17 - 127*	*01/19/23 10:57*	*01/21/23 00:01*	*1*
Terphenyl-d14	*119*		*44 - 149*	*01/19/23 10:57*	*01/21/23 00:01*	*1*
2,4,6-Tribromophenol	*91*		*26 - 150*	*01/19/23 10:57*	*01/21/23 00:01*	*1*

Method: EPA 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND	*+	0.029	0.017	ug/L		01/25/23 10:29	01/27/23 00:58	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/25/23 10:29	01/27/23 00:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*	*p*	*51 - 149*	*01/25/23 10:29*	*01/27/23 00:58*	*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
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
H	Sample was prepped or analyzed beyond the specified holding time
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
*+	LCS and/or LCSD is outside acceptance limits, high biased.
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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231800-1

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	(72-119)	(75-126)	(64-132)
400-231800-1	TB-ROX-011323-8260	95	109	92
400-231800-3	MW1-ROX-011323	95	112	91
400-231800-4	MW2-ROX-011323	98	112	96
400-231800-5	ROST4PZC-ROX-011323	96	110	92
LCS 400-608910/1002	Lab Control Sample	95	114	90
MB 400-608910/4	Method Blank	95	110	91

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	(46-124)	(13-113)	(36-126)	(17-127)	(44-149)	(26-150)
400-231800-3	MW1-ROX-011323	113	13	100	52	113	65
400-231800-4	MW2-ROX-011323	103	50	101	91	79	92
400-231800-5	ROST4PZC-ROX-011323	113	31	105	77	119	91
LCS 400-609111/2-A	Lab Control Sample	95	66	101	98	120	104
LCS 400-609111/6-A	Lab Control Sample	109	42	102	85	117	51
LCSD 400-609111/3-A	Lab Control Sample Dup	98	40	105	87	123	108
LCSD 400-609111/7-A	Lab Control Sample Dup	111	58	100	98	119	76
MB 400-609111/1-A	Method Blank	108	17	105	75	132	76

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)		
		FBP	NBZ	TPHL
Lab Sample ID	Client Sample ID	(15-122)	(19-130)	(33-138)
400-231800-3	MW1-ROX-011323	109	96	94
400-231800-3 - RE	MW1-ROX-011323	97	97	106
400-231800-4	MW2-ROX-011323	89	96	70
400-231800-5	ROST4PZC-ROX-011323	92	94	106
LCS 400-609111/2-A	Lab Control Sample	93	61	97
LCS 400-612425/2-A	Lab Control Sample	86	98	100
LCSD 400-609111/3-A	Lab Control Sample Dup	102	79	114
LCSD 400-612425/3-A	Lab Control Sample Dup	79	94	92
MB 400-609111/1-A	Method Blank	92	79	114
MB 400-612425/1-A	Method Blank		97	105

Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231800-1

Surrogate Legend

FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14

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)							
400-231800-2	TB-ROX-011323-8011	100 p							
400-231800-3	MW1-ROX-011323	99 p							
400-231800-4	MW2-ROX-011323	100 p							
400-231800-5	ROST4PZC-ROX-011323	98 p							
LCS 400-609811/2-A	Lab Control Sample	109							
LCSD 400-609811/3-A	Lab Control Sample Dup	121							
MB 400-609811/1-A	Method Blank	122							

Surrogate Legend

BFB = 4-Bromofluorobenzene

Method Summary

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231800-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	EET PEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	EET PEN
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	EET PEN
8011	EDB and DBCP in Water by Microextraction	EPA	EET PEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	EET PEN
5030B	Purge and Trap	SW846	EET PEN
8011	Microextraction	SW846	EET 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:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231800-1

Client Sample ID: TB-ROX-011323-8260
Date Collected: 01/13/23 12:00
Date Received: 01/14/23 09:02

Lab Sample ID: 400-231800-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	608910	01/18/23 14:58	JE	EET PEN

Client Sample ID: TB-ROX-011323-8011
Date Collected: 01/13/23 12:00
Date Received: 01/14/23 09:02

Lab Sample ID: 400-231800-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			35.7 mL	35 mL	609811	01/25/23 10:29	DS	EET PEN
Total/NA	Analysis	8011		1			610064	01/26/23 23:58	DS	EET PEN

Client Sample ID: MW1-ROX-011323
Date Collected: 01/13/23 10:00
Date Received: 01/14/23 09:02

Lab Sample ID: 400-231800-3
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	608910	01/18/23 16:15	JE	EET PEN
Total/NA	Prep	3520C			242.6 mL	1 mL	609111	01/19/23 10:57	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609551	01/23/23 16:22	S1B	EET PEN
Total/NA	Prep	3520C			242.6 mL	1 mL	609111	01/19/23 10:57	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609321	01/20/23 23:18	S1B	EET PEN
Total/NA	Prep	3520C			242.6 mL	1 mL	609111	01/19/23 10:57	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	611624	02/08/23 19:06	PP1	EET PEN
Total/NA	Prep	3520C	RE		245.8 mL	1 mL	612425	02/14/23 15:10	KWS	EET PEN
Total/NA	Analysis	8270D LL	RE	1	0.4 mL	0.4 mL	614365	02/28/23 21:48	PP1	EET PEN
Total/NA	Prep	8011			35.9 mL	35 mL	609811	01/25/23 10:29	DS	EET PEN
Total/NA	Analysis	8011		1			610064	01/27/23 00:18	DS	EET PEN

Client Sample ID: MW2-ROX-011323
Date Collected: 01/13/23 11:00
Date Received: 01/14/23 09:02

Lab Sample ID: 400-231800-4
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	608910	01/18/23 16:41	JE	EET PEN
Total/NA	Prep	3520C			237 mL	1 mL	609111	01/19/23 10:57	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609551	01/23/23 16:43	S1B	EET PEN
Total/NA	Prep	3520C			237 mL	1 mL	609111	01/19/23 10:57	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609321	01/20/23 23:40	S1B	EET PEN
Total/NA	Prep	3520C			237 mL	1 mL	609111	01/19/23 10:57	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	614365	02/28/23 20:57	PP1	EET PEN
Total/NA	Prep	8011			34.5 mL	35 mL	609811	01/25/23 10:29	DS	EET PEN
Total/NA	Analysis	8011		1			610064	01/27/23 00:38	DS	EET PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231800-1

Client Sample ID: ROST4PZC-ROX-011323

Lab Sample ID: 400-231800-5

Date Collected: 01/13/23 12:10

Matrix: Water

Date Received: 01/14/23 09:02

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	608910	01/18/23 17:07	JE	EET PEN
Total/NA	Prep	3520C			242.4 mL	1 mL	609111	01/19/23 10:57	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609551	01/23/23 17:03	S1B	EET PEN
Total/NA	Prep	3520C			242.4 mL	1 mL	609111	01/19/23 10:57	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609321	01/21/23 00:01	S1B	EET PEN
Total/NA	Prep	3520C			242.4 mL	1 mL	609111	01/19/23 10:57	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	614365	02/28/23 21:14	PP1	EET PEN
Total/NA	Prep	8011			35.8 mL	35 mL	609811	01/25/23 10:29	DS	EET PEN
Total/NA	Analysis	8011		1			610064	01/27/23 00:58	DS	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-608910/4

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	608910	01/18/23 11:20	JE	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-609111/1-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			250 mL	1 mL	609111	01/19/23 10:57	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609551	01/23/23 15:06	S1B	EET PEN
Total/NA	Prep	3520C			250 mL	1 mL	609111	01/19/23 10:57	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	609585	01/23/23 19:11	KJA	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-609811/1-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	609811	01/25/23 10:29	DS	EET PEN
Total/NA	Analysis	8011		1			610064	01/26/23 18:33	DS	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-612425/1-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			250 mL	1 mL	612425	02/14/23 15:10	KWS	EET PEN
Total/NA	Analysis	8270D LL		1	0.4 mL	0.4 mL	614365	02/28/23 21:31	PP1	EET PEN

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 400-608910/1002**
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	608910	01/18/23 10:17	JE	EET PEN

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 400-609111/2-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			250 mL	1 mL	609111	01/19/23 10:57	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609551	01/23/23 15:41	S1B	EET PEN
Total/NA	Prep	3520C			250 mL	1 mL	609111	01/19/23 10:57	KWS	EET PEN
Total/NA	Analysis	8270D LL		5	0.4 mL	0.4 mL	609585	01/23/23 19:28	KJA	EET PEN

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 400-609111/6-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			250 mL	1 mL	609111	01/19/23 10:57	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609321	01/20/23 21:16	S1B	EET PEN

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 400-609811/2-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	609811	01/25/23 10:29	DS	EET PEN
Total/NA	Analysis	8011		1			610064	01/26/23 18:53	DS	EET PEN

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 400-612425/2-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			250 mL	1 mL	612425	02/14/23 15:10	KWS	EET PEN
Total/NA	Analysis	8270D LL		5	0.4 mL	0.4 mL	612520	02/15/23 12:42	KJA	EET PEN

Client Sample ID: Lab Control Sample Dup — **Lab Sample ID: LCSD 400-609111/3-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			250 mL	1 mL	609111	01/19/23 10:57	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609551	01/23/23 16:01	S1B	EET PEN
Total/NA	Prep	3520C			250 mL	1 mL	609111	01/19/23 10:57	KWS	EET PEN
Total/NA	Analysis	8270D LL		5	0.4 mL	0.4 mL	609903	01/25/23 20:33	KJA	EET PEN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: ROXANA QUARTERLY GW

Job ID: 400-231800-1

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-609111/7-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			250 mL	1 mL	609111	01/19/23 10:57	KWS	EET PEN
Total/NA	Analysis	8270D		1	0.4 mL	0.4 mL	609321	01/20/23 21:38	S1B	EET PEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-609811/3-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	609811	01/25/23 10:29	DS	EET PEN
Total/NA	Analysis	8011		1			610064	01/26/23 19:14	DS	EET PEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-612425/3-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			250 mL	1 mL	612425	02/14/23 15:10	KWS	EET PEN
Total/NA	Analysis	8270D LL		5	0.4 mL	0.4 mL	612520	02/15/23 12:59	KJA	EET PEN

Laboratory References:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

GC/MS VOA

Analysis Batch: 608910

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231800-1	TB-ROX-011323-8260	Total/NA	Water	8260B	
400-231800-3	MW1-ROX-011323	Total/NA	Water	8260B	
400-231800-4	MW2-ROX-011323	Total/NA	Water	8260B	
400-231800-5	ROST4PZC-ROX-011323	Total/NA	Water	8260B	
MB 400-608910/4	Method Blank	Total/NA	Water	8260B	
LCS 400-608910/1002	Lab Control Sample	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 609111

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231800-3	MW1-ROX-011323	Total/NA	Water	3520C	
400-231800-4	MW2-ROX-011323	Total/NA	Water	3520C	
400-231800-5	ROST4PZC-ROX-011323	Total/NA	Water	3520C	
MB 400-609111/1-A	Method Blank	Total/NA	Water	3520C	
LCS 400-609111/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 400-609111/6-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-609111/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
LCSD 400-609111/7-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 609321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231800-3	MW1-ROX-011323	Total/NA	Water	8270D	609111
400-231800-4	MW2-ROX-011323	Total/NA	Water	8270D	609111
400-231800-5	ROST4PZC-ROX-011323	Total/NA	Water	8270D	609111
LCS 400-609111/6-A	Lab Control Sample	Total/NA	Water	8270D	609111
LCSD 400-609111/7-A	Lab Control Sample Dup	Total/NA	Water	8270D	609111

Analysis Batch: 609551

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231800-3	MW1-ROX-011323	Total/NA	Water	8270D	609111
400-231800-4	MW2-ROX-011323	Total/NA	Water	8270D	609111
400-231800-5	ROST4PZC-ROX-011323	Total/NA	Water	8270D	609111
MB 400-609111/1-A	Method Blank	Total/NA	Water	8270D	609111
LCS 400-609111/2-A	Lab Control Sample	Total/NA	Water	8270D	609111
LCSD 400-609111/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	609111

Analysis Batch: 609585

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-609111/1-A	Method Blank	Total/NA	Water	8270D LL	609111
LCS 400-609111/2-A	Lab Control Sample	Total/NA	Water	8270D LL	609111

Analysis Batch: 609903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 400-609111/3-A	Lab Control Sample Dup	Total/NA	Water	8270D LL	609111

Analysis Batch: 611624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231800-3	MW1-ROX-011323	Total/NA	Water	8270D LL	609111

GC/MS Semi VOA

Prep Batch: 612425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231800-3 - RE	MW1-ROX-011323	Total/NA	Water	3520C	
MB 400-612425/1-A	Method Blank	Total/NA	Water	3520C	
LCS 400-612425/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-612425/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 612520

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-612425/2-A	Lab Control Sample	Total/NA	Water	8270D LL	612425
LCSD 400-612425/3-A	Lab Control Sample Dup	Total/NA	Water	8270D LL	612425

Analysis Batch: 614365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231800-3 - RE	MW1-ROX-011323	Total/NA	Water	8270D LL	612425
400-231800-4	MW2-ROX-011323	Total/NA	Water	8270D LL	609111
400-231800-5	ROST4PZC-ROX-011323	Total/NA	Water	8270D LL	609111
MB 400-612425/1-A	Method Blank	Total/NA	Water	8270D LL	612425

GC Semi VOA

Prep Batch: 609811

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231800-2	TB-ROX-011323-8011	Total/NA	Water	8011	
400-231800-3	MW1-ROX-011323	Total/NA	Water	8011	
400-231800-4	MW2-ROX-011323	Total/NA	Water	8011	
400-231800-5	ROST4PZC-ROX-011323	Total/NA	Water	8011	
MB 400-609811/1-A	Method Blank	Total/NA	Water	8011	
LCS 400-609811/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 400-609811/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 610064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-231800-2	TB-ROX-011323-8011	Total/NA	Water	8011	609811
400-231800-3	MW1-ROX-011323	Total/NA	Water	8011	609811
400-231800-4	MW2-ROX-011323	Total/NA	Water	8011	609811
400-231800-5	ROST4PZC-ROX-011323	Total/NA	Water	8011	609811
MB 400-609811/1-A	Method Blank	Total/NA	Water	8011	609811
LCS 400-609811/2-A	Lab Control Sample	Total/NA	Water	8011	609811
LCSD 400-609811/3-A	Lab Control Sample Dup	Total/NA	Water	8011	609811

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-608910/4
Matrix: Water
Analysis Batch: 608910

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			01/18/23 11:20	1
Acrolein	ND		20	3.3	ug/L			01/18/23 11:20	1
Acrylonitrile	ND		10	2.8	ug/L			01/18/23 11:20	1
Benzene	ND		1.0	0.13	ug/L			01/18/23 11:20	1
Bromobenzene	ND		1.0	0.54	ug/L			01/18/23 11:20	1
Bromochloromethane	ND		1.0	0.21	ug/L			01/18/23 11:20	1
Bromodichloromethane	ND		1.0	0.50	ug/L			01/18/23 11:20	1
Bromoform	ND		5.0	0.25	ug/L			01/18/23 11:20	1
Bromomethane	ND		1.0	0.98	ug/L			01/18/23 11:20	1
2-Butanone (MEK)	ND		25	2.6	ug/L			01/18/23 11:20	1
Carbon disulfide	ND		1.0	0.50	ug/L			01/18/23 11:20	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/18/23 11:20	1
Chlorobenzene	ND		1.0	0.15	ug/L			01/18/23 11:20	1
Dibromochloromethane	ND		1.0	0.24	ug/L			01/18/23 11:20	1
Chloroethane	ND		1.0	0.76	ug/L			01/18/23 11:20	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			01/18/23 11:20	1
Chloroform	ND		1.0	1.0	ug/L			01/18/23 11:20	1
1-Chlorohexane	ND		1.0	0.32	ug/L			01/18/23 11:20	1
Chloromethane	ND		1.0	0.32	ug/L			01/18/23 11:20	1
cis-1,2-Dichloroethene	ND		1.0	0.20	ug/L			01/18/23 11:20	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			01/18/23 11:20	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			01/18/23 11:20	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			01/18/23 11:20	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			01/18/23 11:20	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			01/18/23 11:20	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			01/18/23 11:20	1
1,2-Dichloroethane	ND		1.0	0.19	ug/L			01/18/23 11:20	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			01/18/23 11:20	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			01/18/23 11:20	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			01/18/23 11:20	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			01/18/23 11:20	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			01/18/23 11:20	1
Ethylbenzene	ND		1.0	0.50	ug/L			01/18/23 11:20	1
Ethyl methacrylate	ND		1.0	0.60	ug/L			01/18/23 11:20	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			01/18/23 11:20	1
2-Hexanone	ND		25	1.4	ug/L			01/18/23 11:20	1
Isopropy benzene	ND		1.0	0.53	ug/L			01/18/23 11:20	1
Methylene bromide	ND		5.0	0.22	ug/L			01/18/23 11:20	1
Methylene Chloride	ND		5.0	3.0	ug/L			01/18/23 11:20	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			01/18/23 11:20	1
Methyl tert-butyl ether	ND		1.0	0.22	ug/L			01/18/23 11:20	1
m-Xylene & p-Xylene	ND		5.0	0.63	ug/L			01/18/23 11:20	1
Naphthalene	ND		5.0	3.0	ug/L			01/18/23 11:20	1
n-Butylbenzene	ND		1.0	0.76	ug/L			01/18/23 11:20	1
N-Propylbenzene	ND		1.0	0.69	ug/L			01/18/23 11:20	1
o-Chlorotoluene	ND		1.0	0.57	ug/L			01/18/23 11:20	1
o-Xylene	ND		5.0	0.60	ug/L			01/18/23 11:20	1
p-Chlorotoluene	ND		1.0	0.56	ug/L			01/18/23 11:20	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-608910/4
Matrix: Water
Analysis Batch: 608910

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			01/18/23 11:20	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			01/18/23 11:20	1
Styrene	ND		1.0	1.0	ug/L			01/18/23 11:20	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			01/18/23 11:20	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.16	ug/L			01/18/23 11:20	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			01/18/23 11:20	1
Tetrachloroethene	ND		1.0	0.90	ug/L			01/18/23 11:20	1
Toluene	ND		1.0	0.41	ug/L			01/18/23 11:20	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			01/18/23 11:20	1
trans-1,3-Dichloropropene	ND		5.0	0.20	ug/L			01/18/23 11:20	1
1,2,3-Trichlorobenzene	ND		1.0	0.90	ug/L			01/18/23 11:20	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			01/18/23 11:20	1
1,1,1-Trichloroethane	ND		1.0	0.18	ug/L			01/18/23 11:20	1
1,1,2-Trichloroethane	ND		5.0	0.21	ug/L			01/18/23 11:20	1
Trichloroethene	ND		1.0	0.15	ug/L			01/18/23 11:20	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			01/18/23 11:20	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			01/18/23 11:20	1
1,2,4-Trimethy benzene	ND		1.0	0.82	ug/L			01/18/23 11:20	1
1,3,5-Trimethy benzene	ND		1.0	0.56	ug/L			01/18/23 11:20	1
Vinyl acetate	ND		25	0.93	ug/L			01/18/23 11:20	1
Vinyl chloride	ND		1.0	0.50	ug/L			01/18/23 11:20	1
Xylenes, Total	ND		10	1.6	ug/L			01/18/23 11:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*72 - 119*		*01/18/23 11:20*	*1*
Dibromofluoromethane	*110*		*75 - 126*		*01/18/23 11:20*	*1*
Toluene-d8 (Surr)	*91*		*64 - 132*		*01/18/23 11:20*	*1*

Lab Sample ID: LCS 400-608910/1002
Matrix: Water
Analysis Batch: 608910

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	200	211		ug/L		106	43 - 160
Acrolein	500	489		ug/L		98	38 - 160
Acrylonitrile	500	531		ug/L		106	64 - 142
Benzene	50.0	59.9		ug/L		120	70 - 130
Bromobenzene	50.0	50.8		ug/L		102	70 - 132
Bromochloromethane	50.0	61.5		ug/L		123	70 - 130
Bromodichloromethane	50.0	59.0		ug/L		118	67 - 133
Bromoform	50.0	44.6		ug/L		89	57 - 140
Bromomethane	50.0	55.8		ug/L		112	10 - 160
2-Butanone (MEK)	200	203		ug/L		101	61 - 145
Carbon disulfide	50.0	59.2		ug/L		118	61 - 137
Carbon tetrachloride	50.0	59.9		ug/L		120	61 - 137
Chlorobenzene	50.0	53.7		ug/L		107	70 - 130
Dibromochloromethane	50.0	50.2		ug/L		100	67 - 135
Chloroethane	50.0	54.0		ug/L		108	55 - 141

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-608910/1002
Matrix: Water
Analysis Batch: 608910

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	45.5		ug/L		91	10 - 160
Chloroform	50.0	60.6		ug/L		121	69 - 130
1-Chlorohexane	50.0	55.4		ug/L		111	69 - 130
Chloromethane	50.0	51.2		ug/L		102	58 - 137
cis-1,2-Dichloroethene	50.0	56.7		ug/L		113	68 - 130
cis-1,3-Dichloropropene	50.0	58.5		ug/L		117	69 - 132
1,2-Dichlorobenzene	50.0	51.7		ug/L		103	67 - 130
1,3-Dichlorobenzene	50.0	53.0		ug/L		106	70 - 130
1,4-Dichlorobenzene	50.0	52.4		ug/L		105	70 - 130
Dichlorodifluoromethane	50.0	50.0		ug/L		100	41 - 146
1,1-Dichloroethane	50.0	59.4		ug/L		119	70 - 130
1,2-Dichloroethane	50.0	59.2		ug/L		118	69 - 130
1,1-Dichloroethene	50.0	59.2		ug/L		118	63 - 134
1,2-Dichloropropane	50.0	59.1		ug/L		118	70 - 130
1,3-Dichloropropane	50.0	49.4		ug/L		99	70 - 130
2,2-Dichloropropane	50.0	58.9		ug/L		118	52 - 135
1,1-Dichloropropene	50.0	60.1		ug/L		120	70 - 130
Ethylbenzene	50.0	54.2		ug/L		108	70 - 130
Ethyl methacrylate	50.0	47.3		ug/L		95	68 - 130
Hexachlorobutadiene	50.0	54.9		ug/L		110	53 - 140
2-Hexanone	200	182		ug/L		91	65 - 137
Isopropy benzene	50.0	55.8		ug/L		112	70 - 130
Methylene bromide	50.0	57.7		ug/L		115	70 - 130
Methylene Chloride	50.0	59.0		ug/L		118	66 - 135
4-Methyl-2-pentanone (MIBK)	200	207		ug/L		104	69 - 138
Methyl tert-butyl ether	50.0	56.6		ug/L		113	66 - 130
m-Xylene & p-Xylene	50.0	53.8		ug/L		108	70 - 130
Naphthalene	50.0	46.0		ug/L		92	47 - 149
n-Butylbenzene	50.0	55.5		ug/L		111	67 - 130
N-Propylbenzene	50.0	53.1		ug/L		106	70 - 130
o-Chlorotoluene	50.0	51.8		ug/L		104	70 - 130
o-Xylene	50.0	53.9		ug/L		108	70 - 130
p-Chlorotoluene	50.0	51.3		ug/L		103	70 - 130
p-Isopropyltoluene	50.0	55.0		ug/L		110	65 - 130
sec-Butylbenzene	50.0	53.6		ug/L		107	66 - 130
Styrene	50.0	53.4		ug/L		107	70 - 130
tert-Butylbenzene	50.0	50.8		ug/L		102	64 - 139
1,1,1,2-Tetrachloroethane	50.0	52.1		ug/L		104	67 - 131
1,1,2,2-Tetrachloroethane	50.0	44.8		ug/L		90	70 - 131
Tetrachloroethene	50.0	56.0		ug/L		112	65 - 130
Toluene	50.0	52.6		ug/L		105	70 - 130
trans-1,2-Dichloroethene	50.0	61.4		ug/L		123	70 - 130
trans-1,3-Dichloropropene	50.0	50.2		ug/L		100	63 - 130
1,2,3-Trichlorobenzene	50.0	51.6		ug/L		103	60 - 138
1,2,4-Trichlorobenzene	50.0	53.5		ug/L		107	60 - 140
1,1,1-Trichloroethane	50.0	60.4		ug/L		121	68 - 130
1,1,2-Trichloroethane	50.0	50.0		ug/L		100	70 - 130
Trichloroethene	50.0	62.4		ug/L		125	70 - 130
Trichlorofluoromethane	50.0	56.1		ug/L		112	65 - 138

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-608910/1002
Matrix: Water
Analysis Batch: 608910

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	50.0	45.0		ug/L		90	70 - 130
1,2,4-Trimethy benzene	50.0	53.1		ug/L		106	70 - 130
1,3,5-Trimethy benzene	50.0	52.0		ug/L		104	69 - 130
Vinyl acetate	100	108		ug/L		108	26 - 160
Vinyl chloride	50.0	52.5		ug/L		105	59 - 136
Xylenes, Total	100	108		ug/L		108	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*95*		*72 - 119*
Dibromofluoromethane	*114*		*75 - 126*
Toluene-d8 (Surr)	*90*		*64 - 132*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-609111/1-A
Matrix: Water
Analysis Batch: 609551

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 609111

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Diphenylhydrazine (as Azobenzene)	ND		10	1.0	ug/L		01/19/23 10:57	01/23/23 15:06	1
1,4-Dioxane	ND		10	1.0	ug/L		01/19/23 10:57	01/23/23 15:06	1
2,4,5-Trichlorophenol	ND		10	3.7	ug/L		01/19/23 10:57	01/23/23 15:06	1
2,4,6-Trichlorophenol	ND		10	3.5	ug/L		01/19/23 10:57	01/23/23 15:06	1
2,4-Dichlorophenol	ND		10	3.0	ug/L		01/19/23 10:57	01/23/23 15:06	1
2,4-Dimethylphenol	ND		10	3.5	ug/L		01/19/23 10:57	01/23/23 15:06	1
2,4-Dinitrophenol	ND		30	3.4	ug/L		01/19/23 10:57	01/23/23 15:06	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		01/19/23 10:57	01/23/23 15:06	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		01/19/23 10:57	01/23/23 15:06	1
2-Chloronaphthalene	ND		10	0.14	ug/L		01/19/23 10:57	01/23/23 15:06	1
2-Chlorophenol	ND		10	2.2	ug/L		01/19/23 10:57	01/23/23 15:06	1
2-Methylphenol	ND		10	1.8	ug/L		01/19/23 10:57	01/23/23 15:06	1
2-Nitroaniline	ND		10	2.2	ug/L		01/19/23 10:57	01/23/23 15:06	1
2-Nitrophenol	ND		10	5.2	ug/L		01/19/23 10:57	01/23/23 15:06	1
3 & 4 Methylphenol	ND		20	0.39	ug/L		01/19/23 10:57	01/23/23 15:06	1
3,3'-Dichlorobenzidine	ND		10	2.6	ug/L		01/19/23 10:57	01/23/23 15:06	1
3-Nitroaniline	ND		10	1.8	ug/L		01/19/23 10:57	01/23/23 15:06	1
4,6-Dinitro-ortho-cresol	ND		10	1.6	ug/L		01/19/23 10:57	01/23/23 15:06	1
4-Bromophenyl phenyl ether	ND		10	0.20	ug/L		01/19/23 10:57	01/23/23 15:06	1
4-Chloro-3-methylphenol	ND		10	3.8	ug/L		01/19/23 10:57	01/23/23 15:06	1
4-Chloroaniline	ND		10	3.4	ug/L		01/19/23 10:57	01/23/23 15:06	1
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		01/19/23 10:57	01/23/23 15:06	1
4-Nitroaniline	ND		10	1.5	ug/L		01/19/23 10:57	01/23/23 15:06	1
4-Nitrophenol	ND		10	2.1	ug/L		01/19/23 10:57	01/23/23 15:06	1
Aniline	ND		10	3.8	ug/L		01/19/23 10:57	01/23/23 15:06	1
Benzenethiol	ND		10	1.7	ug/L		01/19/23 10:57	01/23/23 15:06	1
Benzoic acid	ND		30	7.3	ug/L		01/19/23 10:57	01/23/23 15:06	1
Benzyl alcohol	ND		10	2.0	ug/L		01/19/23 10:57	01/23/23 15:06	1
bis (2-chloroisopropyl) ether	ND		10	0.16	ug/L		01/19/23 10:57	01/23/23 15:06	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-609111/1-A
Matrix: Water
Analysis Batch: 609551

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 609111

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethoxy)methane	ND		10	0.16	ug/L		01/19/23 10:57	01/23/23 15:06	1
Bis(2-chloroethyl)ether	ND		10	2.7	ug/L		01/19/23 10:57	01/23/23 15:06	1
Bis(2-ethylhexyl) phthalate	ND		10	5.0	ug/L		01/19/23 10:57	01/23/23 15:06	1
Butyl benzyl phthalate	ND		10	0.19	ug/L		01/19/23 10:57	01/23/23 15:06	1
Dibenz[a,h]acridine	ND		10	1.0	ug/L		01/19/23 10:57	01/23/23 15:06	1
Dibenzofuran	ND		10	0.17	ug/L		01/19/23 10:57	01/23/23 15:06	1
Diethyl phthalate	ND		10	0.24	ug/L		01/19/23 10:57	01/23/23 15:06	1
Dimethyl phthalate	ND		10	0.17	ug/L		01/19/23 10:57	01/23/23 15:06	1
Di-n-butyl phthalate	ND		10	2.7	ug/L		01/19/23 10:57	01/23/23 15:06	1
Di-n-octyl phthalate	ND		10	0.17	ug/L		01/19/23 10:57	01/23/23 15:06	1
Hexachlorobenzene	ND		10	0.17	ug/L		01/19/23 10:57	01/23/23 15:06	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		01/19/23 10:57	01/23/23 15:06	1
Hexachloroethane	ND		10	4.2	ug/L		01/19/23 10:57	01/23/23 15:06	1
Indene	ND		10	1.0	ug/L		01/19/23 10:57	01/23/23 15:06	1
Isophorone	ND		10	0.14	ug/L		01/19/23 10:57	01/23/23 15:06	1
Nitrobenzene	ND		10	0.13	ug/L		01/19/23 10:57	01/23/23 15:06	1
N-Nitrosodimethylamine	ND		10	3.5	ug/L		01/19/23 10:57	01/23/23 15:06	1
N-Nitrosodi-n-propylamine	ND		10	3.3	ug/L		01/19/23 10:57	01/23/23 15:06	1
N-Nitrosodiphenylamine	ND		10	0.18	ug/L		01/19/23 10:57	01/23/23 15:06	1
Pentachlorophenol	ND		20	1.4	ug/L		01/19/23 10:57	01/23/23 15:06	1
Phenol	ND		10	2.6	ug/L		01/19/23 10:57	01/23/23 15:06	1
Pyridine	ND		10	3.2	ug/L		01/19/23 10:57	01/23/23 15:06	1
Quinoline	ND		10	4.5	ug/L		01/19/23 10:57	01/23/23 15:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*108*		*46 - 124*	*01/19/23 10:57*	*01/23/23 15:06*	*1*
2-Fluorophenol	*17*		*13 - 113*	*01/19/23 10:57*	*01/23/23 15:06*	*1*
Nitrobenzene-d5	*105*		*36 - 126*	*01/19/23 10:57*	*01/23/23 15:06*	*1*
Phenol-d5	*75*		*17 - 127*	*01/19/23 10:57*	*01/23/23 15:06*	*1*
Terphenyl-d14	*132*		*44 - 149*	*01/19/23 10:57*	*01/23/23 15:06*	*1*
2,4,6-Tribromophenol	*76*		*26 - 150*	*01/19/23 10:57*	*01/23/23 15:06*	*1*

Lab Sample ID: LCS 400-609111/2-A
Matrix: Water
Analysis Batch: 609551

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 609111

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Diphenylhydrazine (as Azobenzene)	120	120		ug/L		100	45 - 124
1,4-Dioxane	120	84.1		ug/L		70	31 - 120
2,4,5-Trichlorophenol	120	123		ug/L		102	51 - 136
2,4,6-Trichlorophenol	120	121		ug/L		101	50 - 127
2,4-Dichlorophenol	120	106		ug/L		88	49 - 120
2,4-Dimethylphenol	120	105		ug/L		87	48 - 120
2,4-Dinitrophenol	240	276		ug/L		115	10 - 150
2,4-Dinitrotoluene	120	136		ug/L		113	54 - 142
2,6-Dinitrotoluene	120	123		ug/L		103	55 - 130
2-Chloronaphthalene	120	117		ug/L		97	52 - 121
2-Chlorophenol	120	101		ug/L		84	40 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-609111/2-A
Matrix: Water
Analysis Batch: 609551

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 609111

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Methylphenol	120	115		ug/L		95	46 - 124
2-Nitroaniline	120	126		ug/L		105	51 - 145
2-Nitrophenol	120	96.1		ug/L		80	40 - 124
3 & 4 Methylphenol	120	110		ug/L		91	45 - 120
3,3'-Dichlorobenzidine	160	277	*+	ug/L		173	36 - 132
3-Nitroaniline	120	121		ug/L		101	37 - 127
4,6-Dinitro-ortho-cresol	240	249		ug/L		104	23 - 148
4-Bromophenyl phenyl ether	120	115		ug/L		96	54 - 122
4-Chloro-3-methylphenol	120	121		ug/L		101	48 - 131
4-Chloroaniline	120	92.5		ug/L		77	26 - 120
4-Chlorophenyl phenyl ether	120	120		ug/L		100	56 - 125
4-Nitroaniline	120	118		ug/L		98	36 - 137
4-Nitrophenol	240	224		ug/L		93	23 - 146
Aniline	120	127		ug/L		106	21 - 120
Benzoic acid	554	511		ug/L		92	10 - 144
Benzyl alcohol	120	116		ug/L		96	28 - 120
bis (2-chloroisopropyl) ether	120	109		ug/L		91	33 - 121
Bis(2-chloroethoxy)methane	120	105		ug/L		88	47 - 120
Bis(2-chloroethyl)ether	120	107		ug/L		89	44 - 120
Bis(2-ethylhexyl) phthalate	120	137		ug/L		114	52 - 147
Butyl benzyl phthalate	120	141		ug/L		118	54 - 133
Dibenz[a,h]acridine	120	128		ug/L		107	31 - 150
Dibenzofuran	120	121		ug/L		101	56 - 122
Diethyl phthalate	120	120		ug/L		100	50 - 137
Dimethyl phthalate	120	114		ug/L		95	57 - 124
Di-n-butyl phthalate	120	132		ug/L		110	58 - 126
Di-n-octyl phthalate	120	139		ug/L		116	57 - 138
Hexachlorobenzene	120	123		ug/L		103	52 - 129
Hexachlorocyclopentadiene	120	105		ug/L		88	10 - 134
Hexachloroethane	120	109		ug/L		91	20 - 120
Indene	120	115		ug/L		96	49 - 120
Isophorone	120	105		ug/L		87	48 - 120
Nitrobenzene	120	104		ug/L		87	45 - 120
N-Nitrosodimethylamine	120	90.1		ug/L		75	29 - 137
N-Nitrosodi-n-propylamine	120	112		ug/L		93	45 - 120
N-Nitrosodiphenylamine	119	110		ug/L		92	54 - 120
Pentachlorophenol	240	244		ug/L		102	31 - 130
Phenol	120	107		ug/L		89	11 - 120
Pyridine	240	200		ug/L		83	16 - 120
Quinoline	120	121		ug/L		101	49 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*95*		*46 - 124*
2-Fluorophenol	*66*		*13 - 113*
Nitrobenzene-d5	*101*		*36 - 126*
Phenol-d5	*98*		*17 - 127*
Terphenyl-d14	*120*		*44 - 149*
2,4,6-Tribromophenol	*104*		*26 - 150*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-609111/6-A
Matrix: Water
Analysis Batch: 609321

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 609111

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzenethiol			120	5.57	J *-	ug/L		5	10 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*109*		*46 - 124*
2-Fluorophenol	*42*		*13 - 113*
Nitrobenzene-d5	*102*		*36 - 126*
Phenol-d5	*85*		*17 - 127*
Terphenyl-d14	*117*		*44 - 149*
2,4,6-Tribromophenol	*51*		*26 - 150*

Lab Sample ID: LCSD 400-609111/3-A
Matrix: Water
Analysis Batch: 609551

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 609111

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Diphenylhydrazine (as Azobenzene)			120	127		ug/L		106	45 - 124	6	30
1,4-Dioxane			120	87.6		ug/L		73	31 - 120	4	30
2,4,5-Trichlorophenol			120	128		ug/L		107	51 - 136	5	30
2,4,6-Trichlorophenol			120	127		ug/L		106	50 - 127	5	30
2,4-Dichlorophenol			120	107		ug/L		89	49 - 120	1	30
2,4-Dimethylphenol			120	114		ug/L		95	48 - 120	8	30
2,4-Dinitrophenol			240	262		ug/L		109	10 - 150	5	30
2,4-Dinitrotoluene			120	147		ug/L		122	54 - 142	8	30
2,6-Dinitrotoluene			120	132		ug/L		110	55 - 130	7	30
2-Chloronaphthalene			120	126		ug/L		105	52 - 121	7	30
2-Chlorophenol			120	87.5		ug/L		73	40 - 120	14	30
2-Methylphenol			120	117		ug/L		97	46 - 124	2	30
2-Nitroaniline			120	133		ug/L		111	51 - 145	5	30
2-Nitrophenol			120	97.1		ug/L		81	40 - 124	1	30
3 & 4 Methylphenol			120	109		ug/L		91	45 - 120	0	30
3,3'-Dichlorobenzidine			160	283	*+	ug/L		177	36 - 132	2	30
3-Nitroaniline			120	121		ug/L		101	37 - 127	0	30
4,6-Dinitro-ortho-cresol			240	249		ug/L		104	23 - 148	0	30
4-Bromophenyl phenyl ether			120	123		ug/L		103	54 - 122	7	30
4-Chloro-3-methylphenol			120	128		ug/L		106	48 - 131	6	30
4-Chloroaniline			120	90.4		ug/L		75	26 - 120	2	30
4-Chlorophenyl phenyl ether			120	129		ug/L		108	56 - 125	7	30
4-Nitroaniline			120	108		ug/L		90	36 - 137	9	30
4-Nitrophenol			240	242		ug/L		101	23 - 146	8	30
Aniline			120	120		ug/L		100	21 - 120	6	30
Benzoic acid			554	357	*1	ug/L		64	10 - 144	35	30
Benzyl alcohol			120	120		ug/L		100	28 - 120	4	30
bis (2-chloroisopropyl) ether			120	112		ug/L		93	33 - 121	3	30
Bis(2-chloroethoxy)methane			120	111		ug/L		92	47 - 120	5	30
Bis(2-chloroethyl)ether			120	113		ug/L		94	44 - 120	5	30
Bis(2-ethylhexyl) phthalate			120	151		ug/L		126	52 - 147	9	30
Butyl benzyl phthalate			120	151		ug/L		126	54 - 133	6	30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-609111/3-A
Matrix: Water
Analysis Batch: 609551

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 609111

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dibenz[a,h]acridine			120	138		ug/L		115	31 - 150	7	30
Dibenzofuran			120	131		ug/L		109	56 - 122	7	30
Diethyl phthalate			120	129		ug/L		108	50 - 137	8	30
Dimethyl phthalate			120	122		ug/L		102	57 - 124	7	30
Di-n-butyl phthalate			120	142		ug/L		118	58 - 126	7	30
Di-n-octyl phthalate			120	152		ug/L		127	57 - 138	9	30
Hexachlorobenzene			120	132		ug/L		110	52 - 129	7	30
Hexachlorocyclopentadiene			120	104		ug/L		87	10 - 134	1	30
Hexachloroethane			120	113		ug/L		94	20 - 120	4	30
Indene			120	121		ug/L		101	49 - 120	6	30
Isophorone			120	111		ug/L		93	48 - 120	6	30
Nitrobenzene			120	110		ug/L		92	45 - 120	6	30
N-Nitrosodimethylamine			120	90.2		ug/L		75	29 - 137	0	30
N-Nitrosodi-n-propylamine			120	115		ug/L		96	45 - 120	3	30
N-Nitrosodiphenylamine			119	116		ug/L		98	54 - 120	6	30
Pentachlorophenol			240	255		ug/L		106	31 - 130	4	30
Phenol			120	98.4		ug/L		82	11 - 120	8	30
Pyridine			240	207		ug/L		86	16 - 120	4	30
Quinoline			120	126		ug/L		106	49 - 130	4	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*98*		*46 - 124*
2-Fluorophenol	*40*		*13 - 113*
Nitrobenzene-d5	*105*		*36 - 126*
Phenol-d5	*87*		*17 - 127*
Terphenyl-d14	*123*		*44 - 149*
2,4,6-Tribromophenol	*108*		*26 - 150*

Lab Sample ID: LCSD 400-609111/7-A
Matrix: Water
Analysis Batch: 609321

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 609111

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzenethiol			120	6.80	J *-	ug/L		6	10 - 120	20	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*111*		*46 - 124*
2-Fluorophenol	*58*		*13 - 113*
Nitrobenzene-d5	*100*		*36 - 126*
Phenol-d5	*98*		*17 - 127*
Terphenyl-d14	*119*		*44 - 149*
2,4,6-Tribromophenol	*76*		*26 - 150*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 400-609111/1-A
Matrix: Water
Analysis Batch: 609585

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 609111

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.032	ug/L		01/19/23 10:57	01/23/23 19:11	1
Acenaphthylene	ND		0.20	0.045	ug/L		01/19/23 10:57	01/23/23 19:11	1
Anthracene	ND		0.20	0.032	ug/L		01/19/23 10:57	01/23/23 19:11	1
Benzo[a]anthracene	ND		0.20	0.046	ug/L		01/19/23 10:57	01/23/23 19:11	1
Benzo[a]pyrene	ND		0.20	0.042	ug/L		01/19/23 10:57	01/23/23 19:11	1
Benzo[b]fluoranthene	ND		0.20	0.034	ug/L		01/19/23 10:57	01/23/23 19:11	1
Benzo[g,h,i]perylene	ND		0.20	0.13	ug/L		01/19/23 10:57	01/23/23 19:11	1
Benzo[k]fluoranthene	ND		0.20	0.10	ug/L		01/19/23 10:57	01/23/23 19:11	1
Chrysene	ND		0.20	0.074	ug/L		01/19/23 10:57	01/23/23 19:11	1
Dibenz(a,h)anthracene	ND		0.20	0.050	ug/L		01/19/23 10:57	01/23/23 19:11	1
Fluoranthene	ND		0.20	0.068	ug/L		01/19/23 10:57	01/23/23 19:11	1
Fluorene	ND		0.20	0.11	ug/L		01/19/23 10:57	01/23/23 19:11	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.043	ug/L		01/19/23 10:57	01/23/23 19:11	1
1-Methylnaphthalene	ND		0.20	0.074	ug/L		01/19/23 10:57	01/23/23 19:11	1
2-Methylnaphthalene	ND		0.20	0.060	ug/L		01/19/23 10:57	01/23/23 19:11	1
Phenanthrene	ND		0.20	0.036	ug/L		01/19/23 10:57	01/23/23 19:11	1
Pyrene	ND		0.20	0.040	ug/L		01/19/23 10:57	01/23/23 19:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*92*		*15 - 122*	*01/19/23 10:57*	*01/23/23 19:11*	*1*
Nitrobenzene-d5	*79*		*19 - 130*	*01/19/23 10:57*	*01/23/23 19:11*	*1*
Terphenyl-d14	*114*		*33 - 138*	*01/19/23 10:57*	*01/23/23 19:11*	*1*

Lab Sample ID: LCS 400-609111/2-A
Matrix: Water
Analysis Batch: 609585

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 609111

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	120	114		ug/L		95	41 - 120
Acenaphthylene	120	118		ug/L		98	44 - 120
Anthracene	120	119		ug/L		99	49 - 120
Benzo[a]anthracene	120	121		ug/L		101	61 - 135
Benzo[a]pyrene	120	111		ug/L		93	52 - 120
Benzo[b]fluoranthene	120	122		ug/L		102	53 - 134
Benzo[g,h,i]perylene	120	91.3		ug/L		76	47 - 133
Benzo[k]fluoranthene	120	113		ug/L		94	57 - 134
Chrysene	120	116		ug/L		97	55 - 122
Dibenz(a,h)anthracene	120	97.2		ug/L		81	48 - 146
Fluoranthene	120	144		ug/L		120	54 - 128
Fluorene	120	134		ug/L		112	45 - 125
Indeno[1,2,3-cd]pyrene	120	93.1		ug/L		78	43 - 142
1-Methylnaphthalene	120	90.8		ug/L		76	41 - 120
2-Methylnaphthalene	120	89.0		ug/L		74	32 - 124
Phenanthrene	120	116		ug/L		97	48 - 120
Pyrene	120	125		ug/L		104	48 - 132

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*93*		*15 - 122*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCS 400-609111/2-A
Matrix: Water
Analysis Batch: 609585

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 609111

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5	61		19 - 130
Terphenyl-d14	97		33 - 138

Lab Sample ID: LCSD 400-609111/3-A
Matrix: Water
Analysis Batch: 609903

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 609111

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene			120	125		ug/L		104	41 - 120	10	56
Acenaphthylene			120	137		ug/L		114	44 - 120	15	56
Anthracene			120	140		ug/L		116	49 - 120	16	51
Benzo[a]anthracene			120	141		ug/L		117	61 - 135	15	49
Benzo[a]pyrene			120	134		ug/L		112	52 - 120	19	50
Benzo[b]fluoranthene			120	140		ug/L		116	53 - 134	14	54
Benzo[g,h,i]perylene			120	123		ug/L		103	47 - 133	30	50
Benzo[k]fluoranthene			120	114		ug/L		95	57 - 134	1	52
Chrysene			120	136		ug/L		113	55 - 122	16	50
Dibenz(a,h)anthracene			120	145		ug/L		121	48 - 146	39	50
Fluoranthene			120	141		ug/L		118	54 - 128	2	52
Fluorene			120	125		ug/L		104	45 - 125	7	56
Indeno[1,2,3-cd]pyrene			120	143		ug/L		119	43 - 142	42	51
1-Methylnaphthalene			120	110		ug/L		92	41 - 120	19	55
2-Methylnaphthalene			120	108		ug/L		90	32 - 124	20	57
Phenanthrene			120	122		ug/L		102	48 - 120	5	56
Pyrene			120	130		ug/L		109	48 - 132	4	52

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl	102		15 - 122
Nitrobenzene-d5	79		19 - 130
Terphenyl-d14	114		33 - 138

Lab Sample ID: MB 400-612425/1-A
Matrix: Water
Analysis Batch: 614365

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 612425

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.20	0.046	ug/L		02/14/23 15:10	02/28/23 21:31	1
Benzo[a]pyrene	ND		0.20	0.042	ug/L		02/14/23 15:10	02/28/23 21:31	1
Benzo[b]fluoranthene	ND		0.20	0.034	ug/L		02/14/23 15:10	02/28/23 21:31	1
Benzo[g,h,i]perylene	ND		0.20	0.13	ug/L		02/14/23 15:10	02/28/23 21:31	1
Benzo[k]fluoranthene	ND		0.20	0.10	ug/L		02/14/23 15:10	02/28/23 21:31	1
Chrysene	ND		0.20	0.074	ug/L		02/14/23 15:10	02/28/23 21:31	1
Dibenz(a,h)anthracene	ND		0.20	0.050	ug/L		02/14/23 15:10	02/28/23 21:31	1
Fluoranthene	ND		0.20	0.068	ug/L		02/14/23 15:10	02/28/23 21:31	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.043	ug/L		02/14/23 15:10	02/28/23 21:31	1
Phenanthrene	ND		0.20	0.036	ug/L		02/14/23 15:10	02/28/23 21:31	1
Pyrene	ND		0.20	0.040	ug/L		02/14/23 15:10	02/28/23 21:31	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: MB 400-612425/1-A
Matrix: Water
Analysis Batch: 614365

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 612425

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	97		19 - 130	02/14/23 15:10	02/28/23 21:31	1
Terphenyl-d14	105		33 - 138	02/14/23 15:10	02/28/23 21:31	1

Lab Sample ID: LCS 400-612425/2-A
Matrix: Water
Analysis Batch: 612520

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 612425

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzo[a]anthracene			120	126		ug/L		105	61 - 135		
Benzo[a]pyrene			120	113		ug/L		94	52 - 120		
Benzo[b]fluoranthene			120	103		ug/L		86	53 - 134		
Benzo[g,h,i]perylene			120	117		ug/L		97	47 - 133		
Benzo[k]fluoranthene			120	106		ug/L		88	57 - 134		
Chrysene			120	126		ug/L		105	55 - 122		
Dibenz(a,h)anthracene			120	129		ug/L		107	48 - 146		
Fluoranthene			120	121		ug/L		101	54 - 128		
Indeno[1,2,3-cd]pyrene			120	125		ug/L		104	43 - 142		
Phenanthrene			120	118		ug/L		98	48 - 120		
Pyrene			120	113		ug/L		95	48 - 132		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl	86		15 - 122
Nitrobenzene-d5	98		19 - 130
Terphenyl-d14	100		33 - 138

Lab Sample ID: LCSD 400-612425/3-A
Matrix: Water
Analysis Batch: 612520

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 612425

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzo[a]anthracene			120	122		ug/L		101	61 - 135	4	49
Benzo[a]pyrene			120	113		ug/L		94	52 - 120	0	50
Benzo[b]fluoranthene			120	105		ug/L		88	53 - 134	2	54
Benzo[g,h,i]perylene			120	110		ug/L		92	47 - 133	6	50
Benzo[k]fluoranthene			120	100		ug/L		83	57 - 134	5	52
Chrysene			120	121		ug/L		101	55 - 122	4	50
Dibenz(a,h)anthracene			120	123		ug/L		103	48 - 146	5	50
Fluoranthene			120	118		ug/L		99	54 - 128	2	52
Indeno[1,2,3-cd]pyrene			120	119		ug/L		100	43 - 142	4	51
Phenanthrene			120	112		ug/L		93	48 - 120	5	56
Pyrene			120	107		ug/L		89	48 - 132	6	52

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl	79		15 - 122
Nitrobenzene-d5	94		19 - 130
Terphenyl-d14	92		33 - 138

Method: 8011 - EDB and DBCP in Water by Microextraction

Lab Sample ID: MB 400-609811/1-A
Matrix: Water
Analysis Batch: 610064

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 609811

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-D bromo-3-Chloropropane	ND		0.030	0.017	ug/L		01/25/23 10:29	01/26/23 18:33	1
1,2-D bromoethane	ND		0.020	0.015	ug/L		01/25/23 10:29	01/26/23 18:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*122*		*51 - 149*	*01/25/23 10:29*	*01/26/23 18:33*	*1*

Lab Sample ID: LCS 400-609811/2-A
Matrix: Water
Analysis Batch: 610064

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 609811

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,2-D bromo-3-Chloropropane			0.101	0.171	*+	ug/L		170	60 - 140		
1,2-D bromoethane			0.101	0.130		ug/L		129	60 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*109*		*51 - 149*

Lab Sample ID: LCSD 400-609811/3-A
Matrix: Water
Analysis Batch: 610064

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 609811

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-D bromo-3-Chloropropane			0.101	0.173	*+	ug/L		172	60 - 140	1	30
1,2-D bromoethane			0.101	0.140		ug/L		139	60 - 140	3	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*121*		*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 (_____)

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
Melissa Remiger	25278	DATE: 1/13/2023
PO #	**GSAP Project ID**	PAGE: 1 of 1
60697537 – 3.1.2	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 60697537 – 3.1.2

ADDRESS: 100 N. Broadway, 20th Floor; ST. LOUIS, MO 63102, USA

EDF DELIVERABLE TO (Name, Company, Office Location): Melissa Remiger - please see special instructions
PHONE NO.: 314-802-1207
E-MAIL: melissa.remiger@aecom.com
AECOM Other ID:

PROJECT CONTACT (Hardcopy or PDF Report to): Melissa Remiger, Mary Massa, Brett Howell

SAMPLER NAME(S) (Print): Mary Massa, Joe Mayer
LAB USE ONLY

TELEPHONE:	FAX:	Bill To Contact E-MAIL:
314-429-0100	314-429-0462	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 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT C°	Cooler #1	Cooler #2	Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :

Email reports to: melissa.remiger@aecom.com; mary.massa@aecom.com; brett.howell@aecom.com

* Please include "J" values on Reports.
* Please provide sample receipt upon login.
* Please send EQuiS EDDs to EDDSubmissions@aecomshell.com; loredana.fillmon@aecom.com

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS
60697537 – 3.1.2

FIELD NOTES:

TEMPERATURE ON RECEIPT C°: 0.4C IR4

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	8011 EDB + DBCP	SVOC 8270	PAH 8270LL
	TB-ROX-011323-8260	1/13/2023	0000	Water	2					2	X			
	TB-ROX-011323-8011	1/13/2023	0000	Water	2					2		X		
	MW1-ROX-011323	1/13/2023	1000	Water	6			2		8	X	X	X	X
	MW2-ROX-011323	1/13/2023	1100	Water	6			2		8	X	X	X	X
	ROST4PZC-ROX-011323	1/13/2023	1210	Water	6			2		8	X	X	X	X

400-231600 COC

AM 1/13/23

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
MARY MASSA	FEDEX: 5564 3932 9943	1/13/2023	1600
Relinquished by: (Signature)	Received by: (Signature)	Date: 1/14/23	Time: 402
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Version: 13Oct22

CUSTODY SEALS: 1745820, 1745821

3/3/2023 (Rev. 1)

Login Sample Receipt Checklist

Client: AECOM Technical Services Inc. Job Number: 400-231800-1

Login Number: 231800 **List Source: Eurofins Pensacola**
List Number: 1
Creator: Whitley, Adrian

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.	N/A	
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	0.4°C IR9
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.	N/A	
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.
Job ID: 400-231800-1
Project/Site: ROXANA QUARTERLY GW

Laboratory: Eurofins Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	06-30-23
ANAB	ISO/IEC 17025	L2471	02-22-26
Arkansas DEQ	State	88-0689	09-01-23
California	State	2510	06-30-23
Florida	NELAP	E81010	06-30-23
Georgia	State	E81010(FL)	06-30-23
Illinois	NELAP	200041	10-09-23
Kansas	NELAP	E-10253	10-31-23
Kentucky (UST)	State	53	06-30-23
Louisiana (All)	NELAP	30976	06-30-23
Louisiana (DW)	State	LA017	12-31-23
Maryland	State	233	09-30-23
Michigan	State	9912	06-30-23
North Carolina (WW/SW)	State	314	12-31-23
Oklahoma	NELAP	9810	08-31-23
Pennsylvania	NELAP	68-00467	01-31-24
South Carolina	State	96026	06-30-23
Tennessee	State	TN02907	06-30-23
Texas	NELAP	T104704286	09-30-23
US Fish & Wildlife	US Federal Programs	A22340	06-30-23
USDA	US Federal Programs	FLGNV23001	01-08-26
USDA	US Federal Programs	P330-21-00056	05-17-24
Virginia	NELAP	460166	06-14-23
West Virginia DEP	State	136	03-31-23

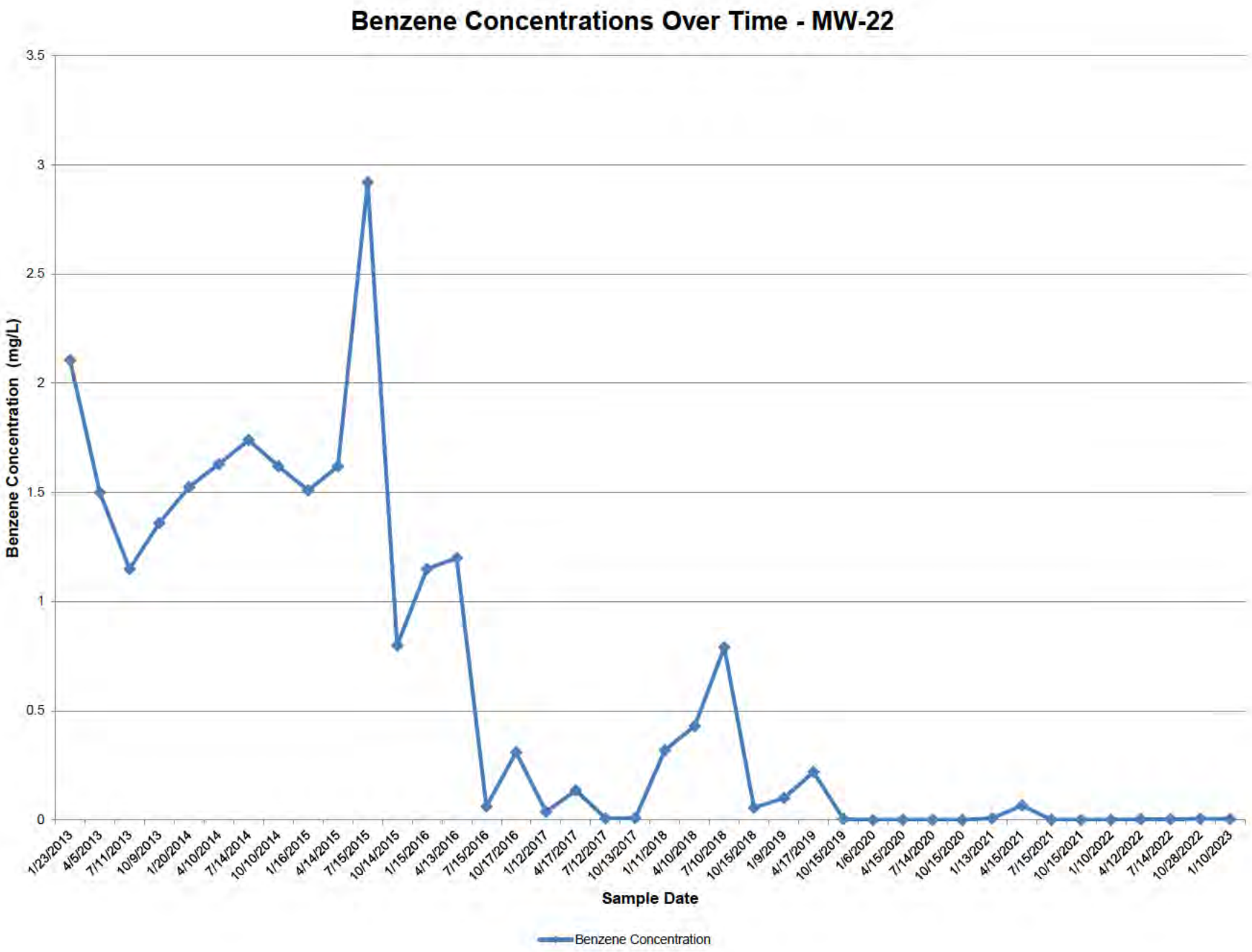
Appendix E

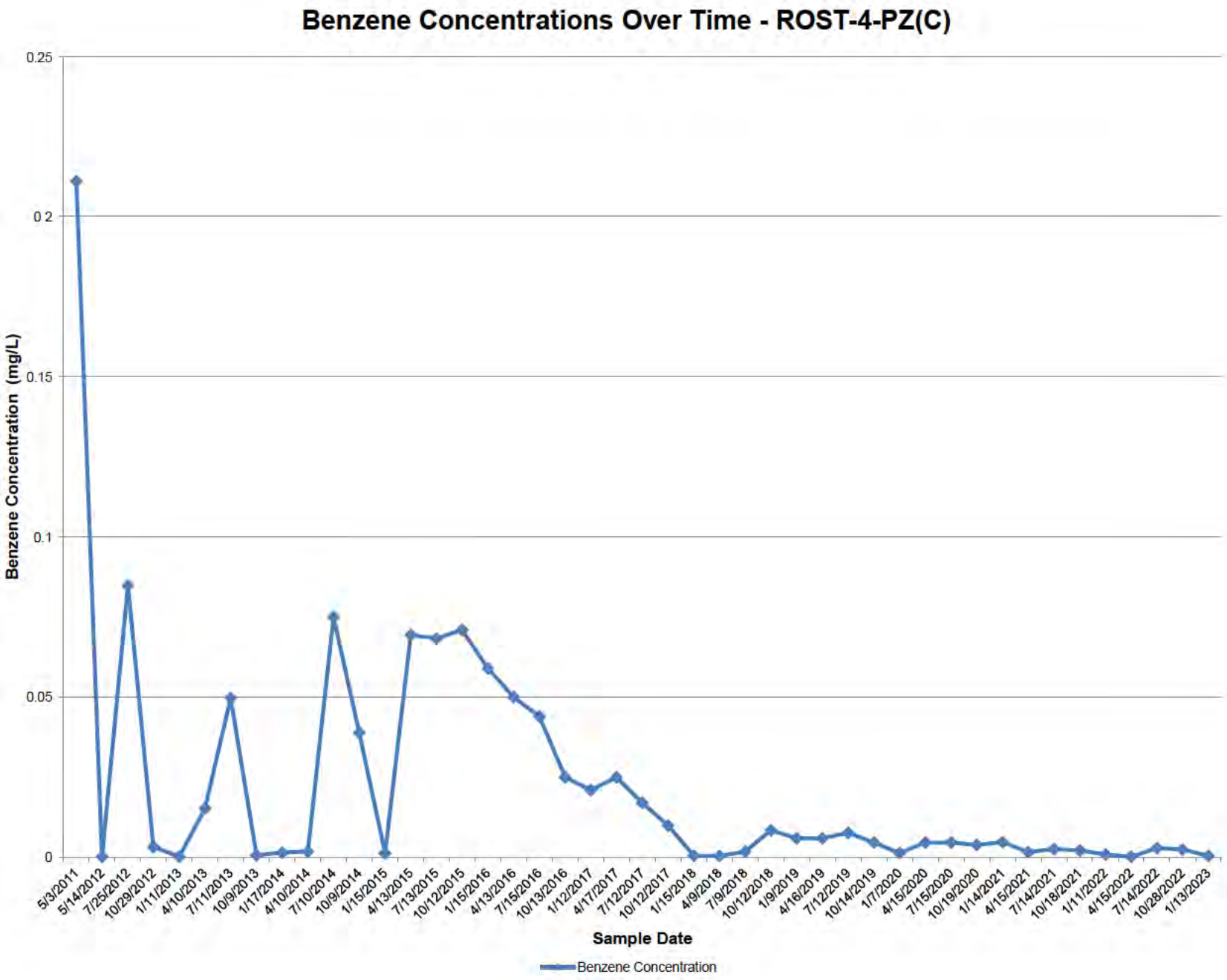
Appendix E – 1 Charts – Benzene Concentrations Over Time

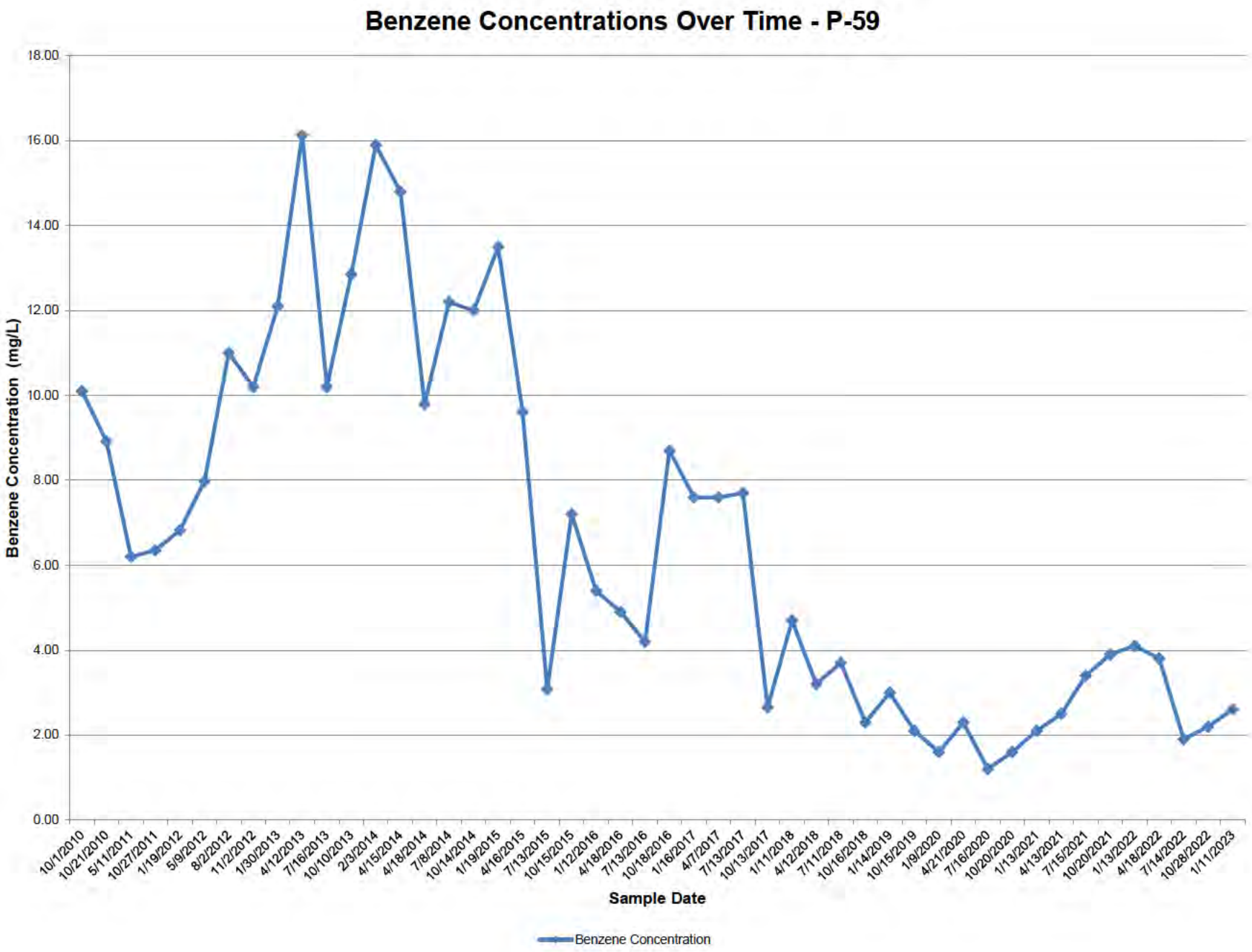
Appendix E – 2 GWSDAT Charts

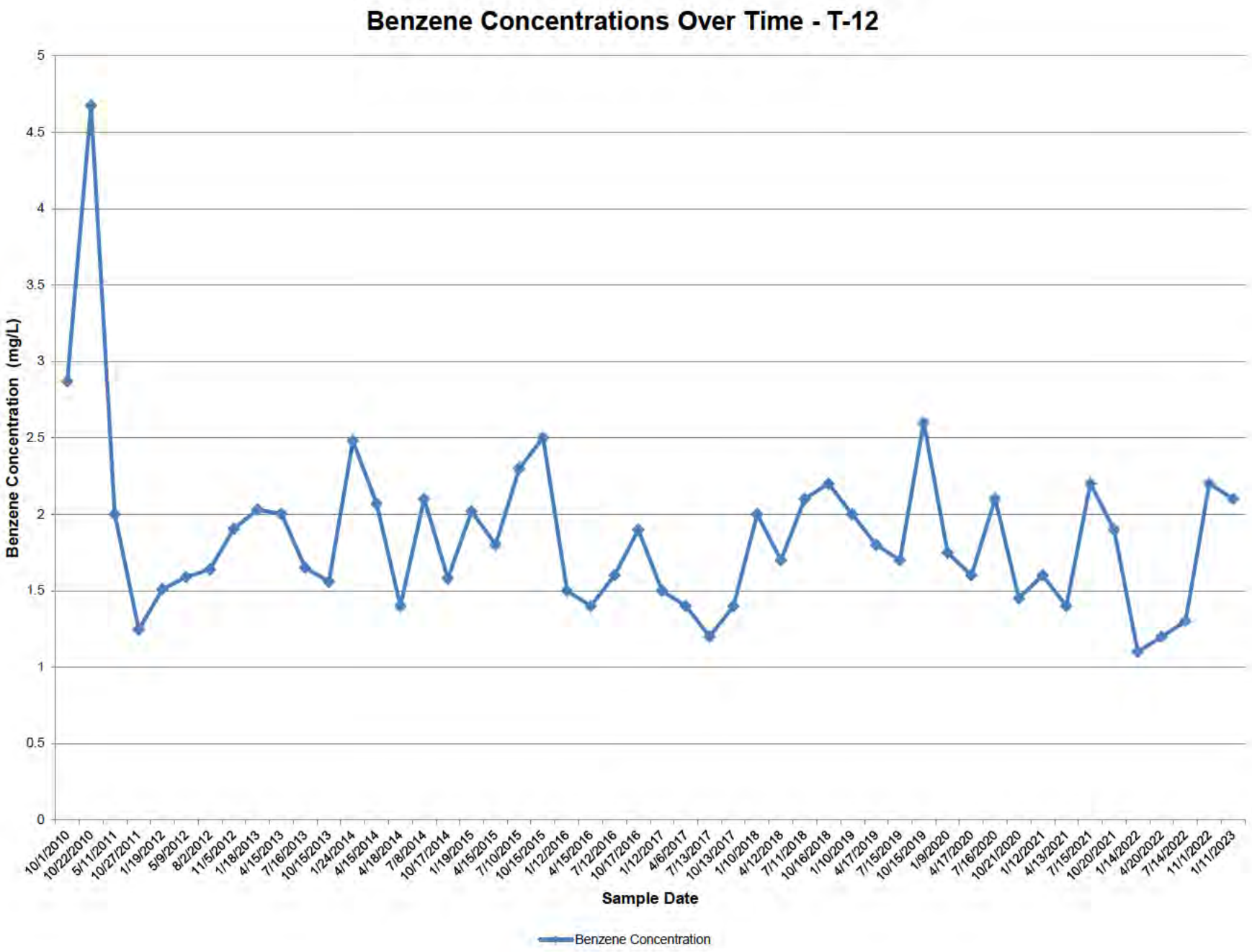
- 4th Street area – MW-22, ROST-4 PZ(C), P-59, and T-12
- Public Works Yard area – MW-7, MW-8, MW-25, and P-57

4th Street Area

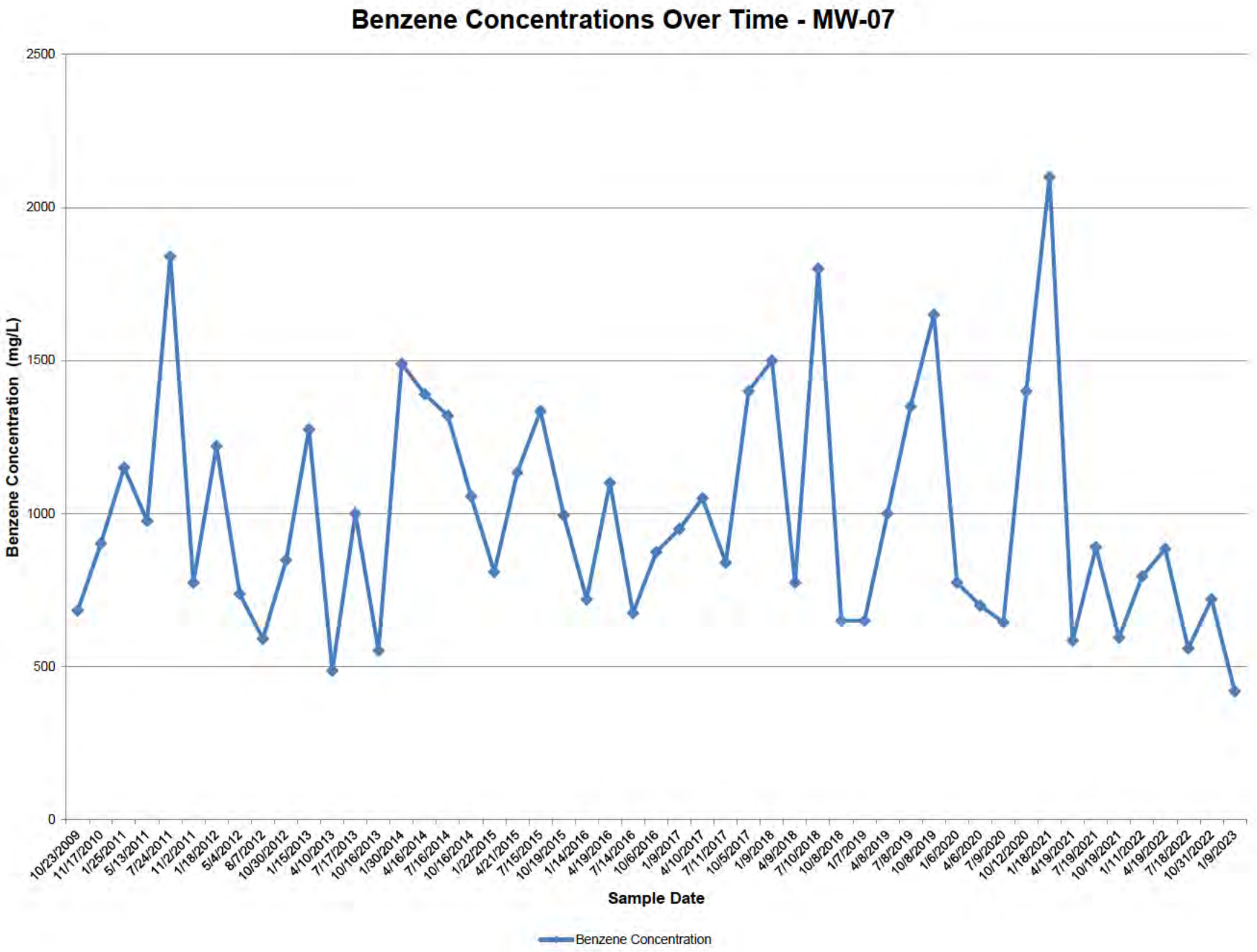

Benzene Concentrations Over Time - MW-22
Benzene Concentration (mg/L)
3.5
3
2.5
2
1.5
1
0.5
0
1/23/2013
4/5/2013
7/11/2013
10/9/2013
1/20/2014
4/10/2014
7/14/2014
10/10/2014
1/16/2015
4/14/2015
7/15/2015
10/14/2015
1/15/2016
4/13/2016
7/15/2016
10/17/2016
1/12/2017
4/17/2017
7/12/2017
10/13/2017
1/11/2018
4/10/2018
7/10/2018
10/15/2018
1/9/2019
4/17/2019
10/15/2019
1/6/2020
4/15/2020
7/14/2020
10/15/2020
1/13/2021
4/15/2021
7/15/2021
10/15/2021
1/10/2022
4/12/2022
7/14/2022
10/28/2022
1/10/2023
Sample Date
Benzene Concentration

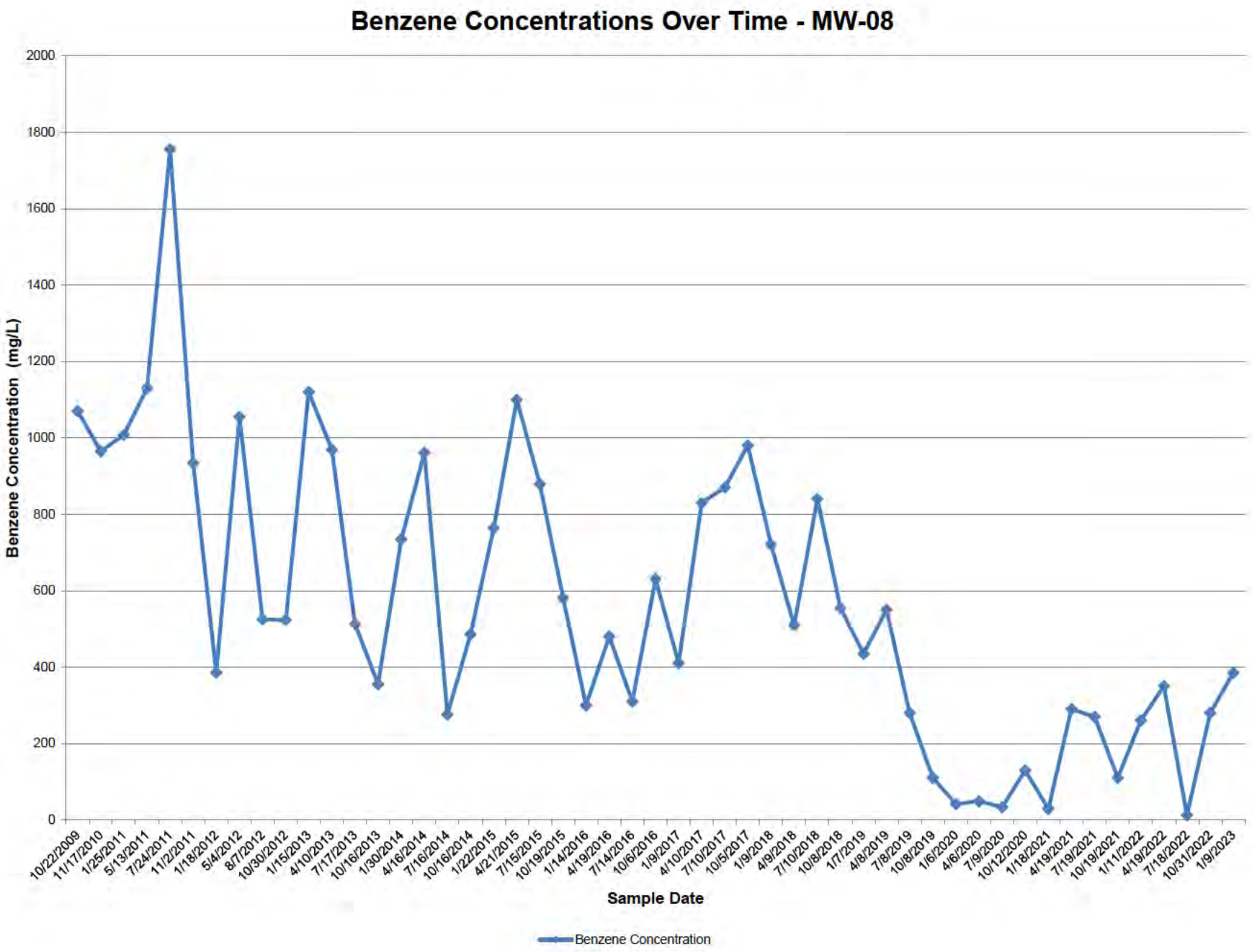

Benzene Concentrations Over Time - ROST-4-PZ(C)
Benzene Concentration (mg/L)
0.25
0.2
0.15
0.1
0.05
0
5/3/2011
5/14/2012
7/25/2012
10/29/2012
1/11/2013
4/10/2013
7/11/2013
10/9/2013
1/17/2014
4/10/2014
7/10/2014
10/9/2014
1/15/2015
4/13/2015
7/13/2015
10/12/2015
1/15/2016
4/13/2016
7/15/2016
10/13/2016
1/12/2017
4/17/2017
7/12/2017
10/12/2017
1/15/2018
4/9/2018
7/9/2018
10/12/2018
1/9/2019
4/16/2019
7/12/2019
10/14/2019
1/7/2020
4/15/2020
7/15/2020
10/19/2020
1/14/2021
4/15/2021
7/14/2021
10/18/2021
1/11/2022
4/15/2022
7/14/2022
10/28/2022
1/13/2023
Sample Date
Benzene Concentration

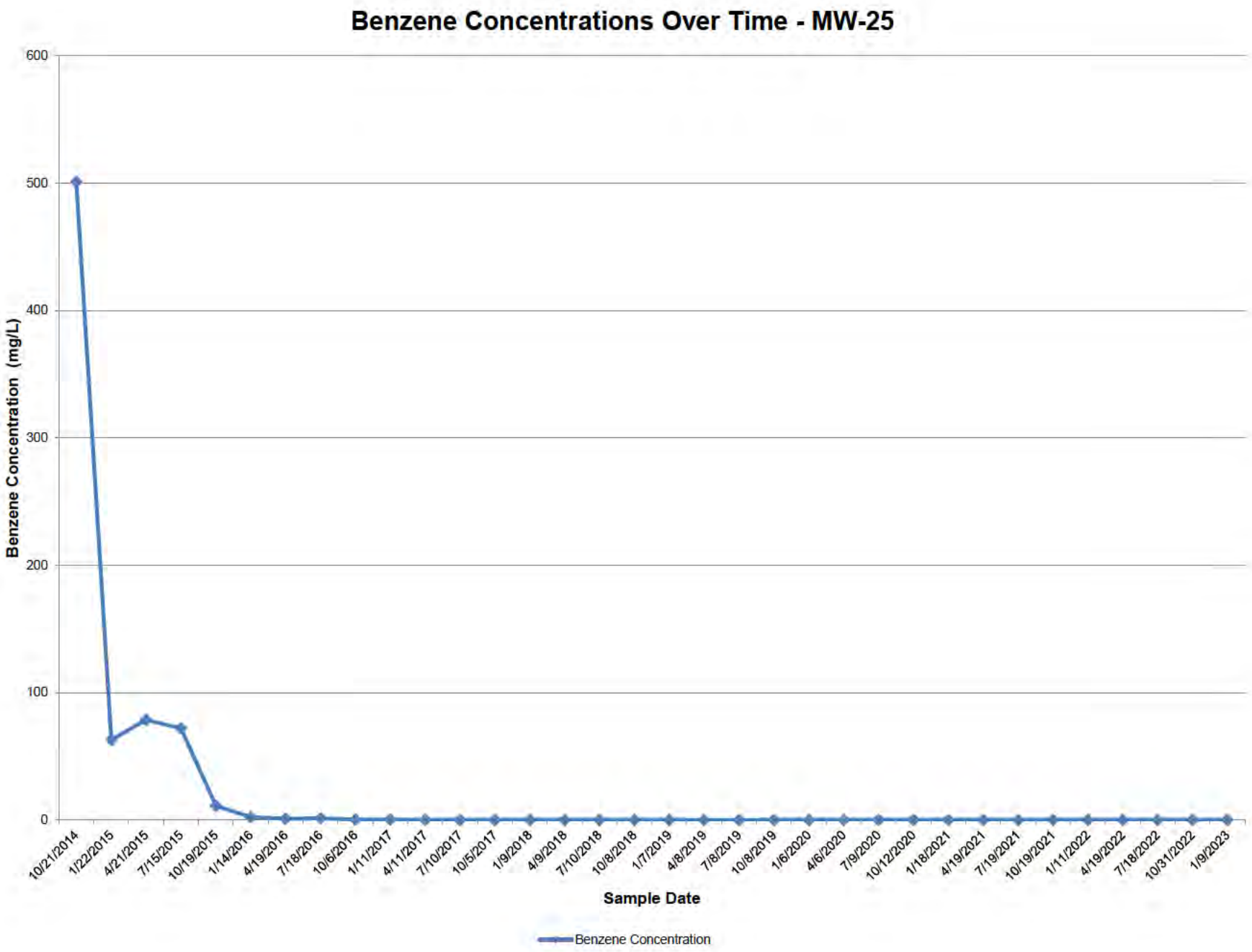

Benzene Concentrations Over Time - P-59
Benzene Concentration (mg/L)
18.00
16.00
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
10/1/2010
10/21/2010
5/11/2011
10/27/2011
1/19/2012
5/9/2012
8/2/2012
11/2/2012
1/30/2013
4/12/2013
7/16/2013
10/10/2013
2/3/2014
4/15/2014
4/18/2014
7/8/2014
10/14/2014
1/19/2015
4/16/2015
7/13/2015
10/15/2015
1/12/2016
4/18/2016
7/13/2016
10/18/2016
1/16/2017
4/7/2017
7/13/2017
10/13/2017
1/11/2018
4/12/2018
7/11/2018
10/16/2018
1/14/2019
10/15/2019
1/9/2020
4/21/2020
7/16/2020
10/20/2020
1/13/2021
4/13/2021
7/15/2021
10/20/2021
1/13/2022
4/18/2022
7/14/2022
10/28/2022
1/11/2023
Sample Date
Benzene Concentration

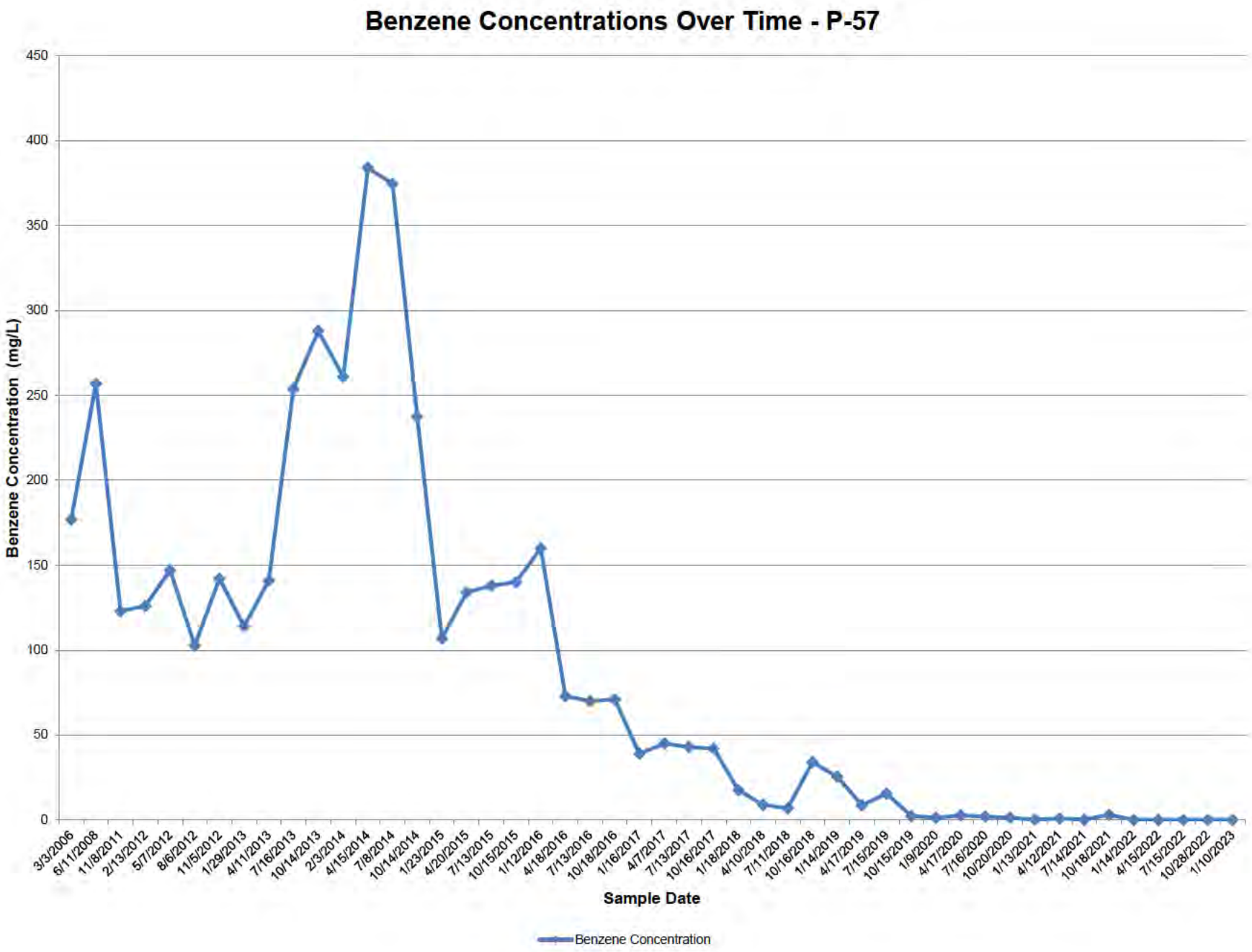

Benzene Concentrations Over Time - T-12
Benzene Concentration (mg/L)
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
10/1/2010
10/22/2010
5/11/2011
10/27/2011
1/19/2012
5/9/2012
8/2/2012
11/5/2012
1/18/2013
4/15/2013
7/16/2013
10/15/2013
1/24/2014
4/15/2014
4/18/2014
7/8/2014
10/17/2014
1/19/2015
4/15/2015
7/10/2015
10/15/2015
1/12/2016
4/15/2016
7/12/2016
10/17/2016
1/12/2017
4/6/2017
7/13/2017
10/13/2017
1/10/2018
4/12/2018
7/11/2018
10/16/2018
1/10/2019
4/17/2019
7/15/2019
10/15/2019
1/9/2020
4/17/2020
7/16/2020
10/21/2020
1/12/2021
4/13/2021
7/15/2021
10/20/2021
1/14/2022
4/20/2022
7/14/2022
11/1/2022
1/11/2023
Sample Date
Benzene Concentration

Public Works Yard Area

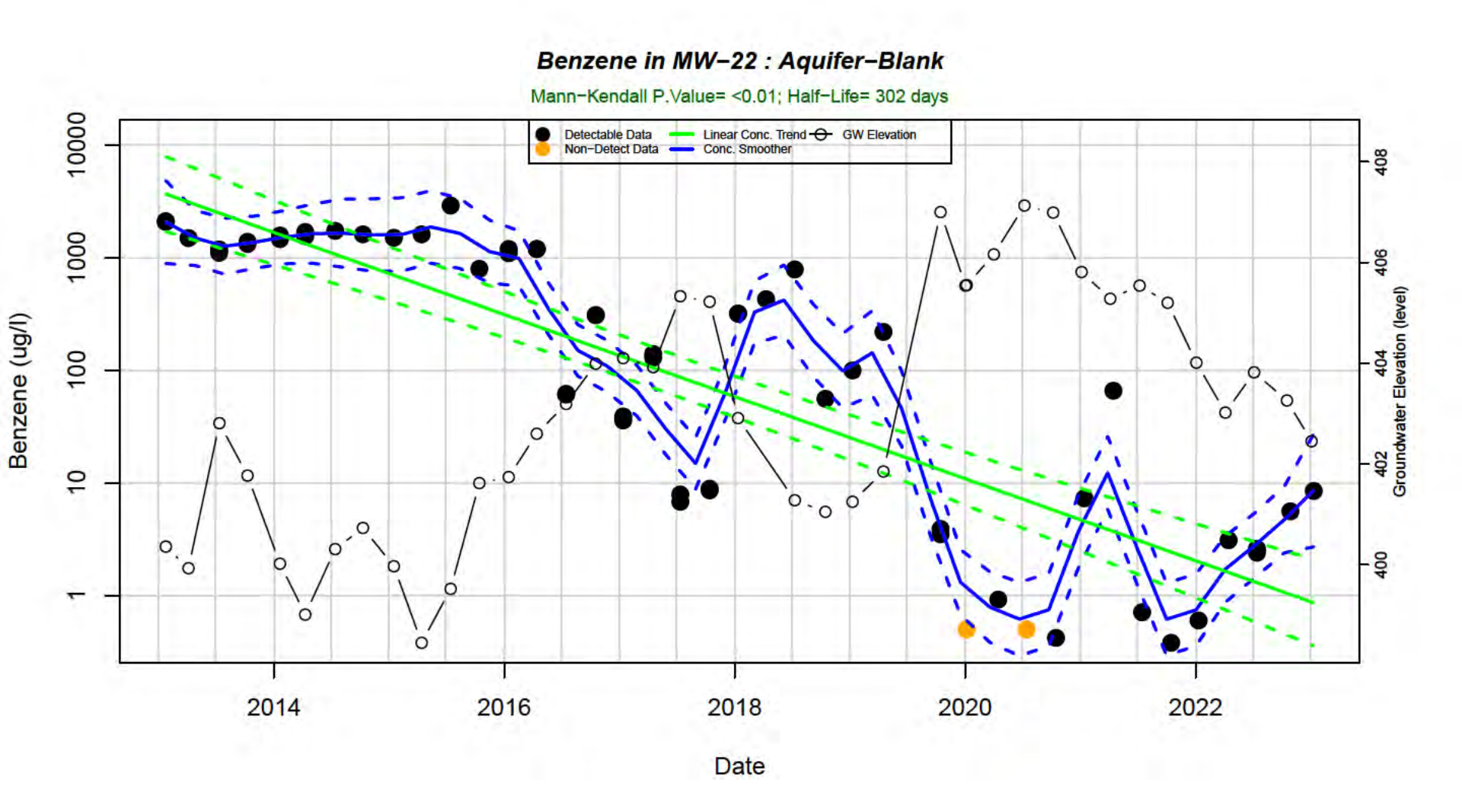

Benzene Concentrations Over Time - MW-07
Benzene Concentration (mg/L)
2500
2000
1500
1000
500
0
10/23/2009
11/17/2010
1/25/2011
5/13/2011
7/24/2011
11/2/2011
1/18/2012
5/4/2012
8/7/2012
10/30/2012
1/15/2013
4/10/2013
7/17/2013
10/16/2013
1/30/2014
4/16/2014
7/16/2014
10/16/2014
1/22/2015
4/21/2015
7/15/2015
10/19/2015
1/14/2016
4/19/2016
7/14/2016
10/6/2016
1/9/2017
4/10/2017
7/11/2017
10/5/2017
1/9/2018
4/9/2018
7/10/2018
10/8/2018
1/7/2019
4/8/2019
7/8/2019
10/8/2019
1/6/2020
4/6/2020
7/9/2020
10/12/2020
1/18/2021
4/19/2021
7/19/2021
10/19/2021
1/11/2022
4/19/2022
7/18/2022
10/31/2022
1/9/2023
Sample Date
Benzene Concentration

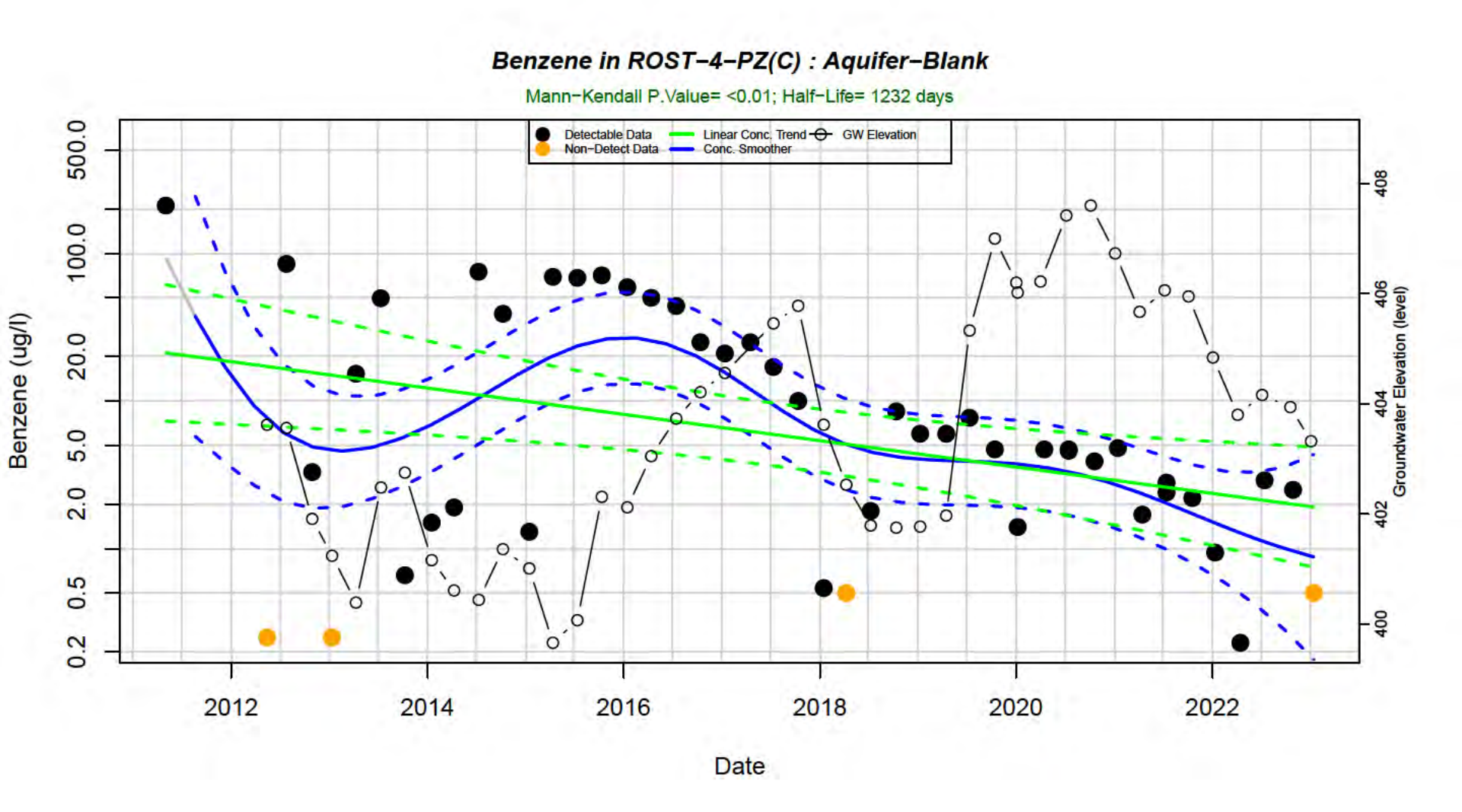

Benzene Concentrations Over Time - MW-08
Benzene Concentration (mg/L)
2000
1800
1600
1400
1200
1000
800
600
400
200
0
10/22/2009
11/17/2010
1/25/2011
5/13/2011
7/24/2011
11/2/2011
1/18/2012
5/4/2012
8/7/2012
10/30/2012
1/15/2013
4/10/2013
7/17/2013
10/16/2013
1/30/2014
4/16/2014
7/16/2014
10/16/2014
1/22/2015
4/21/2015
7/15/2015
10/19/2015
1/14/2016
4/19/2016
7/14/2016
10/6/2016
1/9/2017
4/10/2017
7/10/2017
10/5/2017
1/9/2018
4/9/2018
7/10/2018
10/8/2018
1/7/2019
4/8/2019
7/8/2019
10/8/2019
1/6/2020
4/6/2020
7/9/2020
10/12/2020
1/18/2021
4/19/2021
7/19/2021
10/19/2021
1/11/2022
4/19/2022
7/18/2022
10/31/2022
1/9/2023
Sample Date
Benzene Concentration

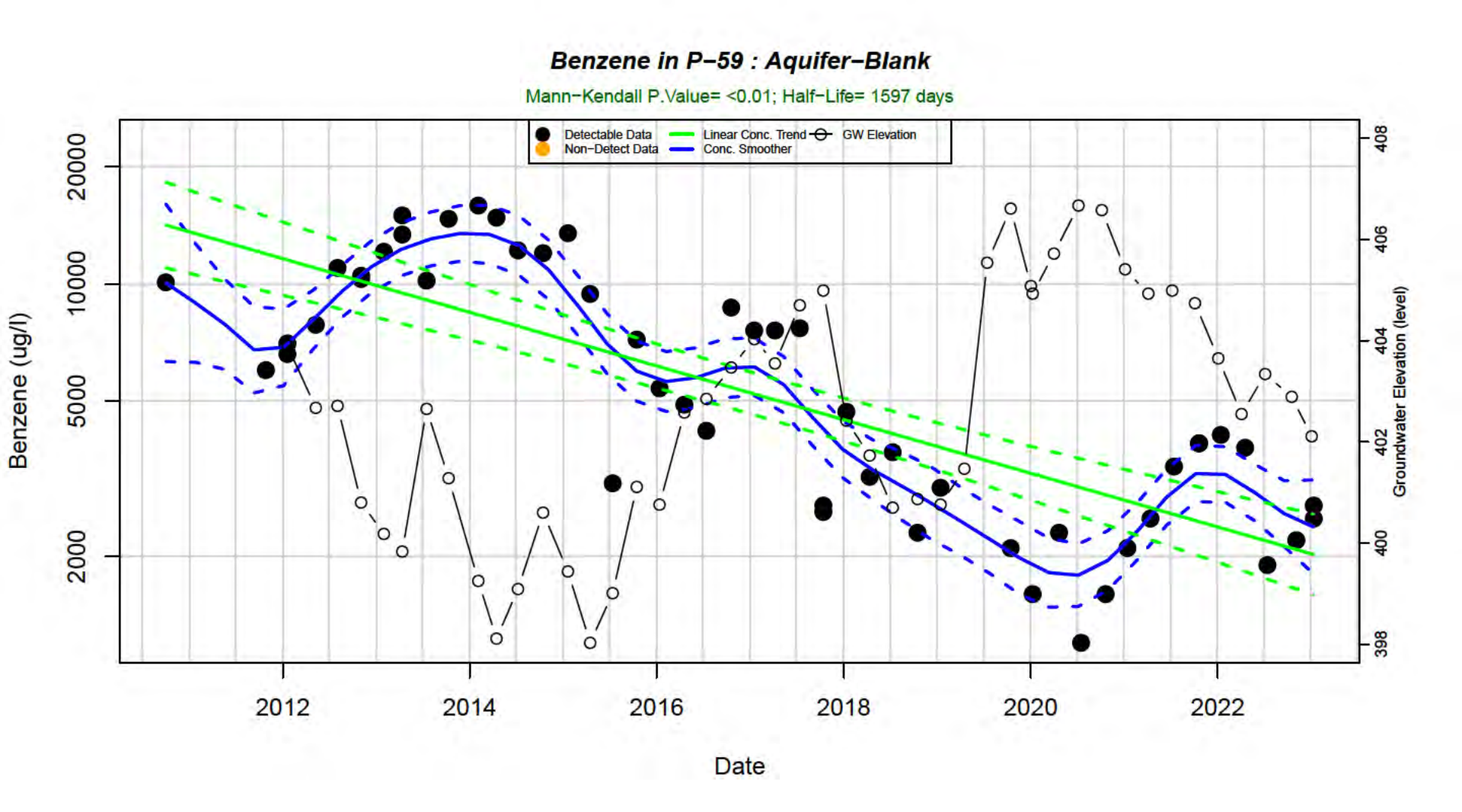

Benzene Concentrations Over Time - MW-25
Benzene Concentration (mg/L)
600
500
400
300
200
100
0
10/21/2014
1/22/2015
4/21/2015
7/15/2015
10/19/2015
1/14/2016
4/19/2016
7/18/2016
10/6/2016
1/11/2017
4/11/2017
7/10/2017
10/5/2017
1/9/2018
4/9/2018
7/10/2018
10/8/2018
1/7/2019
4/8/2019
7/8/2019
10/8/2019
1/6/2020
4/6/2020
7/9/2020
10/12/2020
1/18/2021
4/19/2021
7/19/2021
10/19/2021
1/11/2022
4/19/2022
7/18/2022
10/31/2022
1/9/2023
Sample Date
Benzene Concentration

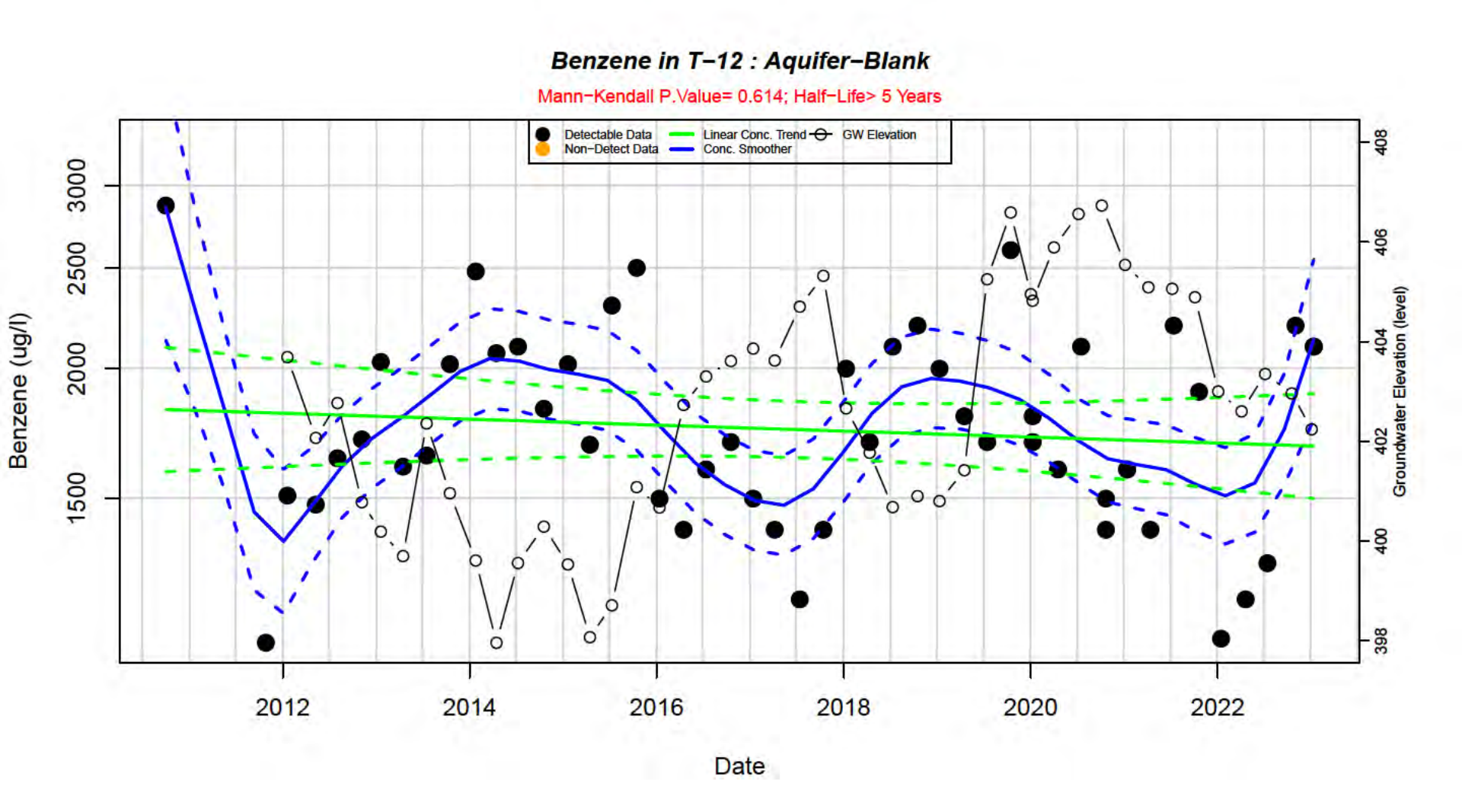

Benzene Concentrations Over Time - P-57
Benzene Concentration (mg/L)
450
400
350
300
250
200
150
100
50
0
3/3/2006
6/11/2008
11/8/2011
2/13/2012
5/7/2012
8/6/2012
11/5/2012
1/29/2013
4/11/2013
7/16/2013
10/14/2013
2/3/2014
4/15/2014
7/8/2014
10/14/2014
1/23/2015
4/20/2015
7/13/2015
10/15/2015
1/12/2016
4/18/2016
7/13/2016
10/18/2016
1/16/2017
4/7/2017
7/13/2017
10/16/2017
1/18/2018
4/10/2018
7/11/2018
10/16/2018
1/14/2019
4/17/2019
7/15/2019
10/15/2019
1/9/2020
4/17/2020
7/16/2020
10/20/2020
1/13/2021
4/12/2021
7/14/2021
10/18/2021
1/14/2022
4/15/2022
7/15/2022
10/28/2022
1/10/2023
Sample Date
Benzene Concentration

4th Street Area

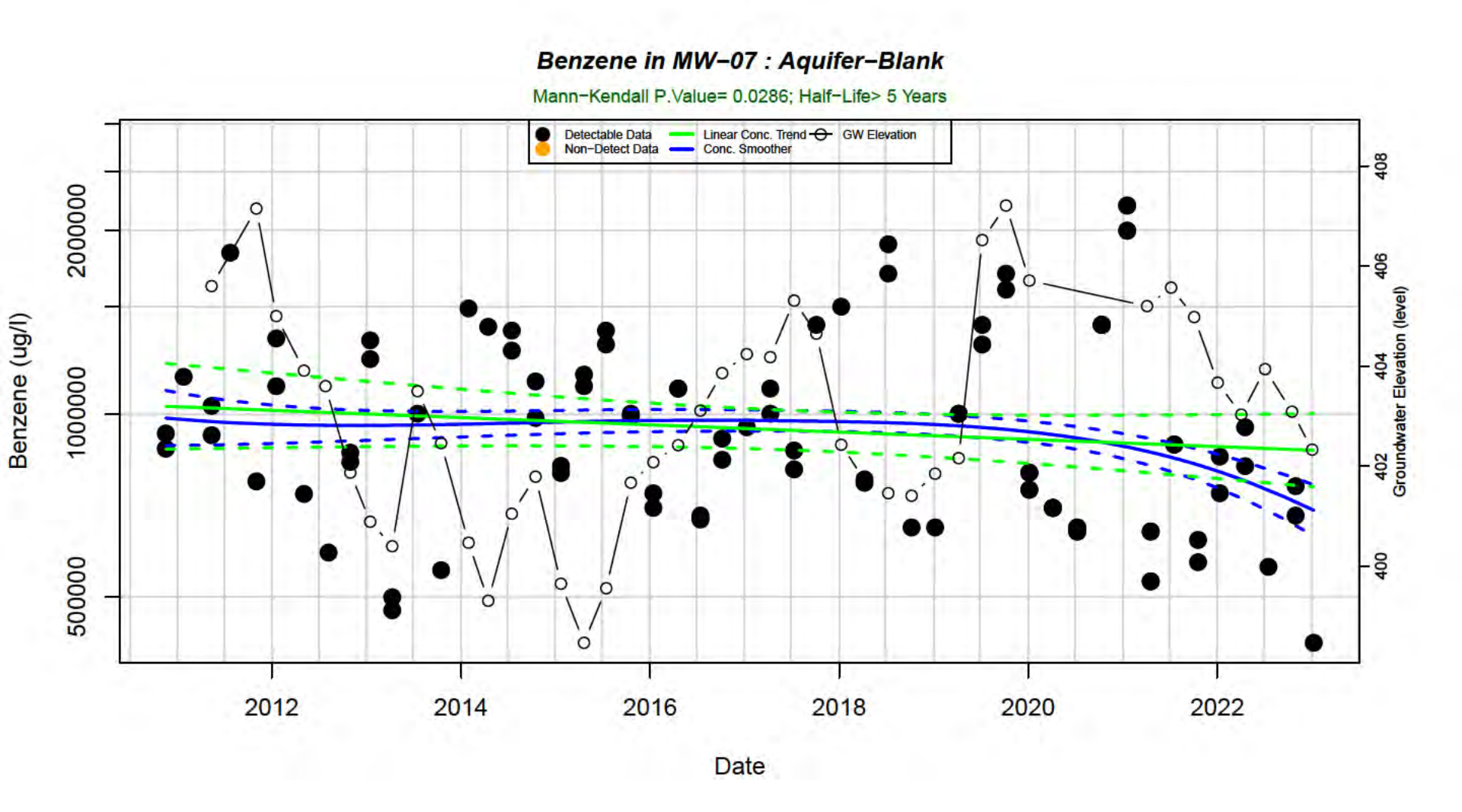

Benzene in MW−22 : Aquifer−Blank
Mann−Kendall P.Value= <0.01; Half−Life= 302 days
Detectable Data
Non−Detect Data
Linear Conc. Trend
Conc. Smoother
GW Elevation
Benzene (ug/l)
10000
1000
100
10
1
Groundwater Elevation (level)
408
406
404
402
400
2014
2016
2018
2020
2022
Date

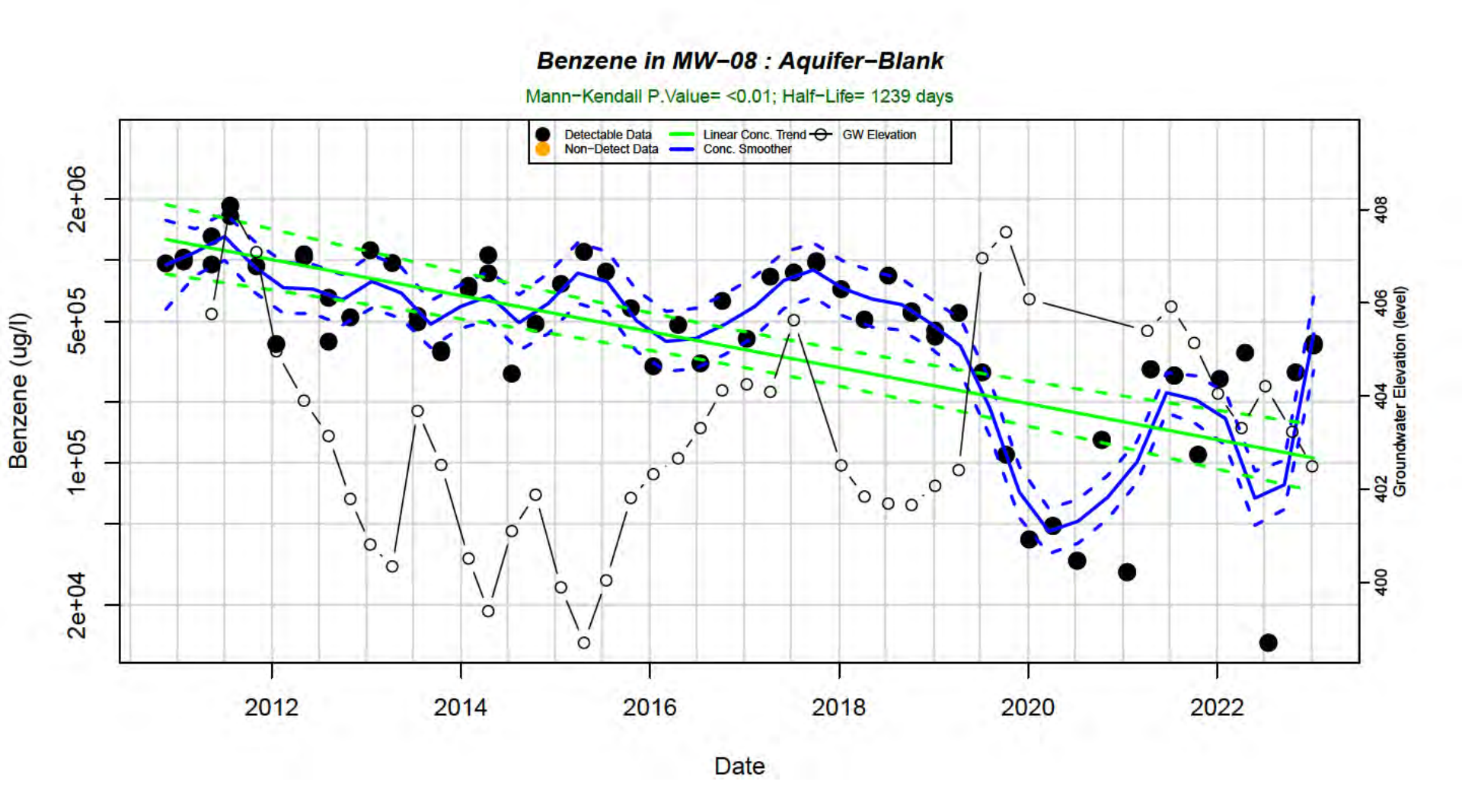

Benzene in ROST−4−PZ(C) : Aquifer−Blank
Mann−Kendall P.Value= <0.01; Half−Life= 1232 days
Detectable Data
Non−Detect Data
Linear Conc. Trend
Conc. Smoother
GW Elevation
Benzene (ug/l)
0.2
0.5
2.0
5.0
20.0
100.0
500.0
Groundwater Elevation (level)
400
402
404
406
408
2012
2014
2016
2018
2020
2022
Date

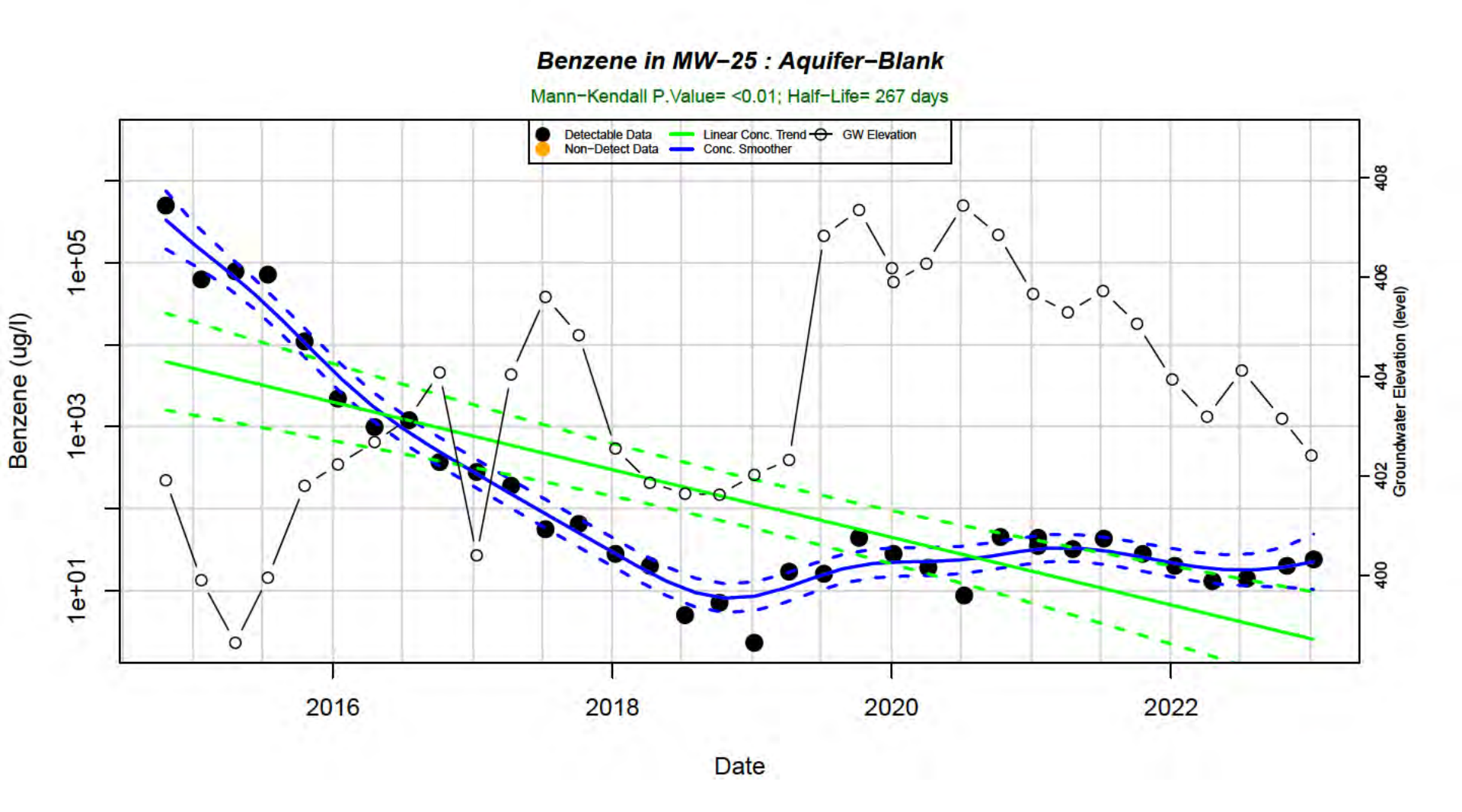

Benzene in P−59 : Aquifer−Blank
Mann−Kendall P.Value= <0.01; Half−Life= 1597 days
Detectable Data
Non−Detect Data
Linear Conc. Trend
Conc. Smoother
GW Elevation
Benzene (ug/l)
2000
5000
10000
20000
Groundwater Elevation (level)
398
400
402
404
406
408
2012
2014
2016
2018
2020
2022
Date

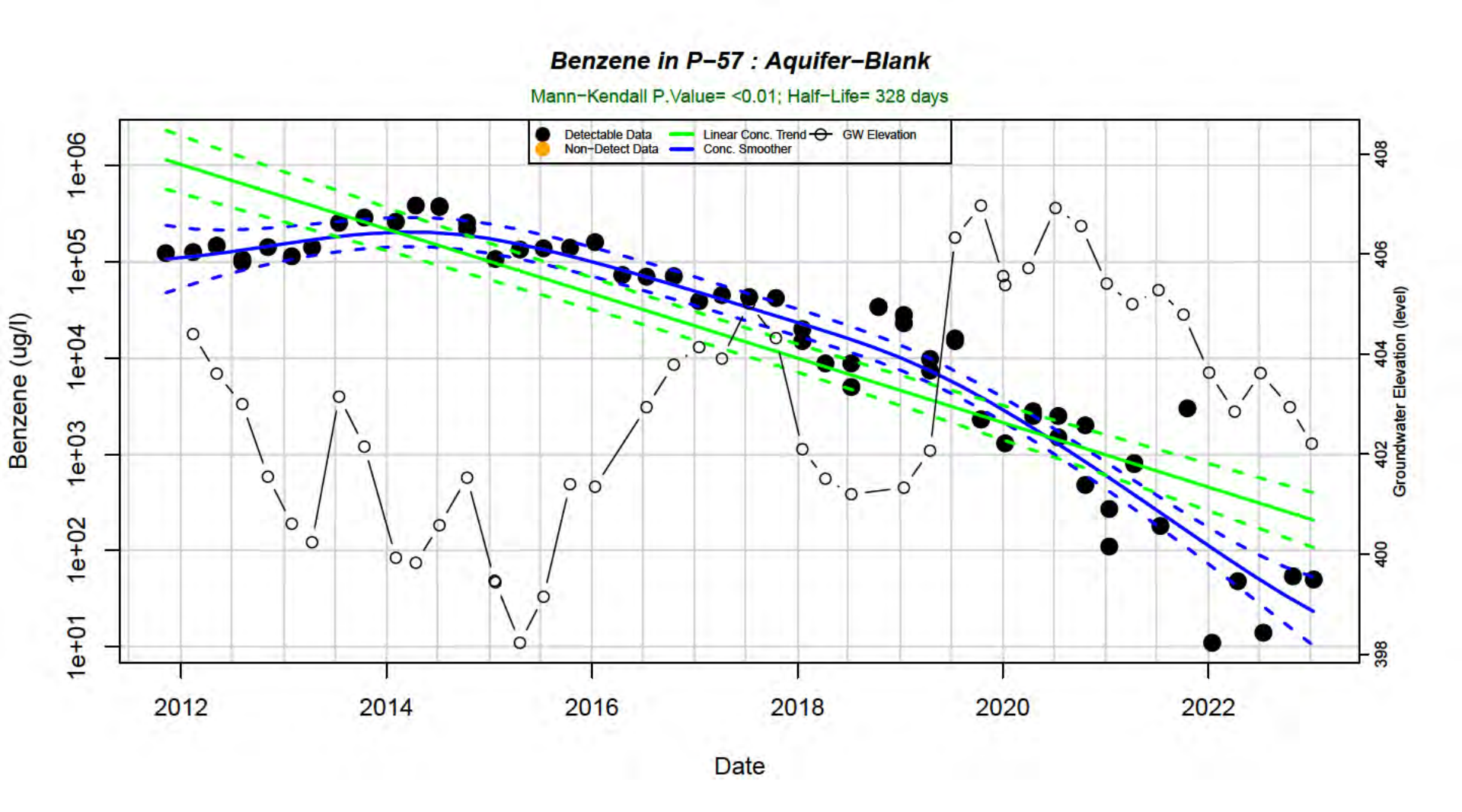

Benzene in T−12 : Aquifer−Blank
Mann−Kendall P.Value= 0.614; Half−Life> 5 Years
Detectable Data
Non−Detect Data
Linear Conc. Trend
Conc. Smoother
GW Elevation
Benzene (ug/l)
1500
2000
2500
3000
Groundwater Elevation (level)
398
400
402
404
406
408
2012
2014
2016
2018
2020
2022
Date

Public Works Yard Area


Benzene in MW−07 : Aquifer−Blank
Mann−Kendall P.Value= 0.0286; Half−Life> 5 Years
Detectable Data
Non−Detect Data
Linear Conc. Trend
Conc. Smoother
GW Elevation
Benzene (ug/l)
500000
1000000
2000000
Groundwater Elevation (level)
400
402
404
406
408
2012
2014
2016
2018
2020
2022
Date


Benzene in MW−08 : Aquifer−Blank
Mann−Kendall P.Value= <0.01; Half−Life= 1239 days
Detectable Data
Non−Detect Data
Linear Conc. Trend
Conc. Smoother
GW Elevation
Benzene (ug/l)
2e+04
1e+05
5e+05
2e+06
Groundwater Elevation (level)
400
402
404
406
408
2012
2014
2016
2018
2020
2022
Date


Benzene in MW−25 : Aquifer−Blank
Mann−Kendall P.Value= <0.01; Half−Life= 267 days
Detectable Data
Non−Detect Data
Linear Conc. Trend
Conc. Smoother
GW Elevation
Benzene (ug/l)
1e+01
1e+03
1e+05
Groundwater Elevation (level)
400
402
404
406
408
2016
2018
2020
2022
Date


Benzene in P−57 : Aquifer−Blank
Mann−Kendall P.Value= <0.01; Half−Life= 328 days
Detectable Data
Non−Detect Data
Linear Conc. Trend
Conc. Smoother
GW Elevation
Benzene (ug/l)
1e+01
1e+02
1e+03
1e+04
1e+05
1e+06
Groundwater Elevation (level)
398
400
402
404
406
408
2012
2014
2016
2018
2020
2022
Date

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