

AFCEC

# 2024 Annual Long-Term Monitoring Report

**Site SS005, Air Force Plant 59  
Johnson City, New York**

June 2025

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Johnson City, New York

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## Acronyms and Abbreviations

|        |                                                                                                        |
|--------|--------------------------------------------------------------------------------------------------------|
| µg/L   | microgram(s) per liter                                                                                 |
| AFP    | Air Force Plant                                                                                        |
| DCE    | dichloroethene                                                                                         |
| EA     | EA Engineering, P.C. and its affiliate EA Science and Technology                                       |
| EPA    | United States Environmental Protection Agency                                                          |
| GWQS   | Groundwater Quality Standards                                                                          |
| J      | estimated value                                                                                        |
| JV     | SERES-ARCADIS SB JV, LLC                                                                               |
| MCL    | New York State Department of Health Part 5, Subpart 5-1 Public Water Systems maximum contaminant level |
| NYSDEC | New York State Department of Environmental Conservation                                                |
| NYSDOH | New York State Department of Health                                                                    |
| TCA    | trichloroethane                                                                                        |
| TCE    | trichloroethene                                                                                        |
| VOC    | volatile organic compound                                                                              |

# 1 Introduction

SERES-ARCADIS SB JV, LLC (hereinafter referred to as the JV) has prepared this 2024 Annual Long-Term Monitoring Report to meet the requirements funded under the U.S. Army Corps of Engineers Baltimore District Multiple Award Environmental Services contract, W912DR19D0009, Delivery Order W912DR20F0483. This report documents the activities completed from August 5 through August 7, 2024, at Site SS005 at the former Air Force Plant (AFP) 59 in Johnson City, New York (**Figure 1**).

The AFP 59 site is located within a combined residential and commercial area, as shown on **Figure 2**. It is bounded to the north by Route 17C, across which are residential and commercial properties; to the east by the ramp to Route 201 and Little Choconut Creek; to the south by Little Choconut Creek; and to the west by residential properties and the Camden Street well field, which is a municipal water supply well field for Johnson City located approximately 2 blocks away from the AFP 59 site.

The AFP 59 site is listed on the New York State Department of Environmental Conservation (NYSDEC) List of Inactive Hazardous Waste Sites and has been designated as Site 704020. Based on the NYSDEC's recommendation, groundwater at the site is currently undergoing long-term groundwater monitoring, which was initiated in November 2004 (AECOM Technical Services, Inc. 2009). In 1999, the Air Force funded the installation of an air stripper for the Village of Johnson City Water Department; however, the site is not currently undergoing active remediation.

## 1.1 Site Background

Site SS005 is located within the approximately 30-acre AFP 59 facility in Johnson City, New York. AFP 59 was occupied by a building that was used by the federal government during World War II to produce propeller blades for fighters, bombers, and air transports. After the war, the government leased the facility for manufacturing and warehousing. General Electric moved into the plant during the Korean conflict to produce armament systems and engine controls and operated the facility into the 1980s to produce flight controls, weapon controls, and inertial navigation and guidance systems for military and commercial aircraft. The business was bought by Martin Marietta in the early 1990s, and Lockheed Martin was formed by the merger of Lockheed Corporation with Martin Marietta in 1995. The building was then taken over by BAE Systems in 2000. A flood inundated the site in September 2011, and BAE Systems announced in November 2011 it would not resume operations there (EA Engineering, P.C. and its affiliate EA Science and Technology [EA] 2022).

The Broome County Industrial Development Agency has functioned as the site's landlord under a deed agreement in effect since 1997. The Industrial Development Agency has been responsible for property maintenance since BAE Systems left the site. In 2017, the damaged and vacant building was demolished, and the site remains unoccupied. Monitoring wells SW-4 and SW-7, which were abandoned in advance of building demolition activities, were replaced with monitoring wells SW-4RE and SW-7RE and one additional, unidentified, monitoring well was abandoned (FPM Remediations, Inc. 2017).

The Air Force initiated groundwater investigations at the site in the 1990s, which revealed several chlorinated volatile organic compounds (VOCs) in groundwater at concentrations greater than the NYSDEC Ambient Water Quality Standards (United States Department of Energy 1995). Additionally, several samples collected by the Johnson City Water Department from potable supply wells, located approximately 2 blocks west of the site, revealed elevated concentrations of chlorinated VOCs in their supply wells. Since then, subsequent groundwater monitoring results have identified VOCs and 1,4-dioxane in several of the groundwater monitoring wells

associated with the site. The general groundwater flow direction of the shallow and deep aquifer below AFP 59 is westerly to southwesterly toward the Camden Street well field (Earth Tech 1996).

The Air Force is currently conducting long-term groundwater monitoring at AFP 59. The existing monitoring well network consists of eight monitoring wells located on site and five monitoring wells located off site. A subset of those wells are currently monitored. The 2024 monitoring activities included collecting samples from five on-site monitoring wells and three off-site monitoring wells, raw (i.e., pre-treatment) water samples from two off-site water supply wells, and one finished (i.e., post-treatment) water sample located at the Johnson City Water Department (**Figure 2**).

## 2 Long-Term Monitoring Activities

### 2.1 Purpose of Long-Term Monitoring Activities

Based on the conclusions presented in the Final Remedial Investigation Report (Earth Tech 1996) and recommendations made by the NYSDEC, the only chemicals of concern in AFP 59 groundwater are VOCs and 1,4-dioxane. In 2020, the NYSDEC approved a reduction in the number of sample locations and reduced the sampling frequency to annual (EA 2021).

### 2.2 Water Sampling Events

As indicated above, annual sampling occurs at 11 locations: five on-site monitoring wells, three off-site monitoring wells, two off-site water supply wells, and the water supply system operated by the Johnson City Water Department.

The annual groundwater sampling event was completed by the JV between August 5 and August 7, 2024, and samples were collected from the following locations:

- SW-9, SW-4RE, and SW-7RE (on-site shallow wells);
- DW-3 and DW-9 (on-site deep wells);
- URS-2S (off-site shallow well);
- URS-2D and URS-3D (off-site deep wells);
- Johnson City Water Department raw (pre-treatment) potable water supply wells JC-2 and JC-3; and
- Finished water (post-treatment).

#### 2.2.1 Groundwater Monitoring Well Gauging and Sampling

Groundwater levels were measured using a water-level probe, prior to groundwater sampling, at each sampled monitoring well and at monitoring wells SW-1, DW-1, BM-121, SW-3, and URS-5S. Groundwater monitoring wells were purged and sampled via low-flow sampling techniques. The monitoring wells were purged until field parameters (including water level, pH, dissolved oxygen, specific conductivity, oxidation-reduction potential, temperature, and turbidity), which were measured using a water quality meter, stabilized. Once the water quality parameters stabilized, samples were collected directly from the tubing exiting the pump into laboratory-provided bottles. Groundwater sampling logs are provided in **Appendix A**.

#### 2.2.2 Municipal Potable Water Sampling

Raw and finished water samples were collected from the Johnson City municipal water supply system during the August 2024 sampling event. An air stripper designed to remove VOCs from entering groundwater is currently operating at the Johnson City municipal water supply. The three samples collected included two raw water samples (supply wells JC-2 and JC-3) and one finished water (post-treatment) sample taken from the distribution system.

The samples were collected by opening the applicable spigot connected to each well's pump (pre-treatment) or the post-treatment piping. Water was purged from the spigot for approximately 5 minutes before collecting the sample directly from the spigot into laboratory-provided bottles.

### **2.2.3 Laboratory Analysis**

Groundwater samples were analyzed for VOCs by United States Environmental Protection Agency (EPA) Method 8260D and for 1,4-dioxane by EPA Method 8270E select ion monitoring. Water samples from the Johnson City municipal water supply system were analyzed for VOCs by EPA Method 524.2 and for 1,4-dioxane by EPA Method 8270E select ion monitoring. Samples were analyzed by ALS Environmental Laboratory of Middletown, Pennsylvania, and analytical results were validated by an independent third-party data validator, Laboratory Data Consultants, Inc., of Carlsbad, California. The laboratory results and data validation reports are provided in **Appendix B** and **Appendix C**, respectively.

### 3 Long-Term Monitoring Analytical Results

Groundwater analytical results from the August 2024 annual sampling event and a comparison to the respective New York State groundwater standards are presented in **Table 1**. Analytical results for the samples collected from the Johnson City Water Department in 2024 are provided in **Table 2**. Detected analytes from the August 2024 groundwater samples are summarized on **Figure 3**. Groundwater elevation contours and interpreted flow direction, based on observations made during the August 2024 sampling event, are presented on **Figure 4**.

Analytical results for VOCs in the samples collected from groundwater monitoring wells were compared to NYSDEC Technical and Operational Guidance Series 1.1.1 water guidance values (NYSDEC 1998). Analytical results for VOCs from the Johnson City municipal water supply drinking water samples were compared to the New York State Department of Health (NYSDOH) Part 5, Subpart 5-1 Public Water Systems maximum contaminant level (MCL) (NYSDOH 2022).

#### 3.1 Annual Groundwater Sampling Event – August 2024

Samples were collected from four shallow groundwater monitoring wells (URS-2S, SW-4RE, SW-7RE, and SW-9) and four deep groundwater monitoring wells (URS-2D, URS-3D, DW-3, and DW-9). Analytical results are presented and compared against the respective standards in **Table 1**.

##### 3.1.1 Shallow Zone Monitoring Well Analytical Results

cis-1,2-Dichloroethene (DCE) was detected at the highest concentration (28.3 micrograms per liter [µg/L]) at SW-7RE, which exceeds the groundwater standard of 5 µg/L. cis-1,2-DCE was also detected at SW-4RE and URS-2S below the groundwater standard. The analyte 1,1,1-trichloroethane (TCA) was detected at a concentration less than the standard in shallow zone groundwater monitoring well SW-4RE (with an estimated concentration of 0.37 µg/L). The remaining shallow zone wells were non-detect for 1,1,1-TCA. Trichloroethene (TCE) was detected at concentrations less than the groundwater standard in two of the four shallow zone monitoring wells (SW-4RE and URS-2S) but exceeded the groundwater standard of 5 µg/L at SW-7RE (5.7 µg/L). Other chlorinated VOCs were detected at concentrations less than the applicable groundwater standard in on-site shallow zone monitoring well SW-7RE and in off-site monitoring well URS-2S, specifically 1,1-dichloroethane, 1,1-DCE, and vinyl chloride.

1,4-Dioxane was detected above the MCL of 1 µg/L in on-site shallow zone monitoring well SW-7RE (1.7 µg/L) and off-site shallow zone monitoring well URS-2S (8.3 µg/L).

##### 3.1.2 Deep Zone Aquifer Analytical Results

Off-site groundwater monitoring well URS-2D and on-site groundwater monitoring well DW-3 contained cis-1,2-DCE detections at concentrations of 56.1 µg/L and 41.3 µg/L, respectively, which exceeded the groundwater standard of 5 µg/L. cis-1,2-DCE was also detected, below the groundwater standard, at deep zone monitoring well URS-3D and its duplicate (0.63 J [estimated value] µg/L and 0.59 J µg/L, respectively). No other groundwater standards were exceeded in the deep zone aquifer wells; however, 1,1,1-TCA and TCE were detected at URS-3D and its duplicate, and iodomethane was detected at DW-9.

1,4-Dioxane was detected above the MCL of 1 µg/L in every deep zone monitoring well sampled. Concentrations of 1,4-dioxane ranged from 2.3 µg/L (DW-9) to 7.9 µg/L (URS-2D).

## 3.2 Municipal Potable Water Supply Analytical Results

Analytical results for the samples collected from the Johnson City Water Department (i.e., pre-treatment supply wells JC-2 and JC-3 and a post-treatment sample) are presented in **Table 2** and discussed below. Analytical results for VOCs for the drinking water samples were compared to the applicable MCL (NYSDOH 2022), and 1,4-dioxane results were compared to the MCL of 1 µg/L.

Historically, brominated compounds and chloroform were routinely detected in the post-treatment supply samples. As common chlorine disinfection byproducts that had not been detected in the site groundwater samples, those analytes were not analyzed during the August 2024 sampling event.

### 3.2.1 August 2024 Municipal Potable Water Supply Analytical Results

No VOC exceedances were observed in either the pre-treatment or post-treatment water supply wells. Additionally, only one chlorinated VOC, 1,1,1-TCA, was detected in JC-3 at a concentration of 0.54 µg/L. 1,4-Dioxane was detected in each water supply well sample, at concentrations below the MCL (NYSDOH 2022), at concentrations ranging from 0.23 µg/L to 0.37 µg/L. The detected concentrations were similar to the previous sampling event in August 2023.

## 4 Data and Trend Analysis

A summary of the historically most detected VOCs in groundwater at the site is provided in **Table 3**.

Exceedances were observed at monitoring wells DW-3, URS-2D, and SW-7RE during the August 2024 sampling event. Historically, exceedances had also been observed at monitoring wells SW-4 and replacement monitoring well SW-4RE and URS-3D. Trend graphs were developed for these wells and are summarized below.

**Figure 5** presents cis-1,2-DCE concentrations at well DW-3. Concentrations have fluctuated throughout the historical sampling period (1994 through 2024) with the greatest historical concentration of 73.1 µg/L reported in June 2008 and the lowest historical concentration (< 1.18 µg/L) in November 2003. Following the demolition of AFP 59 in the spring of 2017, concentrations of cis-1,2-DCE decreased from 51 µg/L in December 2016 to 32 µg/L in December 2017. Concentrations observed during the August 2024 sampling event are similar to the pre-demolition concentrations (41.3 µg/L).

**Figure 6** presents cis-1,2-DCE concentrations at off-site well URS-2D. Concentrations have historically exceeded the groundwater standard and are relatively stable, ranging from 56 µg/L in June 2019 to 78 µg/L in June 2021. cis-1,2-DCE was detected at a concentration of 56.1 µg/L during the August 2024 sampling event.

**Figure 7** presents TCE and cis-1,2-DCE concentrations at on-site well SW-4/SW-4RE. Concentrations of both TCE and cis-1,2-DCE increased immediately following demolition of AFP 59 but have since decreased to concentrations that do not exceed either standard and are similar to pre-demolition concentrations.

**Figure 8** presents TCE and cis-1,2-DCE concentrations at on-site well SW-7/SW-7RE. Concentrations of cis-1,2-DCE increased immediately following demolition of AFP 59, similar to monitoring well SW-4RE. Based on the trend graph, cis-1,2-DCE concentrations have been fluctuating slightly since demolition activities, ranging from 28.3 µg/L in August 2024 to 92 µg/L in December 2017. Concentrations of TCE have remained similar to pre-demolition concentrations, but were above the guidance value of 5 µg/L in August 2024 for the first time since June 2019 (5.7 µg/L).

**Figure 9** presents TCE concentrations at off-site well URS-3D. Concentrations of TCE have historically been below the guidance value of 5 µg/L (sampling period ranging from 2013 through 2023), with the first guidance value exceedance (11.1 µg/L) observed in August 2023. TCE was below the guidance value (0.51 J µg/L with a duplicate of 0.53 J µg/L) during the August 2024 sampling event.

The following is a summary of concentration trends in monitoring wells with no VOC exceedances.

- **Shallow Zone:**
  - SW-9 results from the August 2024 sampling event indicate no detections of VOCs.
  - Detected concentrations of VOCs at off-site monitoring well URS-2S and on-site monitoring well SW-4RE were less than standards and have remained stable over time.
- **Deep Zone:**
  - DW-9 results from the August 2024 sampling event indicate one minor detection of VOCs (i.e., Iodomethane at one one-hundredth of the respective standard) (0.50 J µg/L).
- **Municipal Supply Wells:**
  - 1,1,1-TCA was the only detected VOC at the municipal supply wells during the August 2024 sampling event (0.54 µg/L at JC-3).
  - Analytical results from the post-treatment finished water supply sample show no detections of VOCs since December 2016, and 1,4-dioxane has remained consistently less than the MCL (NYSDOH 2022).

## 5 Conclusions and Recommendations

The August 2024 long-term monitoring activities indicate some site-related compounds are still exceeding the groundwater standards for the deep groundwater monitoring wells both on and off the AFP 59 site (specifically cis-1,2-DCE). Similar to historical sampling events, analytical results from the August 2024 groundwater sampling event show that concentrations of cis-1,2-DCE in shallow on-site monitoring well SW-7RE, deep off-site groundwater monitoring well URS-2D, and deep on-site groundwater monitoring well DW-3 exceed the groundwater standard of 5 µg/L. TCE also exceeded the groundwater standard of 5 µg/L at SW-7RE. Additionally, 1,4-dioxane exceeded the MCL of 1 µg/L in both the shallow and deep intervals for all sampled groundwater monitoring wells with the exception of SW-4RE, which had a concentration of 0.41 µg/L, and SW-9, which was non-detect.

Due to multiple exceedances of cis-1,2-DCE and 1,4-dioxane and the August 2024 TCE exceedance at SW-7RE, the JV recommends continuing annual monitoring of on-site and off-site monitoring wells SW-4RE, SW-7RE, SW-9, DW-9, DW-3, URS-2S, URS-2D, and URS-3D.

Analytical results from municipal water supply wells JC-2 and JC-3 and the post-treatment finished water were all non-detect for site VOCs, with the exception of 1,1,1-TCA at JC-3 and low levels of 1,4-dioxane at all three locations. The results remain below the standards and are consistent with historical sampling results. However, due to the 1,1,1-TCA detection at JC-3 and low concentrations of 1,4-dioxane, it is recommended to continue annual sampling of JC-2, JC-3, and the post-treatment finished water.

## 6 References

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- NYSDOH. 2022. Unofficial Compilation of Codes, Rules and Regulations of the State of New York Title 10. Department of Health Chapter I. State Sanitary Code Part 5. Drinking Water Supplies Subpart 5-1. Public Water Systems. December 28, 2022, revised September 8, 2023.
- United States Department of Energy, Energy Systems Division, Argonne National Laboratory. 1995. *Supplemental Site Inspection Report for Air Force Plant 59, Johnson City, New York. Volume 1: Investigation Report*. August.

# Tables

**Table 1**  
**Summary of Detected Compounds in Groundwater - August 2024**  
**Air Force Plant 59**  
**Johnson City, New York**

| Sample Location:<br>Sample Date:                            |      | NYSDEC<br>TOGS 1.1.1<br>(GA<br>Groundwater) <sup>1</sup> | DW-3<br>8/6/2024 | DW-9<br>8/5/2024 | SW-4RE<br>8/6/2024 | SW-7RE<br>8/6/2024 | SW-9<br>8/6/2024 | URS-2D<br>8/6/2024 | URS-2S<br>8/6/2024 | URS-3D<br>8/7/2024 | URS-3D (DUP)<br>8/7/2024 |
|-------------------------------------------------------------|------|----------------------------------------------------------|------------------|------------------|--------------------|--------------------|------------------|--------------------|--------------------|--------------------|--------------------------|
| Analyte                                                     | Unit |                                                          |                  |                  |                    |                    |                  |                    |                    |                    |                          |
| <b>VOCs via EPA Method 8260D</b>                            |      |                                                          |                  |                  |                    |                    |                  |                    |                    |                    |                          |
| 1,1,1-Trichloroethane                                       | µg/L | 5                                                        | <1.0 U           | <1.0 U           | <b>0.37 J</b>      | <1.0 U             | <1.0 U           | <1.0 U             | <1.0 U             | <b>0.86 J</b>      | <b>0.87 J</b>            |
| 1,1-Dichloroethane                                          | µg/L | 5                                                        | <1.0 U           | <1.0 U           | <1.0 U             | <b>2.6</b>         | <1.0 U           | <1.0 U             | <b>3.0</b>         | <1.0 U             | <1.0 U                   |
| 1,1-Dichloroethene                                          | µg/L | 5                                                        | <1.0 U           | <1.0 U           | <1.0 U             | <b>0.34 J</b>      | <1.0 U           | <1.0 U             | <1.0 U             | <1.0 U             | <1.0 U                   |
| Acetone                                                     | µg/L | 50                                                       | <5.0 U           | <5.0 U           | <5.0 U             | <5.0 U             | <5.0 U           | <5.0 U             | <b>5.8</b>         | <5.0 U             | <5.0 U                   |
| Carbon Disulfide                                            | µg/L | 60                                                       | <1.0 U           | <1.0 U           | <1.0 U             | <1.0 U             | <1.0 U           | <b>0.49 J</b>      | <1.0 U             | <1.0 U             | <1.0 U                   |
| cis-1,2-Dichloroethene                                      | µg/L | 5                                                        | <b>41.3</b>      | <1.0 U           | <b>0.73 J</b>      | <b>28.3</b>        | <1.0 U           | <b>56.1</b>        | <b>0.99 J</b>      | <b>0.63 J</b>      | <b>0.59 J</b>            |
| Iodomethane                                                 | µg/L | 50                                                       | <1.0 U           | <b>0.50 J</b>    | <1.0 UJ            | <1.0 U             | <1.0 U           | <1.0 U             | <1.0 U             | <1.0 U             | <1.0 U                   |
| Trichloroethene                                             | µg/L | 5                                                        | <1.0 U           | <1.0 U           | <b>3.9</b>         | <b>5.7</b>         | <1.0 U           | <1.0 U             | <b>2.7</b>         | <b>0.51 J</b>      | <b>0.53 J</b>            |
| Vinyl chloride                                              | µg/L | 2                                                        | <1.0 U           | <1.0 U           | <1.0 U             | <b>0.48 J</b>      | <1.0 U           | <1.0 U             | <1.0 U             | <1.0 U             | <1.0 U                   |
| <b>SVOCs via EPA Method 8270E Selected Iron Measurement</b> |      |                                                          |                  |                  |                    |                    |                  |                    |                    |                    |                          |
| 1,4-Dioxane                                                 | µg/L | 1 <sup>2</sup>                                           | <b>3.5</b>       | <b>2.3</b>       | <b>0.41 J</b>      | <b>1.7</b>         | <0.50 U          | <b>7.9</b>         | <b>8.3</b>         | <b>2.5</b>         | <b>2.6</b>               |

**Notes:**

<sup>1</sup> NYSDEC Class GA (groundwater for drinking water use) standards and guidance values TOGS 1.1.1, as amended for VOCs only.

<sup>2</sup> Table 3, Subpart 5-1 of Title 10 (Health) of the Official Compilation of Codes, Rules and Regulations of the State of New York, 1,4-Dioxane Drinking Water MCL.

Bold indicates detected analyte.

Shaded value indicates analyte exceeds guidance value.

Only detected analytes are shown.

**Acronyms and Abbreviations:**

µg/L = microgram(s) per liter

EPA = United States Environmental Protection Agency

MCL = Maximum Contaminant Level

NYSDEC = New York State Department of Environmental Conservation

SVOC = semi-volatile organic compound

TOGS = Technical and Operational Guidance Series

VOC = volatile organic compound

**Laboratory Qualifiers:**

J = Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit or indicates that the analyte recovery in the Matrix Spike or Matrix Spike Duplicate is outside of specified acceptance criteria.

U = Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

**Table 2**  
**Summary of Detected Compounds in Raw and Treated Municipal Water - August 2024**  
**Air Force Plant 59**  
**Johnson City, New York**

| Sample Location:<br>Sample Date:                    |      | NYSDOH Part 5<br>MCL for<br>Drinking Water <sup>1</sup> | JC-2<br>8/5/2024 | JC-2 (DUP)<br>8/5/2024 | JC-3<br>8/5/2024 | Post Treatment<br>8/5/2024 |
|-----------------------------------------------------|------|---------------------------------------------------------|------------------|------------------------|------------------|----------------------------|
| Analyte                                             | Unit |                                                         |                  |                        |                  |                            |
| VOCs via EPA Method 524.2                           |      |                                                         |                  |                        |                  |                            |
| 1,1,1-Trichloroethane                               | µg/L | 5                                                       | <0.50 U          | <0.50 U                | 0.54             | <0.50 U                    |
| SVOCs via EPA Method 8270E Selected Ion Measurement |      |                                                         |                  |                        |                  |                            |
| 1,4-Dioxane                                         | µg/L | 1 <sup>2</sup>                                          | 0.23 J           | 0.37 J                 | 0.37 J           | 0.32 J                     |

**Notes:**

<sup>1</sup> Subpart 5-1 of Title 10 (Health) of the Official Compilation of Codes, Rules and Regulations of the State of New York, Drinking Water Maximum Contaminant Level (MCL).

<sup>2</sup> Table 3, Subpart 5-1 of Title 10 (Health) of the Official Compilation of Codes Rules and Regulations of the State of New York, 1,4-Dioxane Drinking Water MCL, effective 26 August 2020.

Bold indicates detected analyte.

Only detected analytes are shown.

**Acronyms and Abbreviations:**

µg/L = microgram(s) per liter

EPA = United States Environmental Protection Agency.

MCL = Maximum Contaminant Level

NYSDOH = New York State Department of Health

SVOC = semi-volatile organic compound

VOC = volatile organic compound

**Laboratory Qualifiers:**

J = Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit or indicates that the analyte recovery in the matrix spike or matrix spike duplicate is outside of specified acceptance criteria.

U = Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

**Table 3**  
**Summary of Historical Concentration for Selected VOCs in Groundwater**  
**Air Force Plant 59**  
**Johnson City, New York**

| Analyte: |             | 1,1,1-Trichloroethane (TCA) µg/L | Trichloroethene (TCE) µg/L | Vinyl Chloride µg/L | 1,1-Dichloroethene (DCE) µg/L | trans-1,2-Dichloroethene (trans-1,2-DCE) µg/L | 1,1-Dichloroethane (DCA) µg/L | cis-1,2-Dichloroethene (cis-1,2-DCE) µg/L | 1,4-Dioxane <sup>4</sup> µg/L |
|----------|-------------|----------------------------------|----------------------------|---------------------|-------------------------------|-----------------------------------------------|-------------------------------|-------------------------------------------|-------------------------------|
| Well ID  | Sample Date | Unit:                            |                            |                     |                               |                                               |                               |                                           |                               |
| SW-1     | 92-Feb      |                                  | 0.5                        | --                  | --                            | --                                            | --                            | --                                        | --                            |
|          | 01-Nov      |                                  | 0.11 J                     | --                  | --                            | --                                            | --                            | --                                        | --                            |
|          | 10-Nov      |                                  | 0.11 J                     | --                  | --                            | --                                            | --                            | --                                        | --                            |
|          | 16-Dec      |                                  | --                         | --                  | --                            | --                                            | --                            | --                                        | 0.047                         |
| DW-1     | 92-Feb      |                                  | 0.6                        | --                  | --                            | --                                            | --                            | --                                        | --                            |
|          | 94-Nov      |                                  | --                         | --                  | --                            | --                                            | --                            | 1.8                                       | --                            |
|          | 10-Nov      |                                  | 0.18 J                     | --                  | --                            | --                                            | --                            | --                                        | --                            |
|          | 14-Nov      |                                  | 0.19 F                     | --                  | --                            | --                                            | --                            | --                                        | --                            |
| SW-3     | 86-Sep      |                                  | --                         | 6                   | --                            | --                                            | --                            | --                                        | --                            |
|          | 92-Jan      |                                  | 12                         | 9                   | --                            | --                                            | 5                             | --                                        | --                            |
|          | 94-Dec      |                                  | 0.5                        | 1.8                 | --                            | --                                            | --                            | --                                        | --                            |
|          | 95-Dec      |                                  | 0.86                       | 2.8                 | --                            | --                                            | --                            | 0.44                                      | --                            |
|          | 97-Jun      |                                  | --                         | 1                   | --                            | --                                            | --                            | --                                        | --                            |
|          | 98-Nov      |                                  | 0.22                       | 0.81                | --                            | --                                            | --                            | 0.1                                       | --                            |
|          | 99-Apr      |                                  | 0.51                       | 0.71                | --                            | --                                            | --                            | 0.17                                      | --                            |
|          | 99-Nov      |                                  | 0.29                       | 0.9                 | --                            | --                                            | --                            | 0.39                                      | --                            |
|          | 00-May      |                                  | 0.69                       | 1                   | --                            | --                                            | 0.55                          | 1.29                                      | --                            |
|          | 00-Nov      |                                  | 0.43                       | 0.9                 | --                            | --                                            | --                            | 0.22                                      | --                            |
|          | 01-May      |                                  | 0.46                       | 0.8                 | --                            | --                                            | 0.32                          | 1.29                                      | --                            |
|          | 01-Nov      |                                  | 0.32 J                     | 0.5 J               | --                            | --                                            | --                            | --                                        | --                            |
|          | 02-May      |                                  | 0.42 J                     | 0.8 J               | --                            | --                                            | 0.46 J                        | --                                        | --                            |
|          | 03-May      |                                  | 0.584 J                    | 0.893 J             | --                            | --                                            | 0.302 J                       | 1.37 J                                    | --                            |
|          | 03-Nov      |                                  | 0.398 J                    | 0.856 J             | --                            | --                                            | --                            | 0.511 J                                   | --                            |
|          | 04-Jun      |                                  | 0.9 J                      | 0.94 J              | --                            | --                                            | 0.95 J                        | 3.7                                       | --                            |
|          | 04-Nov      |                                  | 0.52 J                     | 1                   | 0.26 J                        | --                                            | 0.38 J                        | 1.5                                       | --                            |
|          | 05-Oct      |                                  | 0.47 J                     | 0.86 J              | --                            | --                                            | --                            | 0.55 J                                    | --                            |
|          | 08-Jun      |                                  | 0.661 J                    | 1.31                | --                            | --                                            | 0.403 J                       | 1.45                                      | --                            |
|          | 08-Nov      |                                  | 0.345 J                    | 0.759 J             | --                            | --                                            | --                            | --                                        | --                            |
|          | 09-Nov      |                                  | 0.367 J                    | 0.62 J              | --                            | --                                            | --                            | 0.539 J                                   | --                            |
|          | 10-Nov      |                                  | 0.41                       | 0.59                | --                            | --                                            | --                            | 0.17                                      | --                            |
|          | 12-Aug      |                                  | --                         | 0.51                | --                            | --                                            | --                            | 0.28 F                                    | --                            |
|          | 13-Oct      |                                  | --                         | 0.70 F              | --                            | --                                            | --                            | 1                                         | --                            |
|          | 14-Nov      |                                  | 0.26 F                     | 0.51 F              | --                            | --                                            | --                            | 0.31 F                                    | --                            |
|          | 15-Nov      |                                  | 0.24 F                     | 0.42 F              | --                            | --                                            | --                            | 0.27 F                                    | --                            |
|          | 16-Dec      |                                  | --                         | 0.49 J              | --                            | --                                            | --                            | 0.39 J                                    | 0.14                          |
|          | 17-Dec      |                                  | --                         | 0.61 J              | --                            | --                                            | --                            | --                                        | 0.075                         |
|          | 19-Jun      |                                  | 0.37 J                     | 0.59 J              | --                            | --                                            | --                            | 1.2 J                                     | 0.37 B                        |
|          | 20-Jun      |                                  | --                         | 0.36 J              | --                            | --                                            | --                            | 0.98 J                                    | 0.19                          |

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**Table 3**  
**Summary of Historical Concentration for Selected VOCs in Groundwater**  
**Air Force Plant 59**  
**Johnson City, New York**

| Analyte: |             | 1,1,1-Trichloroethane (TCA) µg/L | Trichloroethene (TCE) µg/L | Vinyl Chloride µg/L | 1,1-Dichloroethene (DCE) µg/L | trans-1,2-Dichloroethene (trans-1,2-DCE) µg/L | 1,1-Dichloroethane (DCA) µg/L | cis-1,2-Dichloroethene (cis-1,2-DCE) µg/L | 1,4-Dioxane <sup>4</sup> µg/L |
|----------|-------------|----------------------------------|----------------------------|---------------------|-------------------------------|-----------------------------------------------|-------------------------------|-------------------------------------------|-------------------------------|
| Well ID  | Sample Date | Unit:                            |                            |                     |                               |                                               |                               |                                           |                               |
| DW-3     | 92-Jan      |                                  | 0.3                        | --                  | --                            | --                                            | 0.3                           | --                                        | --                            |
|          | 94-Dec      |                                  | --                         | --                  | 0.28                          | --                                            | 0.26                          | 36                                        | --                            |
|          | 95-Dec      |                                  | --                         | --                  | --                            | --                                            | --                            | 5.2                                       | --                            |
|          | 97-Apr      |                                  | --                         | --                  | --                            | --                                            | --                            | 41                                        | --                            |
|          | 97-Jul      |                                  | --                         | --                  | --                            | --                                            | --                            | 49                                        | --                            |
|          | 98-Nov      |                                  | --                         | --                  | --                            | --                                            | 0.34                          | 66                                        | --                            |
|          | 99-Apr      |                                  | --                         | --                  | 0.28                          | 0.11                                          | 0.35                          | 67                                        | --                            |
|          | 00-May      |                                  | --                         | --                  | --                            | 0.25                                          | 0.16                          | 24.98                                     | --                            |
|          | 00-Nov      |                                  | --                         | --                  | --                            | 0.25                                          | 0.16                          | 16.85                                     | --                            |
|          | 01-May      |                                  | --                         | --                  | --                            | --                                            | --                            | 13.29                                     | --                            |
|          | 01-Nov      |                                  | --                         | --                  | --                            | --                                            | --                            | 13.58                                     | --                            |
|          | 02-May      |                                  | --                         | --                  | --                            | --                                            | 0.1 J                         | 21.08                                     | --                            |
|          | 03-Nov      |                                  | --                         | --                  | --                            | --                                            | --                            | 1.18 J                                    | --                            |
|          | 04-Jun      |                                  | --                         | --                  | --                            | --                                            | --                            | 1.3                                       | --                            |
|          | 04-Nov      |                                  | --                         | --                  | --                            | --                                            | --                            | 2.1                                       | --                            |
|          | 05-Oct      |                                  | --                         | --                  | --                            | --                                            | --                            | 3                                         | --                            |
|          | 08-Jun      |                                  | --                         | --                  | --                            | --                                            | --                            | 73.1                                      | 14.3                          |
|          | 08-Nov      |                                  | --                         | --                  | --                            | --                                            | 0.41 J                        | 67.3                                      | --                            |
|          | 09-Nov      |                                  | --                         | --                  | --                            | --                                            | 0.369 J                       | 64.3                                      | --                            |
|          | 10-Nov      |                                  | --                         | --                  | --                            | --                                            | --                            | 8.4                                       | --                            |
|          | 12-Aug      |                                  | --                         | --                  | --                            | --                                            | 0.32 F                        | 56                                        | --                            |
|          | 13-Oct      |                                  | --                         | --                  | 0.18 F                        | 0.32 F                                        | --                            | 57                                        | 2.7                           |
|          | 14-Nov      |                                  | --                         | --                  | --                            | --                                            | 0.32 F                        | 49                                        | 11 M                          |
|          | 15-Nov      |                                  | --                         | --                  | --                            | --                                            | 0.31 F                        | 50                                        | 6.7                           |
|          | 16-Dec      |                                  | --                         | --                  | --                            | --                                            | 0.35 J                        | 51                                        | 7.9                           |
|          | 17-Dec      |                                  | --                         | --                  | --                            | --                                            | 0.21 J                        | 32                                        | 5.2                           |
|          | 19-Jun      |                                  | --                         | --                  | --                            | --                                            | 0.28 J                        | 41                                        | 7.4                           |
|          | 20-Jun      |                                  | --                         | --                  | --                            | --                                            | 0.33 J                        | 48                                        | 8.0                           |
|          | 21-Jun      |                                  | --                         | --                  | --                            | 0.41 J                                        | 0.42 J                        | 57                                        | 8.0                           |
|          | 22-Jul      |                                  | --                         | --                  | --                            | --                                            | 0.37 J                        | 48                                        | 6.5                           |
|          | 23-Aug      |                                  | --                         | --                  | --                            | --                                            | --                            | 52.5                                      | 3.3                           |
|          | 24-Aug      |                                  | --                         | --                  | --                            | --                                            | --                            | 41.3                                      | 3.5                           |
| SW-4     | 92-Jan      |                                  | 2                          | 97                  | --                            | 0.3                                           | 0.6                           | --                                        | --                            |
|          | 94-Dec      |                                  | 20                         | 370                 | --                            | 2.1                                           | 8.5                           | 19                                        | --                            |
|          | 95-Dec      |                                  | 34                         | 1200                | --                            | 4.9                                           | 6.9                           | 34                                        | --                            |
|          | 97-Apr      |                                  | --                         | --                  | --                            | --                                            | 7.1                           | 71                                        | --                            |
|          | 97-Jul      |                                  | 23                         | 290                 | --                            | --                                            | --                            | 15                                        | --                            |
|          | 98-Nov      |                                  | 8                          | 46                  | 0.42                          | 0.82                                          | 9                             | 10                                        | --                            |
|          | 99-Apr      |                                  | 1.9                        | 9.53                | --                            | --                                            | 0.87                          | 1.85                                      | --                            |
|          | 99-Nov      |                                  | 2.13                       | 9.5                 | --                            | 0.18                                          | 7.7                           | 7.15                                      | --                            |

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**Table 3**  
**Summary of Historical Concentration for Selected VOCs in Groundwater**  
**Air Force Plant 59**  
**Johnson City, New York**



| Well ID             | Analyte: | 1,1,1-Trichloroethane (TCA) µg/L | Trichloroethene (TCE) µg/L | Vinyl Chloride µg/L | 1,1-Dichloroethene (DCE) µg/L | trans-1,2-Dichloroethene (trans-1,2-DCE) µg/L | 1,1-Dichloroethane (DCA) µg/L | cis-1,2-Dichloroethene (cis-1,2-DCE) µg/L | 1,4-Dioxane <sup>4</sup> µg/L |
|---------------------|----------|----------------------------------|----------------------------|---------------------|-------------------------------|-----------------------------------------------|-------------------------------|-------------------------------------------|-------------------------------|
|                     | Unit:    |                                  |                            |                     |                               |                                               |                               |                                           |                               |
| SW-4 (cont.)        | 00-May   | 2.88                             | 8                          | 0.11                | 0.21                          | 0.49                                          | 1.67                          | 4.3                                       | --                            |
|                     | 00-Nov   | 1.14                             | 15.2                       | 1.49                | 0.29                          | --                                            | 15.25                         | 11.18                                     | --                            |
|                     | 01-May   | 3.35                             | 34                         | --                  | 0.36                          | 0.38                                          | 1.3                           | 3.19                                      | --                            |
|                     | 01-Nov   | 0.88                             | 5.7                        | 0.43 J              | 0.12 J                        | --                                            | 7.18                          | 5.27                                      | --                            |
|                     | 02-May   | 2.54                             | 21.63                      | --                  | 0.34 J                        | --                                            | 0.79 J                        | 2.07                                      | --                            |
|                     | 03-May   | 3.05 J                           | 9.09 J                     | --                  | --                            | --                                            | 1.44 J                        | 3.36 J                                    | --                            |
|                     | 03-Nov   | 2.03                             | 4.63                       | --                  | --                            | --                                            | 0.93                          | 1.93                                      | --                            |
|                     | 04-Jun   | 2.8                              | 41                         | --                  | 0.57 J                        | 0.11 F                                        | 1.3                           | 3.3                                       | --                            |
|                     | 04-Nov   | 3.1                              | 56                         | --                  | 0.88 J                        | 0.19 J                                        | 1.4                           | 4.1                                       | --                            |
|                     | 05-Oct   | 2.2                              | 43                         | --                  | 1                             | --                                            | 1.7                           | 6.3                                       | --                            |
|                     | 08-Jun   | 2.98                             | 17.8                       | --                  | 0.751 J                       | 0.364 J                                       | 1.51                          | 4.35                                      | 8.18                          |
|                     | 08-Nov   | 0.513 J                          | 12.7                       | --                  | --                            | --                                            | 0.825 J                       | 3.38                                      | --                            |
|                     | 09-Nov   | 1.38                             | 11.1                       | --                  | --                            | --                                            | 0.536 J                       | 1.85                                      | --                            |
|                     | 10-Nov   | 1.6                              | 48                         | --                  | 0.64 J                        | --                                            | 1.1                           | 3.2                                       | --                            |
|                     | 12-Aug   | 0.66                             | 11                         | --                  | --                            | --                                            | 0.64 F                        | 2.3                                       | --                            |
| SW-4RE <sup>1</sup> | 13-Oct   | 1.8                              | 6.6                        | --                  | 0.26 F                        | --                                            | --                            | 2.6                                       | 0.81 M                        |
|                     | 14-Nov   | 0.75 F                           | 3.4                        | --                  | 0.46 F                        | --                                            | --                            | 1.7                                       | 2.5 M                         |
|                     | 15-Nov   | 0.64 F                           | 4.9                        | --                  | --                            | --                                            | 0.58 F                        | 2.7                                       | 1.6                           |
|                     | 17-Dec   | 0.82 J                           | 140                        | --                  | 1.2 J                         | 0.68 J                                        | --                            | 11                                        | 6.7                           |
|                     | 19-Jun   | 1.6 J                            | 3.9                        | --                  | 0.36 J                        | --                                            | 0.93 J                        | 2.1 J                                     | 4.1                           |
|                     | 20-Jun   | 2.1 J                            | 3.9 J                      | --                  | 0.43 J                        | --                                            | 1.1 J                         | 2.1 J                                     | 4.9                           |
|                     | 21-Jun   | 1.6 J                            | 4.6 J                      | --                  | 0.38 J                        | 0.25 J                                        | 0.99 J                        | 1.4 J                                     | 3.2                           |
| SW-7                | 22-Jun   | 1.6 J                            | 3.4 J                      | --                  | 0.32 J                        | --                                            | 0.73 J                        | 1 J                                       | 2                             |
|                     | 23-Aug   | 1.2                              | 2.6                        | --                  | --                            | --                                            | 0.45 J                        | 0.82 J                                    | --                            |
|                     | 24-Aug   | 0.37 J                           | 3.9                        | --                  | --                            | --                                            | --                            | 0.73 J                                    | 0.41 J                        |
|                     | 94-Dec   | 4.6                              | 56                         | 6.2                 | 1                             | 0.3                                           | 33                            | 150                                       | --                            |
|                     | 95-Dec   | 2.2                              | 43                         | 6.8                 | 0.8                           | --                                            | 20                            | 130                                       | --                            |
|                     | 97-Jul   | --                               | 17.8                       | --                  | --                            | --                                            | --                            | 2                                         | --                            |
|                     | 98-Nov   | 2.5                              | 12.7                       | 3.4                 | 0.65                          | 0.28                                          | 12                            | 82                                        | --                            |
|                     | 99-Apr   | 1.23                             | 15                         | --                  | --                            | --                                            | 1.46                          | 5.25                                      | --                            |
|                     | 99-Nov   | 1.01                             | 7.9                        | --                  | 0.19                          | --                                            | 3.38                          | 18.8                                      | --                            |
|                     | 00-May   | 0.67                             | 4                          | --                  | --                            | 0.12                                          | 0.71                          | 2.43                                      | --                            |
|                     | 00-Nov   | 0.91                             | 11                         | 0.52                | 0.15                          | --                                            | 3.48                          | 16.06                                     | --                            |
|                     | 01-May   | 1.18                             | 3.95                       | --                  | --                            | --                                            | 0.47                          | 1.46                                      | --                            |
|                     | 01-Nov   | 0.8 J                            | 5.7                        | 0.85 J              | 0.19 J                        | 0.13 J                                        | 3.02                          | 25.89                                     | --                            |
|                     | 02-May   | 0.87 J                           | 1.5                        | --                  | --                            | --                                            | 0.47 J                        | 2.79                                      | --                            |
|                     | 03-May   | 1.5 J                            | 3.8                        | --                  | --                            | --                                            | 0.409 J                       | 1.43 J                                    | --                            |
|                     | 03-Nov   | 0.674 J                          | 1.9                        | --                  | --                            | --                                            | 0.509                         | 2.76                                      | --                            |
|                     | 04-Jun   | 1                                | 1                          | --                  | --                            | --                                            | 0.3 J                         | 1.1                                       | --                            |
|                     | 04-Nov   | 1.5                              | 2.1                        | 0.47 J              | 0.25 J                        | --                                            | 1.5 J                         | 10 J                                      | --                            |

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**Table 3**  
**Summary of Historical Concentration for Selected VOCs in Groundwater**  
**Air Force Plant 59**  
**Johnson City, New York**



| Well ID             | Sample Date | Analyte:<br>Unit: | 1,1,1-Trichloroethane<br>(TCA)<br>µg/L | Trichloroethene<br>(TCE)<br>µg/L | Vinyl Chloride<br>µg/L | 1,1-Dichloroethene<br>(DCE)<br>µg/L | trans-1,2-Dichloroethene<br>(trans-1,2-DCE)<br>µg/L | 1,1-Dichloroethane<br>(DCA)<br>µg/L | cis-1,2-Dichloroethene<br>(cis-1,2-DCE)<br>µg/L | 1,4-Dioxane <sup>4</sup><br>µg/L |
|---------------------|-------------|-------------------|----------------------------------------|----------------------------------|------------------------|-------------------------------------|-----------------------------------------------------|-------------------------------------|-------------------------------------------------|----------------------------------|
|                     |             |                   |                                        |                                  |                        |                                     |                                                     |                                     |                                                 |                                  |
| SW-7 (cont.)        | 05-Oct      |                   | 0.73 J                                 | 3.1                              | --                     | --                                  | --                                                  | 1.4                                 | 12                                              | --                               |
|                     | 08-Jun      |                   | 2.5                                    | 2.94                             | --                     | --                                  | --                                                  | 1.59                                | 6.34                                            | 4.66                             |
|                     | 08-Nov      |                   | 1.88                                   | 8.15                             | 1.21 M                 | --                                  | 0.302 F                                             | 5.04                                | 35.3 M                                          | --                               |
|                     | 09-Nov      |                   | 1.24                                   | 2.42                             | --                     | --                                  | --                                                  | 0.905 J                             | 5.21                                            | --                               |
|                     | 10-Nov      |                   | 1                                      | 2.4                              | 1                      | 0.21                                | 0.096                                               | 0.58                                | 4.3                                             | --                               |
|                     | 12-Aug      |                   | 2                                      | 9.9                              | 1.2                    | 0.65                                | 0.21 F                                              | 6.5                                 | 44                                              | --                               |
|                     | 13-Oct      |                   | --                                     | 2.5                              | --                     | 0.93 F                              | --                                                  | --                                  | 7                                               | 0.43 F                           |
|                     | 14-Nov      |                   | 1.9                                    | 7.8                              | 0.78 F                 | 0.67 F                              | 0.2 F                                               | 4.6                                 | 33                                              | 4.4 M                            |
| SW-7RE <sup>1</sup> | 15-Nov      |                   | 1.8                                    | 9.5                              | 1.2 F                  | 0.52 F                              | 0.16 F                                              | 5.1                                 | 40                                              | 6                                |
|                     | 17-Dec      |                   | 1.5 J                                  | 6                                | 1.9 J                  | --                                  | --                                                  | 4.4 J                               | 92                                              | 3.1                              |
|                     | 19-Jun      |                   | 1.6 J                                  | 3.8 J                            | 1.1 J                  | 0.44 J                              | 0.45 J                                              | 2.4 J                               | 45                                              | 3.6                              |
|                     | 20-Jun      |                   | 1.7 J                                  | 3.8 J                            | 0.75 J                 | 0.43 J                              | 1.1 J                                               | 3.3 J                               | 61                                              | 3.3                              |
|                     | 21-Jun      |                   | 1.6 J                                  | 3.8 J                            | 0.89 J                 | 0.61 J                              | 0.49 J                                              | 3.8 J                               | 72                                              | 3.0                              |
|                     | 22-Jun      |                   | 1.5 J                                  | 4.5 J                            | 0.45 J                 | 0.46 J                              | 0.21 J                                              | 2.5 J                               | 34                                              | 2.9                              |
|                     | 23-Aug      |                   | --                                     | 3.6 J                            | --                     | 0.54 J                              | 0.41 J                                              | 3.7 J                               | 78.7 J                                          | 1.4 J                            |
|                     | 24-Aug      |                   | --                                     | 5.7                              | 0.48 J                 | 0.34 J                              | --                                                  | 2.6                                 | 28.3                                            | 1.7                              |
| DW-9                | 16-Dec      |                   | --                                     | --                               | --                     | --                                  | --                                                  | --                                  | --                                              | 3.1                              |
|                     | 17-Dec      |                   | --                                     | 0.8 J                            | --                     | --                                  | --                                                  | --                                  | --                                              | 8                                |
|                     | 19-Jun      |                   | --                                     | --                               | --                     | --                                  | --                                                  | --                                  | --                                              | 9.5                              |
|                     | 20-Jun      |                   | --                                     | --                               | --                     | --                                  | --                                                  | --                                  | --                                              | 10                               |
|                     | 21-Jun      |                   | --                                     | --                               | --                     | --                                  | --                                                  | --                                  | --                                              | 11                               |
|                     | 22-Jul      |                   | --                                     | --                               | --                     | --                                  | --                                                  | --                                  | --                                              | 8.7                              |
|                     | 23-Aug      |                   | --                                     | --                               | --                     | --                                  | --                                                  | --                                  | --                                              | 4.8                              |
|                     | 24-Aug      |                   | --                                     | --                               | --                     | --                                  | --                                                  | --                                  | --                                              | 2.3                              |
| SW-9                | 17-Dec      |                   | 1.3 J                                  | 0.8 J                            | --                     | --                                  | --                                                  | 0.59 J                              | 0.54 J                                          | 0.054                            |
|                     | 21-Jun      |                   | --                                     | 3.4 J                            | 0.71 J                 | --                                  | --                                                  | 1.2 J                               | 1.7 J                                           | 1.0                              |
|                     | 22-Jun      |                   | --                                     | 3.2 J                            | 0.65 J                 | --                                  | --                                                  | 1 J                                 | 1.3 J                                           | 0.98                             |
|                     | 23-Aug      |                   | 1.4 J                                  | 0.59 J                           | --                     | --                                  | --                                                  | 1.1 J                               | 0.60 J                                          | --                               |
|                     | 24-Aug      |                   | --                                     | --                               | --                     | --                                  | --                                                  | --                                  | --                                              | --                               |
| BM-121              | 15-Nov      |                   | --                                     | --                               | --                     | --                                  | --                                                  | --                                  | --                                              | 0.4 F                            |
|                     | 16-Dec      |                   | --                                     | 0.28J                            | --                     | --                                  | --                                                  | --                                  | --                                              | 0.25                             |
|                     | 17-Dec      |                   | --                                     | --                               | --                     | --                                  | --                                                  | --                                  | --                                              | 0.11                             |
|                     | 19-Jun      |                   | 0.22 J                                 | --                               | --                     | --                                  | --                                                  | --                                  | --                                              | 0.22 B                           |
|                     | 20-Jun      |                   | --                                     | --                               | --                     | --                                  | --                                                  | --                                  | --                                              | 0.22                             |
| URS-2D <sup>2</sup> | 08-Jun      |                   | --                                     | --                               | 0.354 J                | --                                  | --                                                  | 0.339 J                             | 71.9                                            | --                               |
|                     | 09-Nov      |                   | --                                     | --                               | 0.364 J                | --                                  | --                                                  | 0.244 J                             | 72.7                                            | --                               |
|                     | 10-Nov      |                   | --                                     | --                               | 0.22 J                 | --                                  | 0.11 J                                              | 0.23 J                              | 69                                              | --                               |
|                     | 12-Jul      |                   | --                                     | --                               | 0.22 J                 | --                                  | --                                                  | 0.27 J                              | 71                                              | --                               |
|                     | 13-Oct      |                   | --                                     | --                               | --                     | --                                  | 0.17 F                                              | 0.21 F                              | 62                                              | 7.4                              |

See Notes on Page 7.

**Table 3**  
**Summary of Historical Concentration for Selected VOCs in Groundwater**  
**Air Force Plant 59**  
**Johnson City, New York**



| Analyte:                    |             | 1,1,1-Trichloroethane (TCA) µg/L | Trichloroethene (TCE) µg/L | Vinyl Chloride µg/L | 1,1-Dichloroethene (DCE) µg/L | trans-1,2-Dichloroethene (trans-1,2-DCE) µg/L | 1,1-Dichloroethane (DCA) µg/L | cis-1,2-Dichloroethene (cis-1,2-DCE) µg/L | 1,4-Dioxane <sup>4</sup> µg/L |
|-----------------------------|-------------|----------------------------------|----------------------------|---------------------|-------------------------------|-----------------------------------------------|-------------------------------|-------------------------------------------|-------------------------------|
| Well ID                     | Sample Date | Unit:                            |                            |                     |                               |                                               |                               |                                           |                               |
| URS-2D <sup>2</sup> (cont.) | 14-Nov      | --                               | --                         | --                  | --                            | --                                            | 0.27 F                        | 67                                        | 28 M                          |
|                             | 15-Nov      | --                               | --                         | --                  | --                            | --                                            | 0.2 F                         | 61                                        | 21                            |
|                             | 16-Dec      | --                               | --                         | --                  | --                            | --                                            | --                            | 67                                        | 25                            |
|                             | 17-Dec      | --                               | --                         | --                  | --                            | --                                            | 0.3 J                         | 66                                        | 21 J                          |
|                             | 18-Dec      | --                               | --                         | --                  | --                            | --                                            | 0.26 J                        | 60                                        | 23                            |
|                             | 19-Jun      | --                               | --                         | --                  | --                            | --                                            | 0.26 J                        | 56                                        | 23                            |
|                             | 19-Dec      | --                               | --                         | --                  | --                            | --                                            | --                            | 57                                        | 22                            |
|                             | 20-Jun      | --                               | --                         | --                  | --                            | --                                            | 0.22 J                        | 63                                        | 25                            |
|                             | 21-Jun      | --                               | --                         | 0.20 J              | --                            | --                                            | 0.28 J                        | 78                                        | 25                            |
|                             | 22-Jul      | --                               | --                         | --                  | --                            | --                                            | 0.26 J                        | 65                                        | 21                            |
| URS-2S                      | 23-Aug      | --                               | --                         | --                  | --                            | --                                            | --                            | 75.3 J                                    | 11.3                          |
|                             | 24-Aug      | --                               | --                         | --                  | --                            | --                                            | --                            | 56.1                                      | 7.9                           |
|                             | 08-Jun      | 2.2                              | 2.19                       | --                  | --                            | --                                            | 0.569 J                       | 0.966 F                                   | --                            |
|                             | 09-Nov      | 2.99                             | 2.79                       | --                  | --                            | --                                            | 1.07                          | 1.46                                      | --                            |
|                             | 10-Nov      | 2.2                              | 2.6                        | --                  | 0.37 J                        | --                                            | 1.1                           | 1.3                                       | --                            |
|                             | 12-Jul      | 3.3                              | 4.4                        | --                  | --                            | --                                            | 1.6                           | 1.9                                       | --                            |
|                             | 13-Oct      | 1.6                              | 2.3                        | --                  | --                            | --                                            | 1.1                           | 1.2                                       | 1.8 F                         |
|                             | 14-Nov      | 4.1                              | 3.7                        | --                  | 0.32 F                        | --                                            | 2.1                           | 1.2                                       | 20 M                          |
|                             | 15-Nov      | 2.4                              | 2.8                        | --                  | --                            | --                                            | 1.3                           | 1.8                                       | 12                            |
|                             | 16-Dec      | 2.3 J                            | 3.3 J                      | --                  | --                            | --                                            | 1.8 J                         | 2.5 J                                     | 14                            |
|                             | 17-Dec      | 2.8 J                            | 3.6 J                      | --                  | --                            | --                                            | 1.7 J                         | 1.4 J                                     | 27 J                          |
|                             | 19-Jun      | 1.1 J                            | 2.9 J                      | --                  | --                            | --                                            | 2.0 J                         | 1.2 J                                     | 9.5                           |
|                             | 20-Jun      | 1.7 J                            | 2.5 J                      | --                  | --                            | --                                            | 1.3 J                         | 2.3 J                                     | 7.7                           |
|                             | 21-Jun      | 1.6 J                            | 2.7 J                      | --                  | 0.23 J                        | --                                            | 1.0 J                         | 3.3 J                                     | 4.9                           |
| URS-3D                      | 22-Jul      | 1.5 J                            | 2.3 J                      | --                  | --                            | --                                            | 0.99 J                        | 2 J                                       | 3.2                           |
|                             | 23-Aug      | --                               | 2                          | --                  | --                            | --                                            | 3                             | 1.2                                       | 9                             |
|                             | 24-Aug      | --                               | 2.7                        | --                  | --                            | --                                            | 3.0                           | 0.99 J                                    | 8.3                           |
|                             | 13-Oct      | 0.99 F                           | 1.7                        | --                  | --                            | --                                            | --                            | 0.9 F                                     | 1.8 F                         |
|                             | 14-Oct      | 1.3                              | 1.9                        | --                  | --                            | --                                            | --                            | 0.95 F                                    | 4.7 M                         |
|                             | 15-Nov      | 1                                | 1.6                        | --                  | --                            | --                                            | --                            | 0.9 F                                     | 5.8                           |
|                             | 16-Dec      | 1.3 J                            | 1.8 J                      | --                  | --                            | --                                            | --                            | 0.74 J                                    | 6.9                           |
|                             | 17-Dec      | 1.1 J                            | 1.6 J                      | --                  | --                            | --                                            | --                            | 0.77 J                                    | 6.2                           |
|                             | 18-Dec      | 0.71 J                           | 1.6 J                      | --                  | --                            | --                                            | --                            | 0.87                                      | --                            |
|                             | 19-Jun      | 0.98 J                           | --                         | --                  | --                            | --                                            | --                            | 0.80 J                                    | 4.4                           |
|                             | 19-Dec      | 0.92 J                           | 1.4 J                      | --                  | --                            | --                                            | --                            | 0.83 J                                    | 3.9                           |
|                             | 20-Jun      | 0.94 J                           | 1.5 J                      | --                  | --                            | --                                            | --                            | 0.67 J                                    | 5.7                           |
|                             | 20-Dec      | 1.1 J                            | 1.7 J                      | --                  | --                            | --                                            | --                            | 0.72 J                                    | 6.3                           |
|                             | 21-Jun      | 1.1 J                            | 1.8 J                      | --                  | --                            | --                                            | --                            | 0.82 J                                    | 8.7                           |
|                             | 22-Jul      | 0.82 J                           | 1.6 J                      | --                  | --                            | --                                            | --                            | 0.69 J                                    | 6.1                           |

See Notes on Page 7.

**Table 3**  
**Summary of Historical Concentration for Selected VOCs in Groundwater**  
**Air Force Plant 59**  
**Johnson City, New York**



| Analyte:          |             | 1,1,1-Trichloroethane (TCA) µg/L | Trichloroethene (TCE) µg/L | Vinyl Chloride µg/L | 1,1-Dichloroethene (DCE) µg/L | trans-1,2-Dichloroethene (trans-1,2-DCE) µg/L | 1,1-Dichloroethane (DCA) µg/L | cis-1,2-Dichloroethene (cis-1,2-DCE) µg/L | 1,4-Dioxane <sup>4</sup> µg/L |
|-------------------|-------------|----------------------------------|----------------------------|---------------------|-------------------------------|-----------------------------------------------|-------------------------------|-------------------------------------------|-------------------------------|
| Well ID           | Sample Date | Unit:                            |                            |                     |                               |                                               |                               |                                           |                               |
| URS-3D (cont.)    | 23-Aug      |                                  | 0.71 J                     | 11.1                | --                            | --                                            | --                            | 0.83 J                                    | 1.7                           |
|                   | 24-Aug      |                                  | 0.87 J                     | 0.53 J              | --                            | --                                            | --                            | 0.63 J                                    | 2.6                           |
| URS-5S            | 13-Oct      |                                  | 0.5 F                      | 0.63 F              | --                            | --                                            | --                            | --                                        | --                            |
|                   | 14-Oct      |                                  | 0.68 F                     | 0.65 F              | --                            | --                                            | --                            | --                                        | --                            |
|                   | 15-Nov      |                                  | 0.52 F                     | 0.56 F              | --                            | --                                            | --                            | --                                        | 0.4 F                         |
|                   | 16-Dec      |                                  | 0.48 J                     | 0.48 J              | --                            | --                                            | --                            | --                                        | 0.26                          |
|                   | 17-Dec      |                                  | --                         | 0.53 J              | --                            | --                                            | --                            | --                                        | 0.11 J                        |
|                   | 19-Jun      |                                  | 0.28 J                     | 0.38 J              | --                            | --                                            | --                            | --                                        | 0.19 B                        |
|                   | 20-Jun      |                                  | 0.3 J                      | 0.28 J              | --                            | --                                            | --                            | --                                        | 0.21                          |
| JC-2 <sup>3</sup> | 13-Oct      |                                  | 0.36 F                     | 0.48 F              | --                            | --                                            | --                            | 0.29 F                                    | --                            |
|                   | 14-Nov      |                                  | 0.24 F                     | 0.33 F              | --                            | --                                            | --                            | 0.23 F                                    | 0.739 F                       |
|                   | 15-Nov      |                                  | 0.33 F                     | 0.39 F              | --                            | --                                            | --                            | 0.24 F                                    | 0.896 F                       |
|                   | 16-Dec      |                                  | --                         | 0.47 J              | --                            | --                                            | --                            | 0.78 J                                    | 0.715                         |
|                   | 17-Dec      |                                  | --                         | 0.54 J              | --                            | --                                            | --                            | 0.69 J                                    | 0.594                         |
|                   | 18-Dec      |                                  | 0.26 J                     | 0.36 J              | --                            | --                                            | --                            | 0.27 J                                    | 0.536 B                       |
|                   | 19-Feb      |                                  | --                         | 0.43 J              | --                            | --                                            | --                            | --                                        | 0.591                         |
|                   | 19-Jun      |                                  | 0.25                       | 0.28 J              | --                            | --                                            | --                            | 0.32 J                                    | 0.606 B                       |
|                   | 19-Sep      |                                  | --                         | 0.28 J              | --                            | --                                            | --                            | 0.4 J                                     | 0.726                         |
|                   | 19-Dec      |                                  | 0.23 J                     | 0.36 J              | --                            | --                                            | --                            | 0.47 J                                    | 0.512                         |
|                   | 20-Mar      |                                  | --                         | 0.38 J              | --                            | --                                            | --                            | --                                        | 0.649                         |
|                   | 20-Jun      |                                  | 0.36 J                     | 0.44 J              | --                            | --                                            | 0.21 J                        | 0.79 J                                    | 0.964                         |
|                   | 20-Sep      |                                  | --                         | 0.41 J              | --                            | --                                            | --                            | 0.72 J                                    | 0.696                         |
|                   | 20-Dec      |                                  | 0.30 J                     | 0.030 J             | --                            | --                                            | --                            | 0.31 J                                    | 0.999                         |
|                   | 21-Jun      |                                  | 0.32 J                     | 0.47 J              | --                            | --                                            | --                            | 0.41 J                                    | 0.445 J                       |
|                   | 22-Jul      |                                  | 0.24 J                     | 0.33 J              | --                            | --                                            | --                            | 0.42 J                                    | 0.533                         |
| JC-3              | 23-Aug      |                                  | --                         | --                  | --                            | --                                            | --                            | --                                        | 0.24 J                        |
|                   | 24-Aug      |                                  | --                         | --                  | --                            | --                                            | --                            | --                                        | 0.37 J                        |
|                   | 12-Aug      |                                  | 0.56                       | 0.92                | --                            | --                                            | --                            | 0.26 J                                    | --                            |
|                   | 16-Dec      |                                  | 0.59 J                     | 0.62 J              | --                            | --                                            | --                            | --                                        | 0.604                         |
|                   | 17-Dec      |                                  | 0.41 J                     | 0.52 J              | --                            | --                                            | --                            | --                                        | 0.492                         |
|                   | 18-Dec      |                                  | 0.51 J                     | 0.46 J              | --                            | --                                            | --                            | --                                        | 0.464 B                       |
|                   | 19-Feb      |                                  | 0.59 J                     | 0.49 J              | --                            | --                                            | --                            | --                                        | 0.464                         |
|                   | 19-Jun      |                                  | 0.45 J                     | 0.46 J              | --                            | --                                            | --                            | --                                        | 0.755 B                       |
|                   | 19-Sep      |                                  | 0.41 J                     | 0.46 J              | --                            | --                                            | --                            | --                                        | 0.928                         |
|                   | 19-Dec      |                                  | 0.5 J                      | 0.46 J              | --                            | --                                            | --                            | --                                        | 0.486                         |
|                   | 20-Mar      |                                  | 0.6 J                      | 0.63 J              | --                            | --                                            | --                            | --                                        | 0.576                         |
|                   | 20-Jun      |                                  | 0.46 J                     | 0.42 J              | --                            | --                                            | --                            | --                                        | 0.561                         |
|                   | 20-Sep      |                                  | --                         | 0.38 J              | --                            | --                                            | --                            | --                                        | 0.618                         |
|                   | 20-Dec      |                                  | 0.58 J                     | 0.48 J              | --                            | --                                            | --                            | --                                        | 0.615                         |

See Notes on Page 7.

**Table 3**  
**Summary of Historical Concentration for Selected VOCs in Groundwater**  
**Air Force Plant 59**  
**Johnson City, New York**



| Analyte:       |             | 1,1,1-Trichloroethane (TCA) µg/L | Trichloroethene (TCE) µg/L | Vinyl Chloride µg/L | 1,1-Dichloroethene (DCE) µg/L | trans-1,2-Dichloroethene (trans-1,2-DCE) µg/L | 1,1-Dichloroethane (DCA) µg/L | cis-1,2-Dichloroethene (cis-1,2-DCE) µg/L | 1,4-Dioxane <sup>4</sup> µg/L |
|----------------|-------------|----------------------------------|----------------------------|---------------------|-------------------------------|-----------------------------------------------|-------------------------------|-------------------------------------------|-------------------------------|
| Well ID        | Sample Date | Unit:                            |                            |                     |                               |                                               |                               |                                           |                               |
| JC-3 (cont.)   | 21-Jun      |                                  | 0.5 J                      | 0.49 J              | --                            | --                                            | --                            | --                                        | 0.568 J                       |
|                | 22-Jul      |                                  | 0.43 J                     | 0.43 J              | --                            | --                                            | --                            | --                                        | 0.609                         |
|                | 23-Aug      |                                  | --                         | 0.52                | --                            | --                                            | --                            | --                                        | 0.23 J                        |
|                | 24-Aug      |                                  | 0.54                       | --                  | --                            | --                                            | --                            | --                                        | 0.37 J                        |
| POST TREATMENT | 16-Dec      |                                  | --                         | --                  | --                            | --                                            | --                            | --                                        | 0.600                         |
|                | 17-Dec      |                                  | --                         | --                  | --                            | --                                            | --                            | --                                        | 0.536                         |
|                | 18-Dec      |                                  | --                         | --                  | --                            | --                                            | --                            | --                                        | 0.556 BJ                      |
|                | 19-Feb      |                                  | --                         | --                  | --                            | --                                            | --                            | --                                        | 0.964                         |
|                | 19-Jun      |                                  | --                         | --                  | --                            | --                                            | --                            | --                                        | 0.735 B                       |
|                | 19-Sep      |                                  | --                         | --                  | --                            | --                                            | --                            | --                                        | 0.764                         |
|                | 19-Dec      |                                  | --                         | --                  | --                            | --                                            | --                            | --                                        | 0.579                         |
|                | 20-Mar      |                                  | --                         | --                  | --                            | --                                            | --                            | --                                        | 0.554                         |
|                | 20-Jun      |                                  | --                         | --                  | --                            | --                                            | --                            | --                                        | 0.512                         |
|                | 20-Sep      |                                  | --                         | --                  | --                            | --                                            | --                            | --                                        | 0.675 J                       |
|                | 20-Dec      |                                  | --                         | --                  | --                            | --                                            | --                            | --                                        | 0.729                         |
|                | 21-Jun      |                                  | --                         | --                  | --                            | --                                            | --                            | --                                        | 0.574 J                       |
|                | 22-Jul      |                                  | --                         | --                  | --                            | --                                            | --                            | --                                        | 0.589                         |
|                | 23-Aug      |                                  | --                         | --                  | --                            | --                                            | --                            | --                                        | 0.24 J                        |
|                | 24-Aug      |                                  | --                         | --                  | --                            | --                                            | --                            | --                                        | 0.32 J                        |

**Notes:**

<sup>1</sup> Monitoring wells SW-4RE and SW-7RE are replacements for abandoned wells SW-4 and SW-7, respectively.

<sup>2</sup> The 1,4-Dioxane reading for URS-2D was reported using EPA Method 8260C. This value was higher than the reported value for EPA Method 8270D.

<sup>3</sup> In accordance with the USAF 2020 Site Management Plan, samples collected from the municipal water system are to be analyzed via EPA Method 524.2, which started during the June 2021 sampling event.

<sup>4</sup> 1,4-Dioxane concentrations were measured using EPA Methods 8260C and 8270D, except for the public water supply wells, which used EPA Method 522 SIM until the August 2023 sampling event, when EPA Method 8270D SIM was utilized.

The highest concentration of the analyte was used for reporting if a duplicate was collected at the same location.

**Acronyms and Abbreviations:**

µg/L = Microgram(s) per liter

-- = Analyte not detected above laboratory method detection limits.

EPA = United States Environmental Protection Agency

MDL = method detection limit

RL = reporting limit

SIM = Selected Ion Measurement

**Laboratory Qualifiers:**

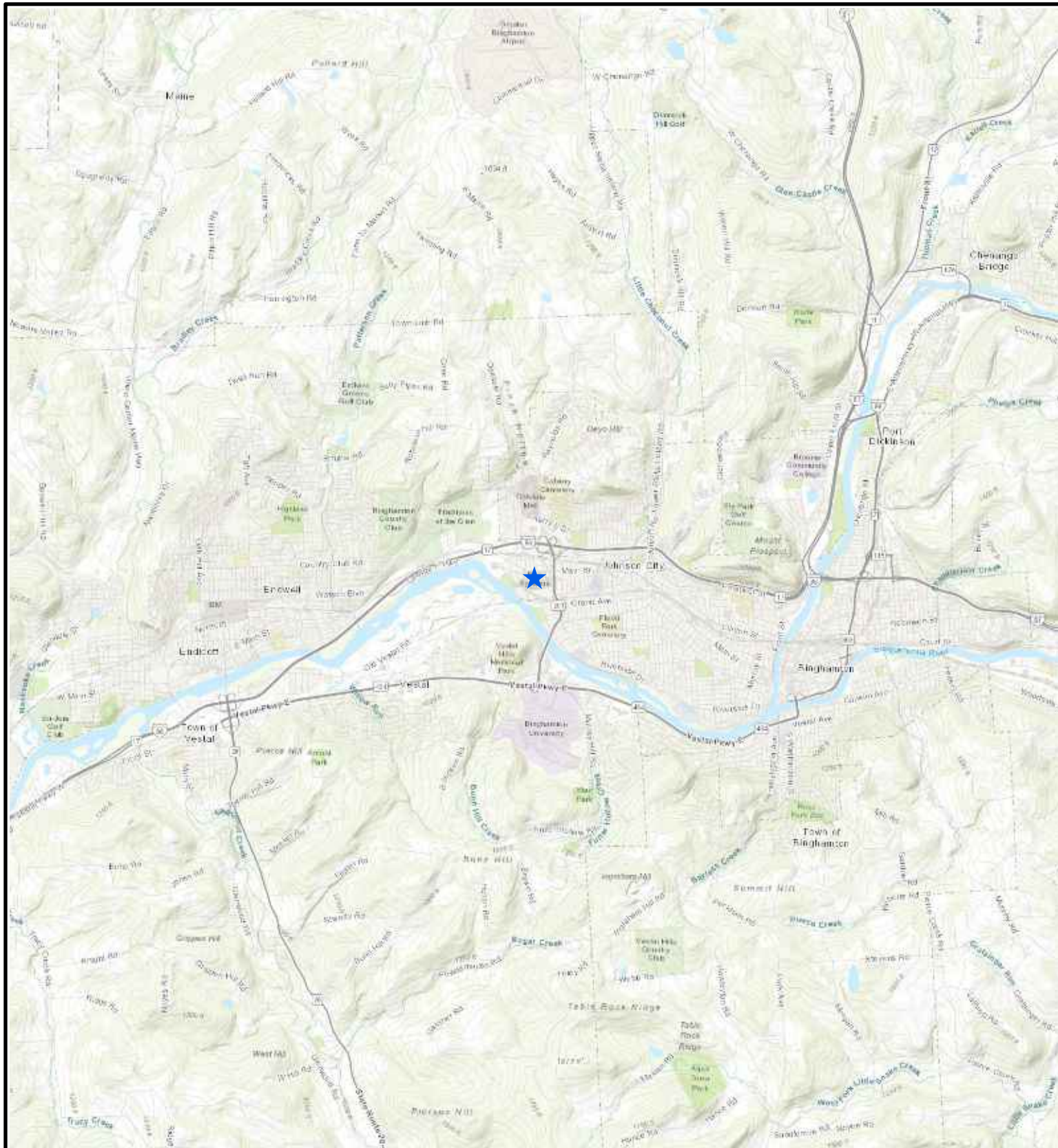
B = Target analyte was detected in the sample, as well as the associated blank.

F = Added by HydroGeologic, the analyte was positively identified but the associated numerical value is below the RL.

J = Result is an estimated value, the analyte was positively detected in sample above MDL but below reporting limit RL.

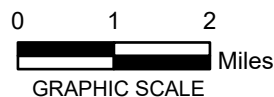
M = Matrix effect. The analyte concentration was estimated due to matrix effect and, therefore, estimated.

# Figures



**LEGEND:**

- ★ Air Force Plant 59 (Site SS005)



AIR FORCE PLANT 59 (SS005)  
JOHNSON CITY, BROOME COUNTY  
NEW YORK

**SITE LOCATION**



FIGURE  
**1**

T:\ENVA\FP59\03\_APRX\AFP59\_ERP\MSIAFP59\_ERP\MS.aprx Fig 2 Site Plan 2/13/2025 11:11 AM hsb906



**Legend**

- Deep Groundwater Monitoring Well
- Shallow Groundwater Monitoring Well
- Municipal Production Well
- Approximate Site Boundary
- Approximate Tax Parcel Boundary
- Former Building
- Former Parking Lot (Remaining Soil Contamination)



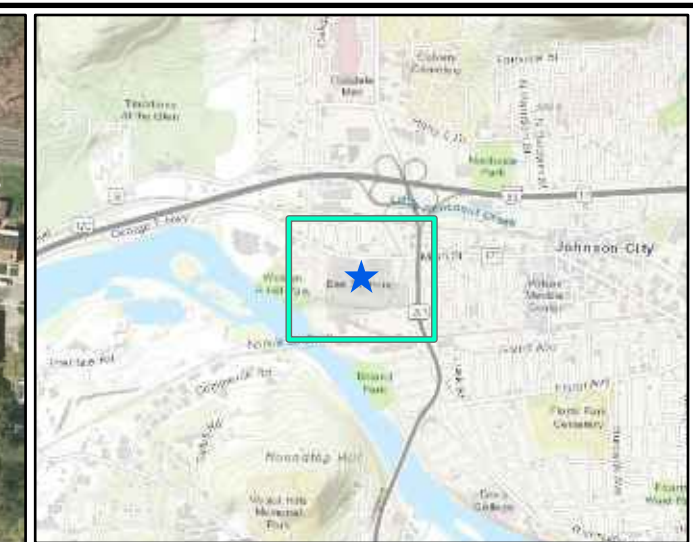
Note:  
Projection: NAD 1983 State Plane New York East FIPS 3101 Feet

AIR FORCE PLANT 59 (SS005)  
JOHNSON CITY, BROOME COUNTY  
NEW YORK

**SITE PLAN**



T:\ENV\AF59\03\_APRX\AF59 ERP\MS\AF59 ERP\MS.aprx Fig 3 Detected Concentrations of VOCs and 1,4-Dioxane (August 2024) 2/14/2025 11:08 AM hs6906



### Legend

- Deep Groundwater Monitoring Well
- Shallow Groundwater Monitoring Well
- Municipal Production Well
- Approximate Site Boundary
- Former Building
- Former Parking Lot (Remaining Soil Contamination)

### Note:

- Only detected analytes are shown.
- Values in bold indicate analyte exceeds guidance value.
- J indicates estimated value.
- Duplicate results are provided in parentheses.
- Projection: NAD 1983 State Plane New York East FIPS 3101 Feet.
- Groundwater results provided in ug/L.

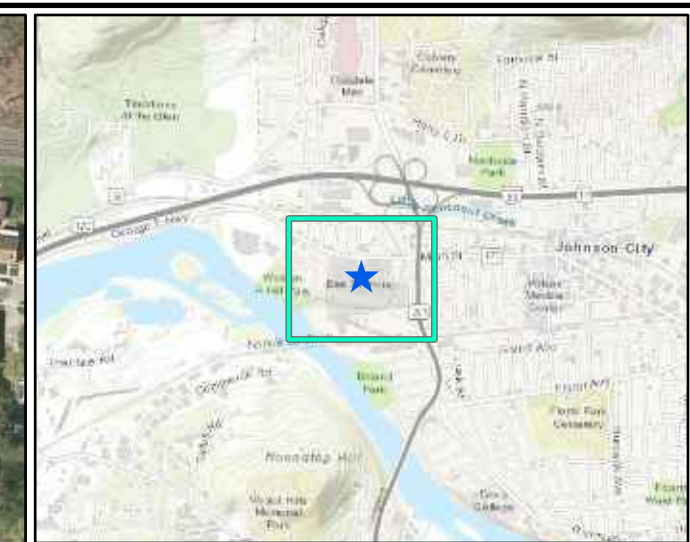


AIR FORCE PLANT 59 (SS005)  
JOHNSON CITY, BROOME COUNTY  
NEW YORK

### DETECTED CONCENTRATIONS OF VOCs AND 1,4-DIOXANE (AUGUST 2024)

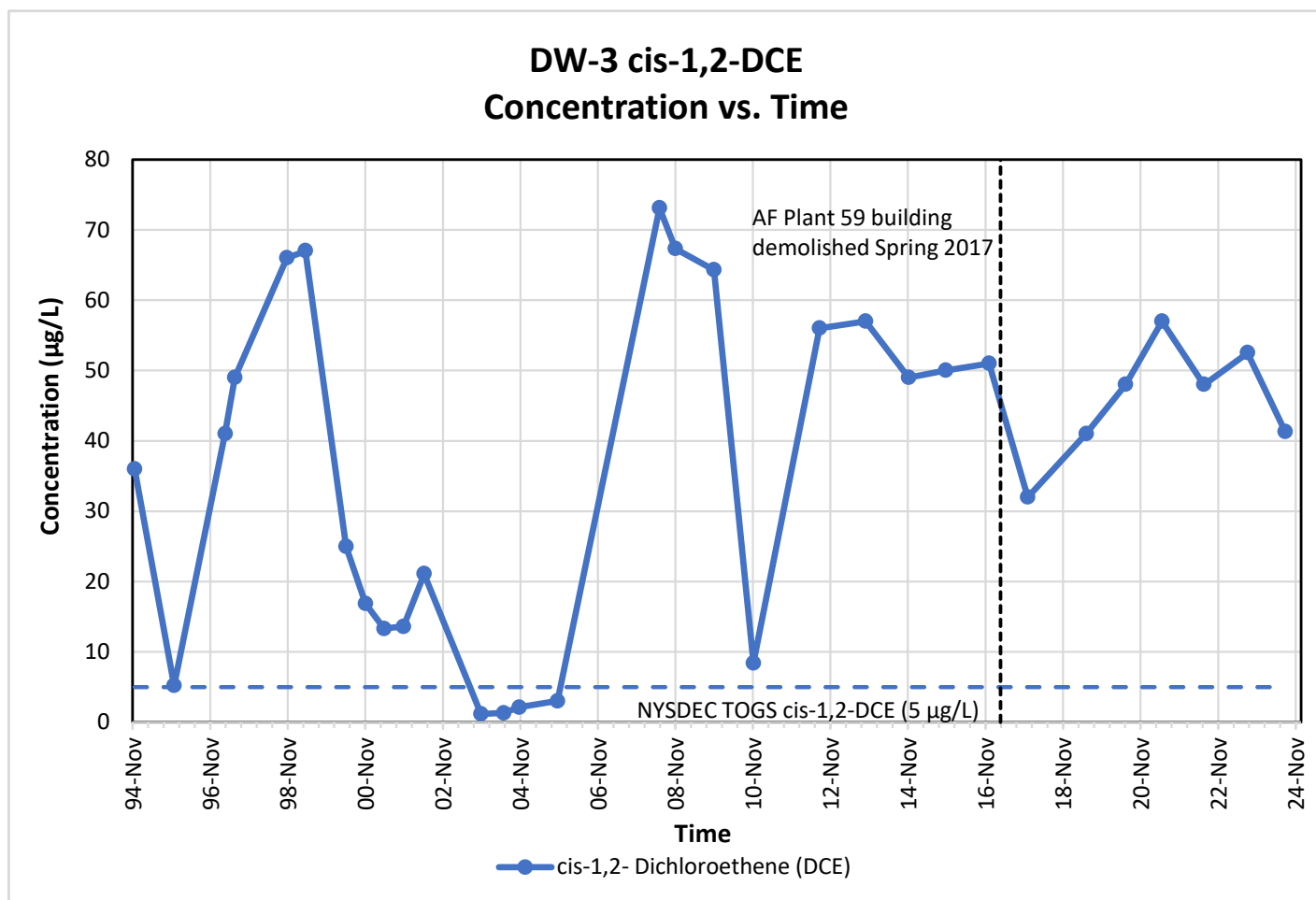


FIGURE  
**3**

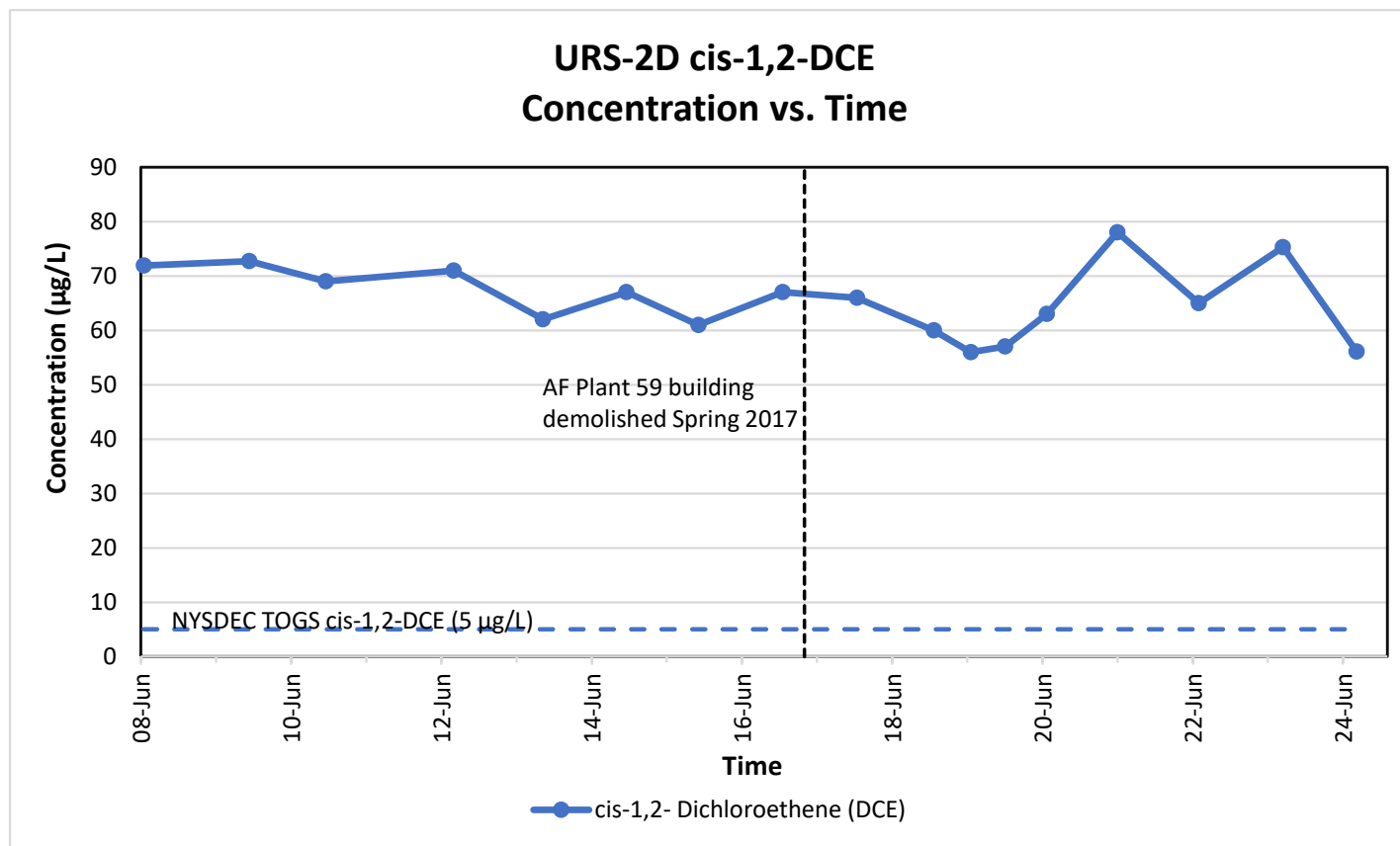


**FIGURE 4**

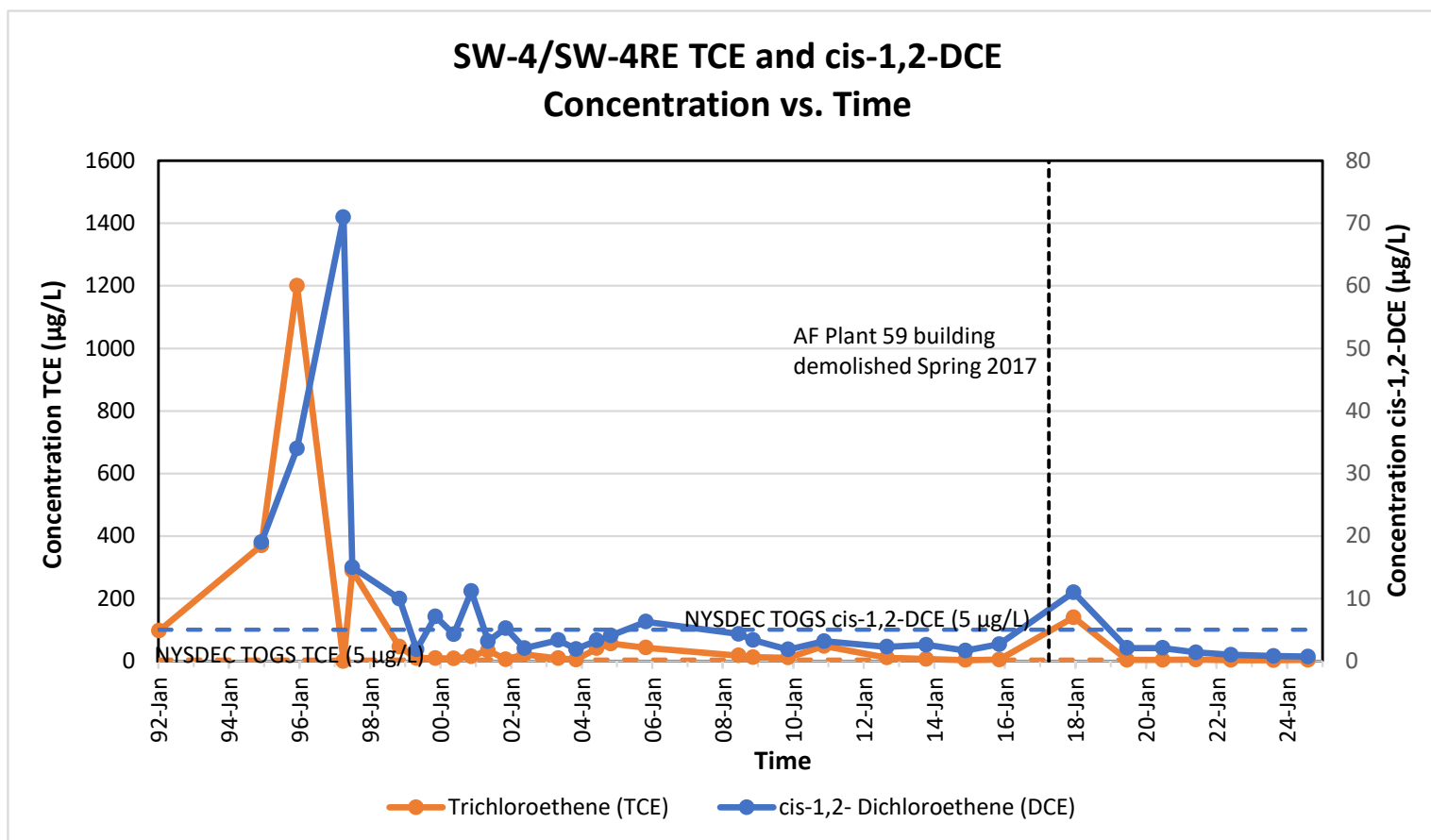
**Figure 5. DW-3 Concentration Over Time - cis-1,2-DCE**  
**Air Force Plant 59**  
**Johnson City, New York**



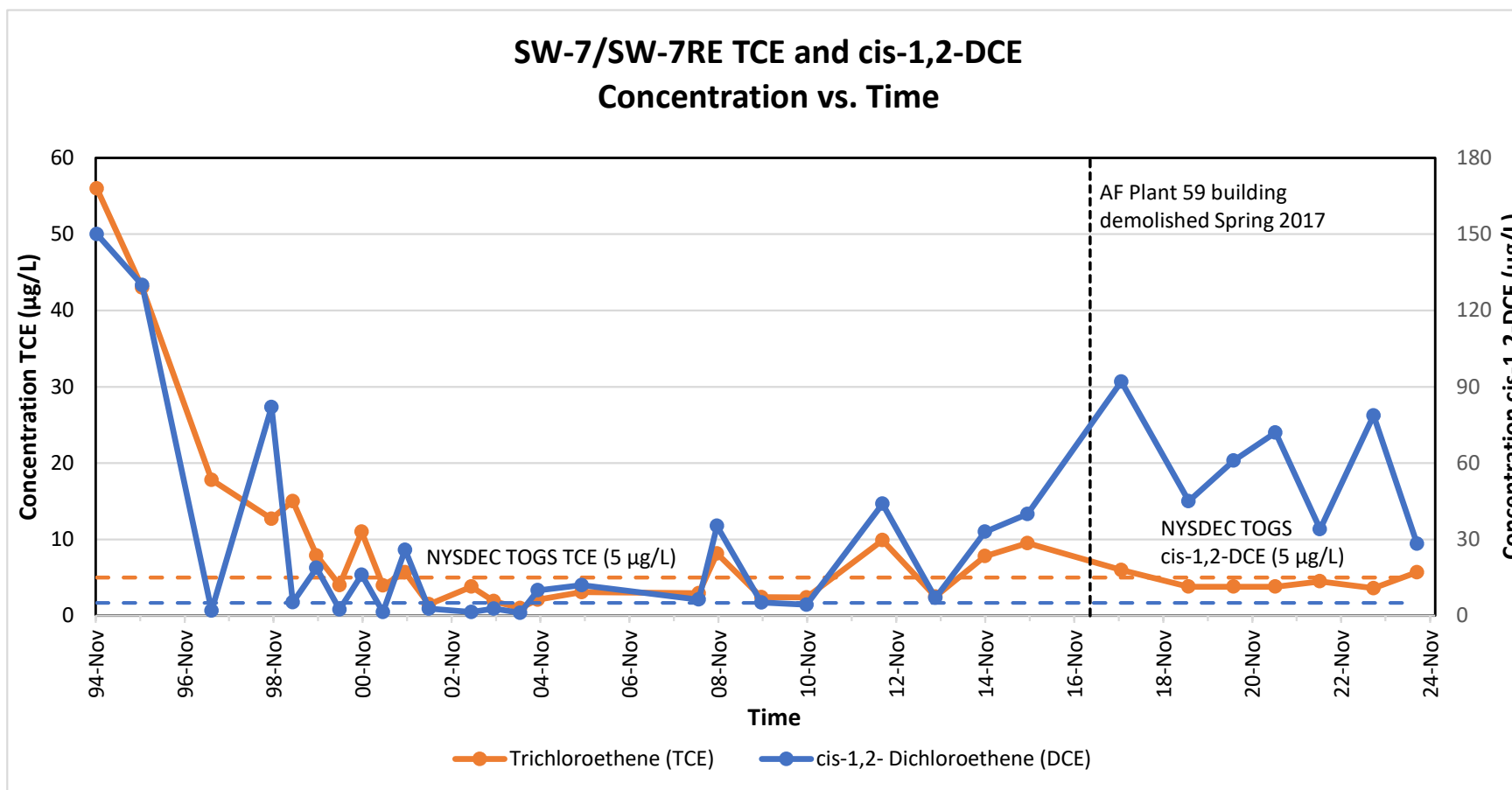
**Figure 6. URS-2D Concentration Over Time - cis-1,2-DCE**  
**Air Force Plant 59**  
**Johnson City, New York**



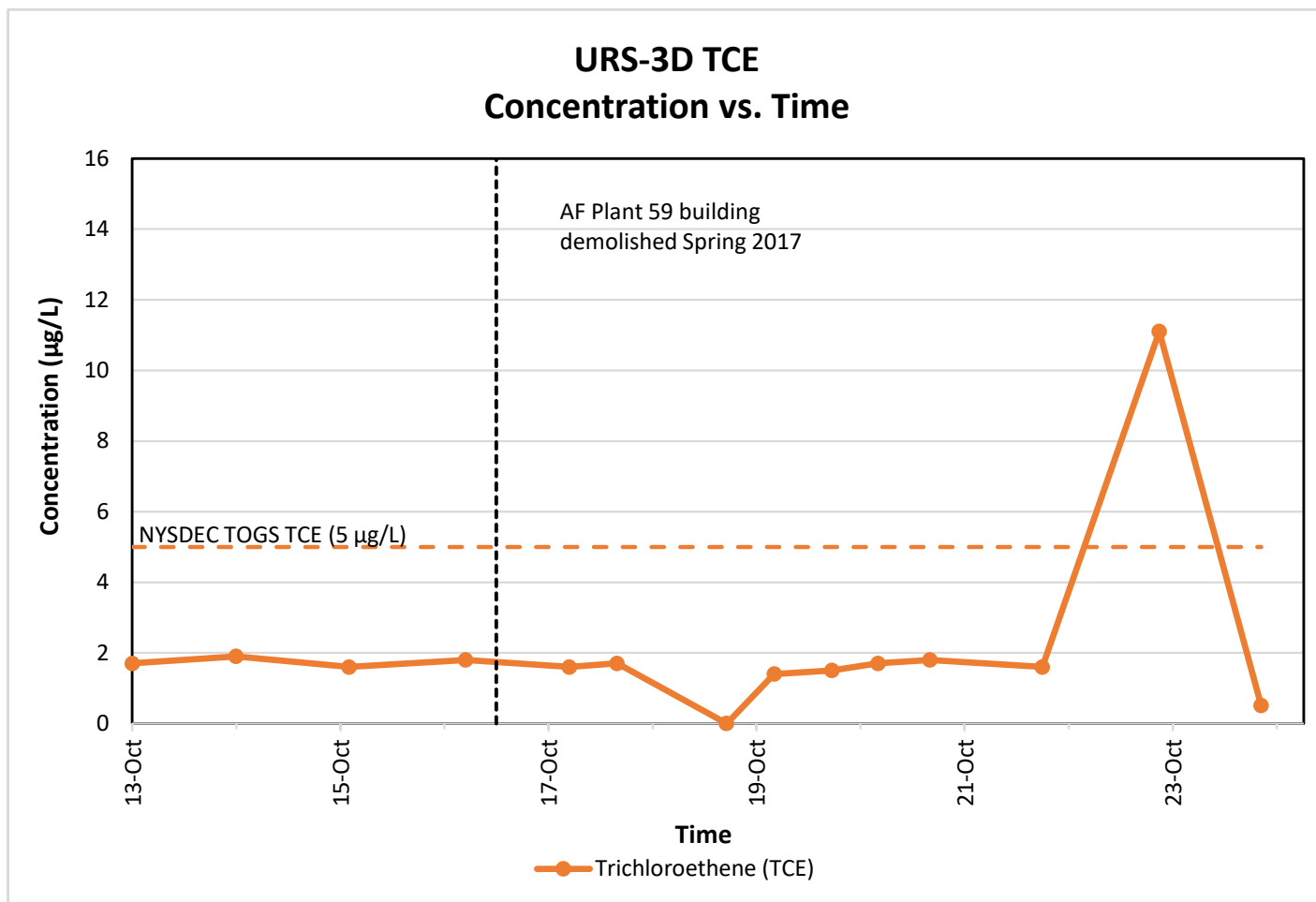
**Figure 7. SW-4/SW-4RE Concentration Over Time - TCE and cis-1,2-DCE**  
**Air Force Plant 59**  
**Johnson City, New York**



**Figure 8. SW-7/SW-7RE Concentration Over Time - TCE and cis-1,2-DCE**  
**Air Force Plant 59**  
**Johnson City, New York**



**Figure 9. URS-3D Concentration Over Time - TCE**  
**Air Force Plant 59**  
**Johnson City, New York**



# Appendix A

## Field Forms

# GROUNDWATER SAMPLING LOG

Project No. 30036646 0000

Well ID

DW-3

Date

Page 1 of 1

8/6/24

Project Name/Location: Northeast ORC AFP 59 / Johnson City, NY

Weather

80°F, Overcast

Measuring Pt. Description

TOC

Screen Setting (ft-bmp)

Casing Diameter (in.)

4

Well Material

☒ PVC  
☐ SS

Static Water Level (ft-bmp)

17.80

Total Depth (ft-bmp)

87.67

Water Column/ Gallons in Well

69.87/45.41

MP Elevation

Pump Intake (ft-bmp)

-85

Purge Method: Bladder pump

Sample Method

Bladder pump

Pump On/Off

0855/0955

Volumes Purged

0.0340

Centrifugal  
Submersible  
Other

Sample Time Label Start End

0945

Replicate/ Code No.

Sampled by

K. Barber

| Time | Minutes Elapsed | Rate (gpm) (mL/min) | Depth to Water (ft) | Gallons Purged | pH   | Cond. (mMhos) (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp. (°C) (°F) | Redox (mV) | Appearance |      |
|------|-----------------|---------------------|---------------------|----------------|------|-----------------------|-----------------|-------------------------|-----------------|------------|------------|------|
|      |                 |                     |                     |                |      |                       |                 |                         |                 |            | Color      | Odor |
| 0855 | 0               | -                   | 17.80               | 0.0            | 7.80 | 1.55                  | 0.0             | 8.23                    | 15.47           | 80         | color      | odor |
| 0900 | 5               | 200                 | 17.81               | 0.2            | 7.72 | 1.56                  | 0.5             | 5.49                    | 14.21           | 11         | 11         | 11   |
| 0905 | 10              | 200                 | 17.83               | 0.4            | 7.60 | 1.57                  | 32.4            | 1.30                    | 13.68           | -73        | 11         | 11   |
| 0910 | 15              | 200                 | 17.84               | 0.6            | 7.04 | 1.57                  | 12.6            | 0.78                    | 13.36           | -103       | 11         | 11   |
| 0915 | 20              | 200                 | 17.84               | 0.8            | 6.92 | 1.56                  | 3.8             | 0.65                    | 13.99           | -110       | 11         | 11   |
| 0920 | 25              | 200                 | 17.84               | 1.0            | 6.89 | 1.56                  | 3.9             | 0.65                    | 14.42           | -112       | 11         | 11   |
| 0925 | 30              | 200                 | 17.84               | 1.2            | 6.87 | 1.56                  | 4.0             | 0.65                    | 14.51           | -112       | 11         | 11   |
| 0930 | 35              | 200                 | 17.85               | 1.4            | 6.86 | 1.56                  | 4.3             | 0.63                    | 14.59           | -112       | 11         | 11   |
| 0935 | 40              | 200                 | 17.85               | 1.6            | 6.86 | 1.55                  | 4.4             | 0.63                    | 14.66           | -115       | 11         | 11   |
| 0940 | 45              | 200                 | 17.85               | 1.8            | 6.86 | 1.55                  | 4.1             | 0.62                    | 14.63           | -119       | 11         | 11   |
| 0945 |                 |                     |                     |                |      |                       |                 |                         |                 |            |            |      |
|      |                 |                     |                     |                |      |                       |                 |                         |                 |            |            |      |
|      |                 |                     |                     |                |      |                       |                 |                         |                 |            |            |      |
|      |                 |                     |                     |                |      |                       |                 |                         |                 |            |            |      |
|      |                 |                     |                     |                |      |                       |                 |                         |                 |            |            |      |
|      |                 |                     |                     |                |      |                       |                 |                         |                 |            |            |      |
|      |                 |                     |                     |                |      |                       |                 |                         |                 |            |            |      |
|      |                 |                     |                     |                |      |                       |                 |                         |                 |            |            |      |
|      |                 |                     |                     |                |      |                       |                 |                         |                 |            |            |      |
|      |                 |                     |                     |                |      |                       |                 |                         |                 |            |            |      |
|      |                 |                     |                     |                |      |                       |                 |                         |                 |            |            |      |
|      |                 |                     |                     |                |      |                       |                 |                         |                 |            |            |      |
|      |                 |                     |                     |                |      |                       |                 |                         |                 |            |            |      |

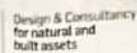
| Constituents Sampled | Container    | Number | Preservative   |
|----------------------|--------------|--------|----------------|
| VOCs                 | 40 mL VOA    | 3      | ASC+HCl or HCl |
| 1,4-Dioxane          | 250 mL amber | 2      | None           |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |

## Well Casing Volumes

|              |              |             |             |             |           |
|--------------|--------------|-------------|-------------|-------------|-----------|
| Gallons/Foot | 1" = 0.04    | 1.5" = 0.09 | 2.5" = 0.26 | 3.5" = 0.50 | 6" = 1.47 |
|              | 1.25" = 0.06 | 2" = 0.16   | 3" = 0.37   | 4" = 0.65   |           |

## Well Information

|                    |                        |                           |                                                                       |
|--------------------|------------------------|---------------------------|-----------------------------------------------------------------------|
| Well Location:     | Johnson City, NY       | Well Locked at Arrival:   | <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No |
| Condition of Well: | Good                   | Well Locked at Departure: | <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No |
| Well Completion:   | Flush Mount / Stick Up | Key Number To Well:       | NYSEG                                                                 |



DW-9

Page 1 of 1

Page 1 of 1  
08/05/2024  
800 554 442

~~PVC~~  
SS

~~46.20~~ 71.08/46.20

### Sample

Method Bladder pump

Sampled by

NYSEB

# GROUNDWATER SAMPLING LOG

Project No. 30036646 0000

Well ID SW-4RE

Date

Page 1 of 1

8/6/24

Project Name/Location: Northeast ORC AFP 59 / Johnson City, NY

Weather

80°F, 2000h

Measuring Pt.  
Description

JOC

Screen

Setting (ft-bmp)

Casing

2

Diameter (in.)

Well Material

☒ PVC  
☐ SS

Static Water  
Level (ft-bmp)

12.98

Total Depth (ft-bmp)

31.14

Water Column/  
Gallons in Well

18.16/2.91

MP Elevation

Pump Intake (ft-bmp)

27

Purge Method: Bladder pump

Sample Method

Bladder pump

Pump On/Off

1010/1110

Volumes Purged

0.62

Centrifugal  
Submersible  
Other

Sample Time: Label  
Start  
End

1100

Replicate/  
Code No.

SW-4REMS/SW-4RED

Sampled by

K. Barber

| Time | Minutes Elapsed | Rate (gpm) (mL/min) | Depth to Water (ft) | Gallons Purged | pH   | Cond (mMhos) (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) (°F) | Redox (mV) | Appearance |          |
|------|-----------------|---------------------|---------------------|----------------|------|----------------------|-----------------|-------------------------|----------------|------------|------------|----------|
|      |                 |                     |                     |                |      |                      |                 |                         |                |            | Color      | Odor     |
| 1010 | 0               | —                   | 12.98               | 0.0            | 7.00 | 0.765                | 128             | 8.37                    | 12.67          | -99        | Colorless  | Odorless |
| 1015 | 5               | 200                 | 13.05               | 0.1            | 6.99 | 0.753                | 108             | 8.84                    | 11.89          | -95        | "          | "        |
| 1020 | 10              | 200                 | 13.14               | 0.4            | 6.98 | 0.747                | 147             | 9.09                    | 11.47          | -91        | "          | "        |
| 1025 | 15              | 200                 | 13.19               | 0.6            | 6.77 | 0.748                | 122             | 8.04                    | 11.89          | -79        | "          | "        |
| 1030 | 20              | 200                 | 13.22               | 0.8            | 6.94 | 0.824                | 89.5            | 8.77                    | 11.65          | -77        | "          | 2/       |
| 1035 | 25              | 200                 | 13.24               | 1.0            | 6.97 | 0.886                | 50.5            | 8.82                    | 11.70          | -75        | "          | "        |
| 1040 | 30              | 200                 | 13.25               | 1.2            | 6.99 | 0.901                | 42.1            | 8.90                    | 11.74          | -72        | "          | (1)      |
| 1045 | 35              | 200                 | 13.25               | 1.4            | 7.02 | 0.933                | 41.5            | 8.95                    | 11.73          | -73        | "          | "        |
| 1050 | 40              | 200                 | 13.25               | 1.6            | 7.04 | 0.942                | 41.9            | 8.98                    | 11.73          | -74        | "          | "        |
| 1055 | 45              | 200                 | 13.25               | 1.8            | 7.05 | 0.939                | 40.9            | 8.99                    | 11.73          | -71        | "          | "        |
| 1100 |                 |                     |                     |                |      |                      |                 |                         |                |            |            |          |
|      |                 |                     |                     |                |      |                      |                 |                         |                |            |            |          |
|      |                 |                     |                     |                |      |                      |                 |                         |                |            |            |          |
|      |                 |                     |                     |                |      |                      |                 |                         |                |            |            |          |
|      |                 |                     |                     |                |      |                      |                 |                         |                |            |            |          |
|      |                 |                     |                     |                |      |                      |                 |                         |                |            |            |          |
|      |                 |                     |                     |                |      |                      |                 |                         |                |            |            |          |
|      |                 |                     |                     |                |      |                      |                 |                         |                |            |            |          |
|      |                 |                     |                     |                |      |                      |                 |                         |                |            |            |          |
|      |                 |                     |                     |                |      |                      |                 |                         |                |            |            |          |
|      |                 |                     |                     |                |      |                      |                 |                         |                |            |            |          |
|      |                 |                     |                     |                |      |                      |                 |                         |                |            |            |          |

| Constituents Sampled | Container    | Number | Preservative   |
|----------------------|--------------|--------|----------------|
| VOCs                 | 40 mL VOA    | 3      | ASC+HCl or HCl |
| 1,4-Dioxane          | 250 mL amber | 2      | None           |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |

## Well Casing Volumes

|              |              |             |             |             |           |
|--------------|--------------|-------------|-------------|-------------|-----------|
| Gallons/Foot | 1" = 0.04    | 1.5" = 0.09 | 2.5" = 0.26 | 3.5" = 0.50 | 6" = 1.47 |
|              | 1.25" = 0.06 | 2" = 0.16   | 3" = 0.37   | 4" = 0.85   |           |

## Well Information

|                    |                         |                           |            |   |    |
|--------------------|-------------------------|---------------------------|------------|---|----|
| Well Location:     | <u>Johnson City, NY</u> | Well Locked at Arrival:   | <u>Yes</u> | / | No |
| Condition of Well: | <u>Good</u>             | Well Locked at Departure: | <u>Yes</u> | / | No |
| Well Completion:   | <u>Flush Mount</u>      | Key Number To Well:       | <u>N/A</u> |   |    |

## GROUNDWATER SAMPLING LOG

Project No. 30036646 0000

Well ID

SW-7RE

Page 1 of 3

Date

08/06/24

Project Name/Location: Northeast ORC AFP 59 / Johnson City, NY

Weather

80°F, Overcast

Measuring Pt. Description

JOL

Screen

Setting (ft-bmp)

Casing

Diameter (in)

2"

Well Material

X PVC

SS

Static Water Level (ft-bmp)

17.6

Total Depth (ft-bmp)

27.65

Water Column/

Gallons in Well

9.54/1.53

MP Elevation

Pump Intake (ft-bmp)

~25

Purge Method: Bladder pump

Sample

Method

Bladder pump

Pump On/Off

1125

Volumes Purged

4.97

Centrifugal

Submersible

Other

Sample Time:

Label

1440

Replicate/

Start

1440

Code No.

End

1450

Sampled by

JK

| Time | Minutes Elapsed | Rate (gpm) (mL/min) | Depth to Water (ft) | Gallons Purged | pH   | Cond (mMhos) (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) (°F) | Redox (mV) | Appearance |      |
|------|-----------------|---------------------|---------------------|----------------|------|----------------------|-----------------|-------------------------|----------------|------------|------------|------|
|      |                 |                     |                     |                |      |                      |                 |                         |                |            | Color      | Odor |
| 1130 | 0               | 1.50                | 17.61               | 0.0            | 6.10 | 1.48                 | 328             | 6.47                    | 16.31          | 133        |            |      |
| 1135 | 5               | 1.0                 | 17.55               | 0.2            | 6.53 | 1.45                 | 500             | 9.31                    | 15.72          | 143        |            |      |
| 1140 | 10              | 1.5                 | 17.49               | 0.4            | 6.63 | 0.739                | 482             | 9.09                    | 15.38          | 139        |            |      |
| 1145 | 15              | 2.0                 | 17.42               | 0.6            | 6.65 | 2.149                | 473             | 10.78                   | 12.80          | 155        |            |      |
| 1150 | 20              | 2.5                 | 17.40               | 0.8            | 6.78 | 1.56                 | 582             | 10.43                   | 10.52          | 153        |            |      |
| 1155 | 25              | 3.0                 | 17.43               | 1.0            | 6.66 | 1.59                 | 602             | 10.52                   | 10.57          | 158        |            |      |
| 1200 | 30              | 3.5                 | 17.44               | 1.2            | 6.65 | 1.60                 | 601             | 8.52                    | 10.20          | 160        |            |      |
| 1205 | 35              | 4.0                 | 17.46               | 1.4            | 6.55 | 1.61                 | 400             | 8.61                    | 10.25          | 167        |            |      |
| 1210 | 40              | 4.5                 | 17.46               | 1.6            | 6.58 | 1.62                 | 320             | 8.69                    | 10.30          | 164        |            |      |
| 1215 | 45              | 5.0                 | 17.46               | 1.8            | 6.63 | 1.60                 | 220             | 8.53                    | 10.55          | 163        |            |      |
| 1220 | 50              | 5.5                 | 17.46               | 2.0            | 6.65 | 1.63                 | 180             | 8.93                    | 10.13          | 161        |            |      |
| 1225 | 55              | 6.0                 | 17.46               | 2.2            | 6.57 | 1.64                 | 190             | 8.38                    | 10.46          | 162        |            |      |
| 1230 | 60              | 6.5                 | 17.48               | 2.4            | 6.57 | 1.65                 | 159             | 8.37                    | 10.22          | 164        |            |      |
| 1235 | 65              | 7.0                 | 17.44               | 2.6            | 6.56 | 1.66                 | 223             | 8.37                    | 9.80           | 168        |            |      |
| 1240 | 70              | 7.5                 | 17.48               | 2.8            | 6.55 | 1.66                 | 177             | 7.83                    | 9.95           | 169        |            |      |
| 1245 | 75              | 8.0                 | 17.48               | 3.0            |      |                      |                 |                         |                |            |            |      |

| Constituents Sampled | Container    | Number | Preservative     |
|----------------------|--------------|--------|------------------|
| VOCs                 | 40 mL VOA    | 3      | ASC+HCl or (HCl) |
| 1,4-Dioxane          | 250 mL amber | 2      | None             |
|                      |              |        |                  |
|                      |              |        |                  |
|                      |              |        |                  |
|                      |              |        |                  |
|                      |              |        |                  |
|                      |              |        |                  |
|                      |              |        |                  |

### Well Casing Volumes

|              |              |             |             |             |           |
|--------------|--------------|-------------|-------------|-------------|-----------|
| Gallons/Foot | 1" = 0.04    | 1.5" = 0.09 | 2.5" = 0.26 | 3.5" = 0.50 | 6" = 1.47 |
|              | 1.25" = 0.06 | 2" = 0.16   | 3" = 0.37   | 4" = 0.65   |           |

### Well Information

|                    |                        |                           |     |   |    |
|--------------------|------------------------|---------------------------|-----|---|----|
| Well Location:     |                        | Well Locked at Arrival:   | Yes | / | No |
| Condition of Well: |                        | Well Locked at Departure: | Yes | / | No |
| Well Completion:   | Flush Mount / Stick Up | Key Number To Well:       |     |   |    |

# GROUNDWATER SAMPLING LOG

Page 2 of 3

Project No. 30036646 0000

Well ID SW-7RE

Date \_\_\_\_\_

Project Name/Location: Northeast ORC AFP 59 / Johnson City, NY

Weather \_\_\_\_\_

Measuring Pt.  
Description \_\_\_\_\_

Screen  
Setting (ft-bmp) \_\_\_\_\_

Casing  
Diameter (in) \_\_\_\_\_

Well Material X PVC  
SS

Static Water  
Level (ft-bmp) \_\_\_\_\_

Total Depth (ft-bmp) \_\_\_\_\_

Water Column/  
Gallons in Well \_\_\_\_\_

MP Elevation \_\_\_\_\_

Pump Intake (ft-bmp) \_\_\_\_\_

Purge Method: Bladder pump

Sample Method Bladder pump

Pump On/Off \_\_\_\_\_

Volumes Purged \_\_\_\_\_

Centrifugal  
Submersible  
Other \_\_\_\_\_

Sample Time: Label  
Start \_\_\_\_\_  
End \_\_\_\_\_

Replicate/  
Code No. \_\_\_\_\_

Sampled by \_\_\_\_\_

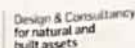
| Time | Minutes Elapsed | Rate (gpm) (mL/min) | Depth to Water (ft) | Gallons Purged | pH   | Cond. (mMhos) (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp. (°C) (°F) | Redox (mV) | Appearance |      |
|------|-----------------|---------------------|---------------------|----------------|------|-----------------------|-----------------|-------------------------|-----------------|------------|------------|------|
|      |                 |                     |                     |                |      |                       |                 |                         |                 |            | Color      | Odor |
| 1250 | 85              | 150                 | 17.48               | 3.2            | 6.58 | 1.65                  | 285             | 4.00                    | 10.22           | 168        |            |      |
| 1255 | 90              | 150                 | 17.50               | 3.4            | 6.57 | 1.65                  | 325             | 7.97                    | 10.38           | 168        |            |      |
| 1300 | 95              | 150                 | 17.49               | 3.6            | 6.56 | 1.63                  | 315             | 8.01                    | 10.52           | 169        |            |      |
| 1305 | 100             | 150                 | 17.44               | 3.8            | 6.55 | 1.65                  | 325             | 8.20                    | 10.44           | 168        |            |      |
| 1310 | 105             | 150                 | 17.49               | 4.0            | 6.54 | 1.63                  | 274             | 7.66                    | 10.89           | 167        |            |      |
| 1315 | 110             | 150                 | 17.49               | 4.2            | 6.55 | 1.62                  | 222             | 7.48                    | 11.00           | 166        |            |      |
| 1320 | 115             | 150                 | 17.49               | 4.4            | 6.56 | 1.63                  | 201             | 7.80                    | 10.66           | 163        |            |      |
| 1325 | 120             | 150                 | 17.49               | 4.6            | 6.57 | 1.65                  | 273             | 7.87                    | 10.17           | 162        |            |      |
| 1330 | 125             | 150                 | 17.49               | 4.8            | 6.58 | 1.67                  | 296             | 8.03                    | 10.20           | 160        |            |      |
| 1335 | 130             | 150                 | 17.49               | 5.0            | 6.57 | 1.67                  | 181             | 8.55                    | 10.18           | 158        |            |      |
| 1340 | 135             | 150                 | 17.49               | 5.2            | 6.58 | 1.67                  | 159             | 7.68                    | 10.18           | 156        |            |      |
| 1345 | 140             | 150                 | 17.49               | 5.4            | 6.55 | 1.65                  | 178             | 7.65                    | 10.57           | 155        |            |      |
| 1350 | 145             | 150                 | 17.49               | 5.6            | 6.56 | 1.63                  | 81.6            | 7.74                    | 10.47           | 152        |            |      |
| 1355 | 145             | 150                 | 17.49               | 5.8            | 6.56 | 1.63                  | 117             | 7.74                    | 10.53           | 142        |            |      |
| 1400 | 150             | 150                 | 17.49               | 6.0            | 6.53 | 1.66                  | 106             | 7.75                    | 10.42           | 132        |            |      |
| 1405 | 155             | 150                 | 17.49               | 6.2            | 6.61 | 1.68                  | 90.8            | 7.35                    | 10.40           | 127        |            |      |

| Constituents Sampled | Container    | Number | Preservative   |
|----------------------|--------------|--------|----------------|
| VOCs                 | 40 mL VOA    | 3      | ASC+HCl or HCl |
| 1,4-Dioxane          | 250-mL amber | 2      | None           |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |

| Well Casing Volumes |              |             |             |             |           |
|---------------------|--------------|-------------|-------------|-------------|-----------|
| Gallons/Foot        | 1" = 0.04    | 1.5" = 0.09 | 2.5" = 0.26 | 3.5" = 0.50 | 6" = 1.47 |
|                     | 1.25" = 0.06 | 2" = 0.16   | 3" = 0.37   | 4" = 0.65   |           |

## Well Information

|                                         |                                    |
|-----------------------------------------|------------------------------------|
| Well Location: _____                    | Well Locked at Arrival: Yes / No   |
| Condition of Well: _____                | Well Locked at Departure: Yes / No |
| Well Completion: Flush Mount / Stick Up | Key Number To Well: _____          |



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Well ID

SW-7RE

Date \_\_\_\_\_

## Weather

Well Material — PVC  
SS

Project Name/Location: Northeast ORC AFP 59 / Johnson City, NY

|               |                   |
|---------------|-------------------|
| Measuring Pt. | Screen            |
| Description   | Setting (ft.-bmp) |

Casing  
Diameter (in.)

Static Water  
Level (ft-bmp)      Total Depth (ft-bmp)

~~Water Column/  
Gallons in Well~~

MP Elevation Pump Intake (ft-bmp)

Purge Method: Bladder pump

|               |                     |
|---------------|---------------------|
| Sample Method | <u>Bladder pump</u> |
|---------------|---------------------|

|             |                |
|-------------|----------------|
| Pump On/Off | Volumes Purged |
|-------------|----------------|

Centrifugal  
Submersible  
Other

Sample Time: Label \_\_\_\_\_ Replicate/  
Start \_\_\_\_\_ Code No.  
End \_\_\_\_\_

Sampled by

[illegible][illegible]

| Well Casing Volumes |              |             |             |             |           |
|---------------------|--------------|-------------|-------------|-------------|-----------|
| Gallons/Foot        | 1" = 0.04    | 1.5" = 0.09 | 2.5" = 0.26 | 3.5" = 0.50 | 6" = 1.47 |
|                     | 1.25" = 0.06 | 2" = 0.16   | 3" = 0.37   | 4" = 0.65   |           |

### Well Information

Well Location: \_\_\_\_\_  
Condition of Well: \_\_\_\_\_  
Well Completion: \_\_\_\_\_ Flush Mount / \_\_\_\_\_ Stick Up

|                           |     |   |    |
|---------------------------|-----|---|----|
| Well Locked at Arrival:   | Yes | / | No |
| Well Locked at Departure: | Yes | / | No |
| Key Number To Well:       |     |   |    |



# GROUNDWATER SAMPLING LOG

Project No. 30036646.0000

Well ID URS-20

Page 1 of 1  
Date 8/6/14

Project Name/Location: Northeast ORC AFP 59 / Johnson City, NY

Weather 80°F, overcast

Measuring Pt. Description TOL

Screen Setting (ft-bmp) \_\_\_\_\_

Casing Diameter (in.) 2

Well Material PVC  
SS

Static Water Level (ft-bmp) 30.93

Total Depth (ft-bmp) 890.50

Water Column/ Gallons in Well 59.57 / 9.53

MP Elevation \_\_\_\_\_

Pump Intake (ft-bmp) ~87

Purge Method: Bladder pump

Sample Method Bladder pump

Pump On/Off 1530/1650

Volumes Purged 0.77

Centrifugal \_\_\_\_\_  
Submersible \_\_\_\_\_  
Other \_\_\_\_\_

Sample Time: Label 640  
Start \_\_\_\_\_  
End \_\_\_\_\_

Replicate/ Code No. \_\_\_\_\_

Sampled by K. Berke

| Time | Minutes Elapsed | Rate (gpm) (mL/min) | Depth to Water (ft) | Gallons Purged | pH   | Cond. (mMhos) (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) (°F) | Redox (mV) | Appearance |        |
|------|-----------------|---------------------|---------------------|----------------|------|-----------------------|-----------------|-------------------------|----------------|------------|------------|--------|
|      |                 |                     |                     |                |      |                       |                 |                         |                |            | Color      | Odor   |
| 1530 | 0               | —                   | 30.93               | 2.0            | 6.75 | 0.447                 | 837             | 3.56                    | 23.02          | 75         | Brown      | absent |
| 1535 | 5               | 200                 | 30.93               | 0.2            | 7.27 | 0.520                 | 489             | 0.86                    | 22.72          | -75        | 11         | 11     |
| 1540 | 10              | 200                 | 30.93               | 0.4            | 7.15 | 0.697                 | 411             | 0.84                    | 21.93          | -51        | 1.8        | 11     |
| 1545 | 15              | 200                 | 30.93               | 0.6            | 7.07 | 0.852                 | 384             | 0.83                    | 21.43          | -14        | 11         | 11     |
| 1550 | 20              | 200                 | 30.93               | 0.8            | 7.05 | 0.849                 | 117             | 0.88                    | 20.81          | -109       | 11         | 11     |
| 1555 | 25              | 200                 | 30.93               | 1.0            | 7.05 | 1.02                  | 124             | 0.41                    | 19.87          | -119       | 11         | 11     |
| 1600 | 30              | 200                 | 30.93               | 1.2            | 7.04 | 1.10                  | 110             | 0.44                    | 19.11          | -115       | 11         | 11     |
| 1605 | 35              | 200                 | 30.93               | 1.4            | 7.03 | 1.31                  | 102             | 0.50                    | 18.83          | -132       | 11         | 11     |
| 1610 | 40              | 200                 | 30.93               | 1.6            | 7.03 | 1.46                  | 846             | 0.81                    | 18.47          | -169       | 11         | 11     |
| 1615 | 45              | 200                 | 30.93               | 1.8            | 6.95 | 1.44                  | 59.7            | 0.24                    | 18.43          | -185       | 11         | 11     |
| 1620 | 50              | 200                 | 30.93               | 2.0            | 6.88 | 1.45                  | 39.6            | 0.18                    | 18.22          | -188       | 11         | 11     |
| 1625 | 55              | 200                 | 30.93               | 2.2            | 6.86 | 1.46                  | 32.9            | 0.12                    | 18.03          | -185       | 11         | 11     |
| 1630 | 60              | 200                 | 30.93               | 2.4            | 6.88 | 1.44                  | 36.8            | 0.21                    | 18.07          | -189       | 11         | 11     |
| 1635 | 65              | 200                 | 30.93               | 2.6            | 6.89 | 1.44                  | 36.2            | 0.20                    | 17.98          | -190       | 11         | 11     |
| 1640 |                 |                     |                     |                |      |                       |                 |                         |                |            |            |        |

| Constituents Sampled | Container    | Number | Preservative   |
|----------------------|--------------|--------|----------------|
| VOCs                 | 40 mL VOA    | 3      | ASC+HCl or HCl |
| 1,4-Dioxane          | 250 mL amber | 2      | None           |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |

| Well Casing Volumes |              |             |             |             |           |
|---------------------|--------------|-------------|-------------|-------------|-----------|
| Gallons/Foot        | 1" = 0.04    | 1.5" = 0.09 | 2.5" = 0.26 | 3.5" = 0.50 | 6" = 1.47 |
|                     | 1.25" = 0.06 | 2" = 0.16   | 3" = 0.37   | 4" = 0.65   |           |

## Well Information

|                    |                         |                           |            |   |    |
|--------------------|-------------------------|---------------------------|------------|---|----|
| Well Location:     | <u>Johnson City, NY</u> | Well Locked at Arrival:   | <u>Yes</u> | / | No |
| Condition of Well: | <u>Good</u>             | Well Locked at Departure: | <u>Yes</u> | / | No |
| Well Completion:   | <u>Flush Mount</u>      | Key Number To Well:       | <u>N/A</u> |   |    |

# GROUNDWATER SAMPLING LOG

Project No. 30036646.0000

Well ID URS-25

Page 1 of 1  
Date 8/17/24

Project Name/Location: Northeast ORC AFP 59 / Johnson City, NY

Weather GS, overcast

Measuring Pt. Description TOX

Screen Setting (ft-bmp) \_\_\_\_\_

Casing Diameter (in) 2

Well Material ☒ PVC ☐ SS

Static Water Level (ft-bmp) 30.92

Total Depth (ft-bmp) 58.25

Water Column/ Gallons in Well 27.33 / 4.38

MP Elevation \_\_\_\_\_

Pump Intake (ft-bmp) ~56

Purge Method: Bladder pump

Sample Method Bladder pump

Pump On/Off 0835 / 1030

Volumes Purged 0.37

Centrifugal  
Submersible  
Other \_\_\_\_\_

Sample Time: Label 1020  
Start \_\_\_\_\_  
End \_\_\_\_\_

Replicate/  
Code No. \_\_\_\_\_

Sampled by K. Barber

| Time | Minutes Elapsed | Rate (gpm) (mL/min) | Depth to Water (ft) | Gallons Purged | pH   | Cond (mMhos) (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp. (°C) (°F) | Redox (mV) | Appearance  |          |
|------|-----------------|---------------------|---------------------|----------------|------|----------------------|-----------------|-------------------------|-----------------|------------|-------------|----------|
|      |                 |                     |                     |                |      |                      |                 |                         |                 |            | Color       | Odor     |
| 0935 | 0               | -                   | 30.92               | 0.0            | 7.83 | 0.567                | 431             | 10.38                   | 16.77           | 68         | Light Brown | Odorless |
| 0940 | 5               | 200                 | 30.94               | 0.2            | 7.47 | 0.001                | 269             | 9.12                    | 16.59           | 84         | "           | "        |
| 0945 | 10              | 200                 | 30.96               | 0.4            | 6.81 | 1.24                 | 183             | 0.94                    | 13.44           | -81        | "           | "        |
| 0950 | 15              | 200                 | 30.97               | 0.6            | 6.63 | 1.27                 | 141             | 0.90                    | 12.11           | -70        | "           | "        |
| 0955 | 20              | 200                 | 30.98               | 0.8            | 6.43 | 1.29                 | 78.9            | 1.26                    | 11.69           | -36        | clear       | "        |
| 1000 | 25              | 200                 | 30.98               | 1.0            | 6.37 | 1.29                 | 67.3            | 1.37                    | 11.61           | -31        | "           | "        |
| 1005 | 30              | 200                 | 30.98               | 1.2            | 6.35 | 1.30                 | 49.3            | 1.46                    | 11.58           | -27        | "           | "        |
| 1010 | 35              | 200                 | 30.98               | 1.4            | 6.34 | 1.30                 | 42.5            | 1.48                    | 11.57           | -25        | "           | "        |
| 1015 | 40              | 200                 | 30.98               | 1.6            | 6.33 | 1.30                 | 42.0            | 1.55                    | 11.56           | -19        | "           | "        |
| 1020 |                 |                     |                     |                |      |                      |                 |                         |                 |            |             |          |
|      |                 |                     |                     |                |      |                      |                 |                         |                 |            |             |          |
|      |                 |                     |                     |                |      |                      |                 |                         |                 |            |             |          |
|      |                 |                     |                     |                |      |                      |                 |                         |                 |            |             |          |
|      |                 |                     |                     |                |      |                      |                 |                         |                 |            |             |          |
|      |                 |                     |                     |                |      |                      |                 |                         |                 |            |             |          |
|      |                 |                     |                     |                |      |                      |                 |                         |                 |            |             |          |
|      |                 |                     |                     |                |      |                      |                 |                         |                 |            |             |          |
|      |                 |                     |                     |                |      |                      |                 |                         |                 |            |             |          |
|      |                 |                     |                     |                |      |                      |                 |                         |                 |            |             |          |
|      |                 |                     |                     |                |      |                      |                 |                         |                 |            |             |          |
|      |                 |                     |                     |                |      |                      |                 |                         |                 |            |             |          |
|      |                 |                     |                     |                |      |                      |                 |                         |                 |            |             |          |

| Constituents Sampled | Container    | Number | Preservative   |
|----------------------|--------------|--------|----------------|
| VOCs                 | 40 mL VOA    | 3      | ASC+HCl or HCl |
| 1,4-Dioxane          | 250 mL amber | 2      | None           |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |

| Well Casing Volumes |              |             |             |             |
|---------------------|--------------|-------------|-------------|-------------|
| Gallons/Foot        | 1" = 0.04    | 1.5" = 0.09 | 2.5" = 0.26 | 3.5" = 0.50 |
|                     | 1.25" = 0.06 | 2" = 0.16   | 3" = 0.37   | 4" = 0.65   |
|                     |              |             |             | 6" = 1.47   |

## Well Information

|                    |                               |                           |                                         |                             |
|--------------------|-------------------------------|---------------------------|-----------------------------------------|-----------------------------|
| Well Location:     | <u>Johnson City, NY</u>       | Well Locked at Arrival:   | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Condition of Well: | <u>Good</u>                   | Well Locked at Departure: | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Well Completion:   | <u>Flush Mount / Stick Up</u> | Key Number To Well:       | <u>N/A</u>                              |                             |

## GROUNDWATER SAMPLING LOG

Project No. 30036646 0000

Well ID

URS-3D

Date

Page 1 of 1

8/6/24

Project Name/Location: Northeast ORC AFP 59 / Johnson City, NY

Weather

80°F, overcast

 Measuring Pt.  
Description

TOL

Screen

Setting (ft-bmp)

Casing

Diameter (in.)

2

Well Material

PVC

SS

 Static Water  
Level (ft-bmp)

35.71

Total Depth (ft-bmp)

86.67

Water Column/

Gallons in Well

5216/8.15

MP Elevation

Pump Intake (ft-bmp)

~84

Purge Method: Bladder pump

Sample

Method

Bladder pump

Pump On/Off

1135/1310

Volumes Purged

0.37

Centrifugal

Submersible

Other

Sample Time: Label

1255

Replicate/

Code No.

URS-3DC

Sampled by

K. Bunker

| Time | Minutes Elapsed | Rate (gpm) (mL/min) | Depth to Water (ft) | Gallons Purged | pH   | Cond. (mMhos) (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp. (°C) (°F) | Redox (mV) | Appearance |          |
|------|-----------------|---------------------|---------------------|----------------|------|-----------------------|-----------------|-------------------------|-----------------|------------|------------|----------|
|      |                 |                     |                     |                |      |                       |                 |                         |                 |            | Color      | Odor     |
| 1135 | 0               | —                   | 35.71               | 0.0            | 2.01 | 1.64                  | 167             | 4.02                    | 12.01           | 57         | Colorless  | Odorless |
| 1140 | 5               | 200                 | 35.71               | 0.2            | 6.94 | 1.63                  | 140             | 3.12                    | 12.39           | 67         | 11         | 11       |
| 1145 | 10              | 200                 | 35.72               | 0.4            | 6.89 | 1.60                  | 128             | 2.42                    | 12.62           | 74         | 11         | 11       |
| 1150 | 15              | 200                 | 35.72               | 0.6            | 6.87 | 1.60                  | 117             | 1.99                    | 15.38           | 58         | 11         | 11       |
| 1155 | 20              | 200                 | 35.73               | 0.8            | 6.83 | 1.61                  | 105             | 1.85                    | 14.51           | 41         | 11         | 11       |
| 1200 | 25              | 200                 | 35.73               | 1.0            | 6.76 | 1.61                  | 98.7            | 1.80                    | 14.13           | 28         | 11         | 11       |
| 1205 | 30              | 200                 | 35.73               | 1.2            | 6.76 | 1.61                  | 111             | 1.77                    | 14.20           | 4          | 11         | 11       |
| 1210 | 35              | 200                 | 35.73               | 1.4            | 6.77 | 1.61                  | 124             | 1.74                    | 14.27           | -18        | 11         | 11       |
| 1215 | 40              | 200                 | 35.73               | 1.6            | 6.77 | 1.60                  | 84.3            | 1.74                    | 14.31           | -19        | 11         | 11       |
| 1220 | 45              | 200                 | 35.73               | 1.8            | 6.78 | 1.60                  | 68.9            | 1.73                    | 14.46           | -19        | 11         | 11       |
| 1225 | 50              | 200                 | 35.73               | 2.0            | 6.78 | 1.60                  | 60.3            | 1.75                    | 14.33           | -20        | 11         | 11       |
| 1230 | 55              | 200                 | 35.73               | 2.2            | 6.79 | 1.60                  | 52.4            | 1.76                    | 14.27           | -20        | 11         | 11       |
| 1235 | 60              | 200                 | 35.73               | 2.4            | 6.79 | 1.60                  | 51.3            | 1.77                    | 14.16           | -20        | 11         | 11       |
| 1240 | 65              | 200                 | 35.73               | 2.6            | 6.80 | 1.61                  | 48.5            | 1.80                    | 14.11           | -20        | 11         | 11       |
| 1245 | 70              | 200                 | 35.73               | 2.8            | 6.80 | 1.61                  | 44.3            | 1.81                    | 14.10           | -20        |            |          |
| 1250 | 75              | 200                 | 35.73               | 3.0            | 6.81 | 1.61                  | 43.8            | 1.81                    | 14.07           | -20        |            |          |

| Constituents Sampled | Container    | Number | Preservative   |
|----------------------|--------------|--------|----------------|
| VOCs                 | 40 mL VOA    | 3      | ASC+HCl or HCl |
| 1,4-Dioxane          | 250 mL amber | 2      | None           |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |
|                      |              |        |                |

## Well Casing Volumes

Gallons/Foot

1" = 0.04

1.25" = 0.06

1.5" = 0.09

2" = 0.16

2.5" = 0.26

3" = 0.37

3.5" = 0.50

4" = 0.65

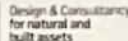
6" = 1.47

## Well Information

|                    |                        |                           |       |   |    |
|--------------------|------------------------|---------------------------|-------|---|----|
| Well Location:     | Johnson City           | Well Locked at Arrival:   | Yes   | / | No |
| Condition of Well: | Good                   | Well Locked at Departure: | Yes   | / | No |
| Well Completion:   | Flush Mount / Stick Up | Key Number To Well:       | NYSEC |   |    |







Page 1 of 1

### Post Treatment

815/24

## Weather

805, 5000

N/A

N/A

N/A

Well Material

PVC

Setting (ft-bmp)

Diameter (in.)

SS

NA

Total Depth (ft-bmp)

Water Column/

N/A

Pump Intake (ft-bmp)

Purge Method: Bladder pump

### Sample

95016

085/0950

### Volumes Purged

Centrifugal

## Method

~~-Bladder pump~~

Label 09501

Replicate/

Start DATE 9/13/2014 Page No. \_\_\_\_\_

Sampled by

by KB

|       |           |
|-------|-----------|
| Start | 0475 0160 |
| End   | 0450 0000 |

Well Location:

Johnson City, NY

### Well Locked at Arrival:

Yes

No. *N71*

Condition of Well:

672

### Well Locked at Departure:

Yes

No. *11*

**Well Completion:**

~~Flush Mount~~

~~Stick Up~~

Key Number To Well:

N/A

# Appendix B

## Laboratory Reports



Main Site: 301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | [www.alsglobal.com](http://www.alsglobal.com)  
Associated Site: 20 Riverside Drive | Spring City, PA 19475 | Phone: 610-948-4903 | Fax: 717-944-1430 |

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618  
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343, NJ PA101

Analytical Results Report For

**ARCADIS US Inc - Clifton Park, NY**

Project AF Plant 59/30036646

Workorder 3372682

Report ID 347489 on 8/20/2024

### Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Aug 08, 2024.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Susan Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

This laboratory report may not be reproduced, except in full, without the written approval of ALS Global.  
ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

**Recipient(s):**

Andy Vitolins - Arcadis  
Erika Denkenberger - Arcadis  
Kyle Barber - Arcadis US Inc  
Carissa Koski - ARCADIS  
Corey Averill - Arcadis  
Suzie Bower - Arcadis US Inc

*Susan Scherer*

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

**Susan Scherer**  
Project Coordinator

(ALS Digital Signature)



Sample Summary

| Lab ID     | Sample ID      | Matrix       | Date Collected   | Date Received    | Collector | Collection Company  |
|------------|----------------|--------------|------------------|------------------|-----------|---------------------|
| 3372682001 | DW-9           | Ground Water | 08/05/2024 15:45 | 08/08/2024 08:47 | CBC       | Collected By Client |
| 3372682002 | DW-3           | Ground Water | 08/06/2024 09:45 | 08/08/2024 08:47 | CBC       | Collected By Client |
| 3372682003 | SW-9           | Ground Water | 08/06/2024 10:40 | 08/08/2024 08:47 | CBC       | Collected By Client |
| 3372682004 | SW-4RE         | Ground Water | 08/06/2024 11:00 | 08/08/2024 08:47 | CBC       | Collected By Client |
| 3372682005 | URS-3D         | Ground Water | 08/06/2024 12:55 | 08/08/2024 08:47 | CBC       | Collected By Client |
| 3372682006 | URS-3DC        | Ground Water | 08/06/2024 12:55 | 08/08/2024 08:47 | CBC       | Collected By Client |
| 3372682007 | SW-7RE         | Ground Water | 08/06/2024 14:40 | 08/08/2024 08:47 | CBC       | Collected By Client |
| 3372682008 | URS-2D         | Ground Water | 08/06/2024 16:40 | 08/08/2024 08:47 | CBC       | Collected By Client |
| 3372682009 | FB-080624      | Water        | 08/06/2024 13:50 | 08/08/2024 08:47 | CBC       | Collected By Client |
| 3372682010 | EB-080624      | Water        | 08/06/2024 16:40 | 08/08/2024 08:47 | CBC       | Collected By Client |
| 3372682011 | JC-2           | Ground Water | 08/05/2024 09:20 | 08/08/2024 08:47 | CBC       | Collected By Client |
| 3372682012 | JC-2C          | Ground Water | 08/05/2024 09:20 | 08/08/2024 08:47 | CBC       | Collected By Client |
| 3372682013 | Post-Treatment | Ground Water | 08/05/2024 09:50 | 08/08/2024 08:47 | CBC       | Collected By Client |
| 3372682014 | Trip-Blank     | Water        | 08/05/2024 00:00 | 08/08/2024 08:47 | CBC       | Collected By Client |



Reference

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136, including but not limited to the following EPA Method reference revisions:  
EPA 300.1 Rev. 1.0-1997  
EPA 300.0 Rev. 2.1-1993  
EPA 353.2 Rev. 2.0-1993  
EPA 410.4 Rev. 1.0-1993  
EPA 420.4 Rev. 1.0-1993  
EPA 365.1 Rev. 2.0-1993  
EPA 200.7 Rev. 4.4-1994  
EPA 200.8 Rev. 5.4-1994  
EPA 245.1 Rev. 3.0-1994
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

Standard Acronyms/Flags

|        |                                                                                                                                      |
|--------|--------------------------------------------------------------------------------------------------------------------------------------|
| J      | Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte     |
| U      | Indicates that the analyte was Not Detected (ND) above the MDL                                                                       |
| N      | Indicates presumptive evidence of the presence of a compound                                                                         |
| MDL    | Method Detection Limit                                                                                                               |
| PQL    | Practical Quantitation Limit                                                                                                         |
| RDL    | Practical Quantitation Limit for this Project                                                                                        |
| ND     | Not Detected - indicates that the analyte was Not Detected                                                                           |
| Cntr   | Analysis was performed using this container                                                                                          |
| RegLmt | Regulatory Limit                                                                                                                     |
| LCS    | Laboratory Control Sample                                                                                                            |
| MS     | Matrix Spike                                                                                                                         |
| MSD    | Matrix Spike Duplicate                                                                                                               |
| DUP    | Sample Duplicate                                                                                                                     |
| %Rec   | Percent Recovery                                                                                                                     |
| RPD    | Relative Percent Difference                                                                                                          |
| LOD    | DoD Limit of Detection                                                                                                               |
| LOQ    | DoD Limit of Quantitation                                                                                                            |
| DL     | DoD Detection Limit                                                                                                                  |
| I      | Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL) |
| (S)    | Surrogate Compound                                                                                                                   |
| NC     | Not Calculated                                                                                                                       |
| *      | Result outside of QC limits                                                                                                          |
| #      | Please reference the result in the Results Section for analyte-level flags.                                                          |



Project Notations

Sample Notations

Lab ID

Sample ID

| Result Notations |                                                                                                                                                                                      |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Notation Ref.    |                                                                                                                                                                                      |
| 1                | The QC sample type MS for method SW846 8260D was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 51.1 and the control limits were 53 to 141. |
| 2                | The QC sample type MSD for method SW846 8260D was outside the control limits for the analyte Iodomethane. The % Recovery was reported as 41.1 and the control limits were 69 to 131. |
| 3                | The QC sample type MSD for method SW846 8260D was outside the control limits for the analyte Iodomethane. The RPD was reported as 41.6 and the upper control limit is 30.            |
| 4                | The QC sample type MS for method SW846 8260D was outside the control limits for the analyte Iodomethane. The % Recovery was reported as 26.9 and the control limits were 69 to 131.  |



Detected Results Summary

| Client Sample ID  | DW-9       | Collected   | 08/05/2024 15:45 |      |       |                 |      |
|-------------------|------------|-------------|------------------|------|-------|-----------------|------|
| Lab Sample ID     | 3372682001 | Lab Receipt | 08/08/2024 08:47 |      |       |                 |      |
| Compound          | Result     | Units       | LOQ              | LOD  | DL    | Method          | Flag |
| SEMIVOLATILE SIM  |            |             |                  |      |       |                 |      |
| 1,4-Dioxane       | 2.3        | ug/L        | 0.50             | 0.20 | 0.068 | SW846 8270E SIM | #    |
| VOLATILE ORGANICS |            |             |                  |      |       |                 |      |
| Iodomethane       | 0.50J      | ug/L        | 1.0              | 0.75 | 0.33  | SW846 8260D     | #    |



Detected Results Summary

| Client Sample ID       | DW-3       | Collected   | 08/06/2024 09:45 |      |       |                 |      |
|------------------------|------------|-------------|------------------|------|-------|-----------------|------|
| Lab Sample ID          | 3372682002 | Lab Receipt | 08/08/2024 08:47 |      |       |                 |      |
| Compound               | Result     | Units       | LOQ              | LOD  | DL    | Method          | Flag |
| SEMIVOLATILE SIM       |            |             |                  |      |       |                 |      |
| 1,4-Dioxane            | 3.5        | ug/L        | 0.50             | 0.20 | 0.068 | SW846 8270E SIM | #    |
| VOLATILE ORGANICS      |            |             |                  |      |       |                 |      |
| cis-1,2-Dichloroethene | 41.3       | ug/L        | 1.0              | 0.75 | 0.33  | SW846 8260D     | #    |



Detected Results Summary

| Client Sample ID       | SW-4RE     | Collected   | 08/06/2024 11:00 |      |       |                 |      |
|------------------------|------------|-------------|------------------|------|-------|-----------------|------|
| Lab Sample ID          | 3372682004 | Lab Receipt | 08/08/2024 08:47 |      |       |                 |      |
| Compound               | Result     | Units       | LOQ              | LOD  | DL    | Method          | Flag |
| SEMIVOLATILE SIM       |            |             |                  |      |       |                 |      |
| 1,4-Dioxane            | 0.41J      | ug/L        | 0.57             | 0.23 | 0.077 | SW846 8270E SIM | #    |
| VOLATILE ORGANICS      |            |             |                  |      |       |                 |      |
| 1,1,1-Trichloroethane  | 0.37J      | ug/L        | 1.0              | 0.75 | 0.33  | SW846 8260D     | #    |
| cis-1,2-Dichloroethene | 0.73J      | ug/L        | 1.0              | 0.75 | 0.33  | SW846 8260D     | #    |
| Trichloroethene        | 3.9        | ug/L        | 1.0              | 0.75 | 0.33  | SW846 8260D     | #    |



Detected Results Summary

| Client Sample ID       | URS-3D     | Collected   | 08/06/2024 12:55 |      |       |                 |      |
|------------------------|------------|-------------|------------------|------|-------|-----------------|------|
| Lab Sample ID          | 3372682005 | Lab Receipt | 08/08/2024 08:47 |      |       |                 |      |
| Compound               | Result     | Units       | LOQ              | LOD  | DL    | Method          | Flag |
| SEMIVOLATILE SIM       |            |             |                  |      |       |                 |      |
| 1,4-Dioxane            | 2.5        | ug/L        | 0.50             | 0.20 | 0.068 | SW846 8270E SIM | #    |
| VOLATILE ORGANICS      |            |             |                  |      |       |                 |      |
| 1,1,1-Trichloroethane  | 0.86J      | ug/L        | 1.0              | 0.75 | 0.33  | SW846 8260D     | #    |
| cis-1,2-Dichloroethene | 0.63J      | ug/L        | 1.0              | 0.75 | 0.33  | SW846 8260D     | #    |
| Trichloroethene        | 0.51J      | ug/L        | 1.0              | 0.75 | 0.33  | SW846 8260D     | #    |



Detected Results Summary

| Client Sample ID       | URS-3DC    | Collected   | 08/06/2024 12:55 |      |       |                 |      |
|------------------------|------------|-------------|------------------|------|-------|-----------------|------|
| Lab Sample ID          | 3372682006 | Lab Receipt | 08/08/2024 08:47 |      |       |                 |      |
| Compound               | Result     | Units       | LOQ              | LOD  | DL    | Method          | Flag |
| SEMIVOLATILE SIM       |            |             |                  |      |       |                 |      |
| 1,4-Dioxane            | 2.6        | ug/L        | 0.50             | 0.20 | 0.068 | SW846 8270E SIM | #    |
| VOLATILE ORGANICS      |            |             |                  |      |       |                 |      |
| 1,1,1-Trichloroethane  | 0.87J      | ug/L        | 1.0              | 0.75 | 0.33  | SW846 8260D     | #    |
| cis-1,2-Dichloroethene | 0.59J      | ug/L        | 1.0              | 0.75 | 0.33  | SW846 8260D     | #    |
| Trichloroethene        | 0.53J      | ug/L        | 1.0              | 0.75 | 0.33  | SW846 8260D     | #    |



Detected Results Summary

| Client Sample ID       | SW-7RE     | Collected   | 08/06/2024 14:40 |      |       |                 |      |
|------------------------|------------|-------------|------------------|------|-------|-----------------|------|
| Lab Sample ID          | 3372682007 | Lab Receipt | 08/08/2024 08:47 |      |       |                 |      |
| Compound               | Result     | Units       | LOQ              | LOD  | DL    | Method          | Flag |
| SEMIVOLATILE SIM       |            |             |                  |      |       |                 |      |
| 1,4-Dioxane            | 1.7        | ug/L        | 0.50             | 0.20 | 0.068 | SW846 8270E SIM | #    |
| VOLATILE ORGANICS      |            |             |                  |      |       |                 |      |
| 1,1-Dichloroethane     | 2.6        | ug/L        | 1.0              | 0.75 | 0.33  | SW846 8260D     | #    |
| 1,1-Dichloroethene     | 0.34J      | ug/L        | 1.0              | 0.75 | 0.33  | SW846 8260D     | #    |
| cis-1,2-Dichloroethene | 28.3       | ug/L        | 1.0              | 0.75 | 0.33  | SW846 8260D     | #    |
| Trichloroethene        | 5.7        | ug/L        | 1.0              | 0.75 | 0.33  | SW846 8260D     | #    |
| Vinyl Chloride         | 0.48J      | ug/L        | 1.0              | 0.75 | 0.33  | SW846 8260D     | #    |



Detected Results Summary

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | URS-2D     | Collected   | 08/06/2024 16:40 |
| Lab Sample ID    | 3372682008 | Lab Receipt | 08/08/2024 08:47 |

| Compound               | Result | Units | LOQ  | LOD  | DL    | Method          | Flag |
|------------------------|--------|-------|------|------|-------|-----------------|------|
| SEMIVOLATILE SIM       |        |       |      |      |       |                 |      |
| 1,4-Dioxane            | 7.9    | ug/L  | 0.54 | 0.22 | 0.074 | SW846 8270E SIM | #    |
| VOLATILE ORGANICS      |        |       |      |      |       |                 |      |
| Carbon Disulfide       | 0.49J  | ug/L  | 1.0  | 0.75 | 0.33  | SW846 8260D     | #    |
| cis-1,2-Dichloroethene | 56.1   | ug/L  | 1.0  | 0.75 | 0.33  | SW846 8260D     | #    |



Detected Results Summary

| Client Sample ID  | FB-080624  | Collected   | 08/06/2024 13:50 |      |      |             |      |
|-------------------|------------|-------------|------------------|------|------|-------------|------|
| Lab Sample ID     | 3372682009 | Lab Receipt | 08/08/2024 08:47 |      |      |             |      |
| Compound          | Result     | Units       | LOQ              | LOD  | DL   | Method      | Flag |
| VOLATILE ORGANICS |            |             |                  |      |      |             |      |
| Acetone           | 5.6        | ug/L        | 5.0              | 3.8  | 1.6  | SW846 8260D | #    |
| Toluene           | 0.40J      | ug/L        | 1.0              | 0.75 | 0.33 | SW846 8260D | #    |



Detected Results Summary

| Client Sample ID  | EB-080624  | Collected   | 08/06/2024 16:40 |      |      |             |      |
|-------------------|------------|-------------|------------------|------|------|-------------|------|
| Lab Sample ID     | 3372682010 | Lab Receipt | 08/08/2024 08:47 |      |      |             |      |
| Compound          | Result     | Units       | LOQ              | LOD  | DL   | Method      | Flag |
| VOLATILE ORGANICS |            |             |                  |      |      |             |      |
| Acetone           | 5.1        | ug/L        | 5.0              | 3.8  | 1.6  | SW846 8260D | #    |
| Toluene           | 0.42J      | ug/L        | 1.0              | 0.75 | 0.33 | SW846 8260D | #    |



Detected Results Summary

| Client Sample ID | JC-2       | Collected   | 08/05/2024 09:20 |      |       |                 |      |
|------------------|------------|-------------|------------------|------|-------|-----------------|------|
| Lab Sample ID    | 3372682011 | Lab Receipt | 08/08/2024 08:47 |      |       |                 |      |
| Compound         | Result     | Units       | LOQ              | LOD  | DL    | Method          | Flag |
| SEMIVOLATILE SIM |            |             |                  |      |       |                 |      |
| 1,4-Dioxane      | 0.23J      | ug/L        | 0.50             | 0.20 | 0.068 | SW846 8270E SIM | #    |



Detected Results Summary

| Client Sample ID | JC-2C      | Collected   | 08/05/2024 09:20 |      |       |                 |      |
|------------------|------------|-------------|------------------|------|-------|-----------------|------|
| Lab Sample ID    | 3372682012 | Lab Receipt | 08/08/2024 08:47 |      |       |                 |      |
| Compound         | Result     | Units       | LOQ              | LOD  | DL    | Method          | Flag |
| SEMIVOLATILE SIM |            |             |                  |      |       |                 |      |
| 1,4-Dioxane      | 0.37J      | ug/L        | 0.50             | 0.20 | 0.068 | SW846 8270E SIM | #    |



Detected Results Summary

| Client Sample ID | Post-Treatment | Collected   | 08/05/2024 09:50 |      |       |                 |      |
|------------------|----------------|-------------|------------------|------|-------|-----------------|------|
| Lab Sample ID    | 3372682013     | Lab Receipt | 08/08/2024 08:47 |      |       |                 |      |
| Compound         | Result         | Units       | LOQ              | LOD  | DL    | Method          | Flag |
| SEMIVOLATILE SIM |                |             |                  |      |       |                 |      |
| 1,4-Dioxane      | 0.32J          | ug/L        | 0.50             | 0.20 | 0.068 | SW846 8270E SIM | #    |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | DW-9       | Collected   | 08/05/2024 15:45 |
| Lab Sample ID    | 3372682001 | Lab Receipt | 08/08/2024 08:47 |

SEMIVOLATILE SIM

| Compound    | Result | Flag | Units | LOQ  | LOD  | DL    | Method             | Dilution | Analysis Date/Time | By  | Cntr |
|-------------|--------|------|-------|------|------|-------|--------------------|----------|--------------------|-----|------|
| 1,4-Dioxane | 2.3    |      | ug/L  | 0.50 | 0.20 | 0.068 | SW846 8270E<br>SIM | 1        | 08/12/2024 11:15   | S7M | E    |

SURROGATES

| Compound               | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|------------------------|------------|----------|-----------|--------------------|------------|
| 2-Methylnapthalene-d10 | 7297-45-2  | 67.4%    | 29 – 112  | 08/12/2024 11:15   |            |
| Fluoranthene-d10       | 93951-69-0 | 107%     | 45 – 130  | 08/12/2024 11:15   |            |

VOLATILE ORGANICS

| Compound                    | Result | Flag | Units | LOQ | LOD  | DL   | Method      | Dilution | Analysis Date/Time | By  | Cntr |
|-----------------------------|--------|------|-------|-----|------|------|-------------|----------|--------------------|-----|------|
| 1,1,1,2-Tetrachloroethane   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| 1,1,1-Trichloroethane       | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| 1,1,2,2-Tetrachloroethane   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| 1,1,2-Trichloroethane       | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| 1,1-Dichloroethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| 1,1-Dichloroethene          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| 1,2,3-Trichloropropane      | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| 1,2-Dibromo-3-chloropropane | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| 1,2-Dibromoethane           | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| 1,2-Dichlorobenzene         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| 1,2-Dichloroethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| 1,2-Dichloropropane         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| 1,4-Dichlorobenzene         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| 2-Butanone                  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| 2-Hexanone                  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| 4-Methyl-2-Pentanone(MIBK)  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Acetone                     | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Acrylonitrile               | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Benzene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Bromochloromethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Bromodichloromethane        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Bromoform                   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Bromomethane                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Carbon Disulfide            | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Carbon Tetrachloride        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Chlorobenzene               | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Chlorodibromomethane        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Chloroethane                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Chloroform                  | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Chloromethane               | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| cis-1,2-Dichloroethene      | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Dibromomethane              | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Ethylbenzene                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Iodomethane                 | 0.50J  | J    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Methylene Chloride          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | DW-9       | Collected   | 08/05/2024 15:45 |
| Lab Sample ID    | 3372682001 | Lab Receipt | 08/08/2024 08:47 |

VOLATILE ORGANICS (cont.)

| Compound                    | Result | Flag | Units | LOQ | LOD  | DL   | Method      | Dilution | Analysis Date/Time | By  | Cntr |
|-----------------------------|--------|------|-------|-----|------|------|-------------|----------|--------------------|-----|------|
| mp-Xylene                   | 1.5U   | U    | ug/L  | 2.0 | 1.5  | 0.66 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| o-Xylene                    | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Styrene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Tetrachloroethene           | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Toluene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Total Xylenes               | 2.3U   | U    | ug/L  | 3.0 | 2.3  | 1.0  | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| trans-1,2-Dichloroethene    | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| trans-1,3-Dichloropropene   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| trans-1,4-Dichloro-2-butene | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.35 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Trichloroethene             | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Trichlorofluoromethane      | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Vinyl Acetate               | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |
| Vinyl Chloride              | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:06   | TMP | A    |

SURROGATES

| Compound              | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|-----------------------|------------|----------|-----------|--------------------|------------|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 102%     | 81 – 118  | 08/16/2024 13:06   |            |
| 4-Bromofluorobenzene  | 460-00-4   | 98.3%    | 85 – 114  | 08/16/2024 13:06   |            |
| Dibromofluoromethane  | 1868-53-7  | 97.7%    | 80 – 119  | 08/16/2024 13:06   |            |
| Toluene-d8            | 2037-26-5  | 98.6%    | 89 – 112  | 08/16/2024 13:06   |            |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | DW-3       | Collected   | 08/06/2024 09:45 |
| Lab Sample ID    | 3372682002 | Lab Receipt | 08/08/2024 08:47 |

SEMIVOLATILE SIM

| Compound    | Result | Flag | Units | LOQ  | LOD  | DL    | Method             | Dilution | Analysis Date/Time | By  | Cntr |
|-------------|--------|------|-------|------|------|-------|--------------------|----------|--------------------|-----|------|
| 1,4-Dioxane | 3.5    |      | ug/L  | 0.50 | 0.20 | 0.068 | SW846 8270E<br>SIM | 1        | 08/12/2024 11:42   | S7M | E    |

SURROGATES

| Compound               | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|------------------------|------------|----------|-----------|--------------------|------------|
| 2-Methylnapthalene-d10 | 7297-45-2  | 89.9%    | 29 – 112  | 08/12/2024 11:42   |            |
| Fluoranthene-d10       | 93951-69-0 | 112%     | 45 – 130  | 08/12/2024 11:42   |            |

VOLATILE ORGANICS

| Compound                    | Result | Flag | Units | LOQ | LOD  | DL   | Method      | Dilution | Analysis Date/Time | By  | Cntr |
|-----------------------------|--------|------|-------|-----|------|------|-------------|----------|--------------------|-----|------|
| 1,1,1,2-Tetrachloroethane   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| 1,1,1-Trichloroethane       | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| 1,1,2,2-Tetrachloroethane   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| 1,1,2-Trichloroethane       | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| 1,1-Dichloroethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| 1,1-Dichloroethene          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| 1,2,3-Trichloropropane      | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| 1,2-Dibromo-3-chloropropane | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| 1,2-Dibromoethane           | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| 1,2-Dichlorobenzene         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| 1,2-Dichloroethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| 1,2-Dichloropropane         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| 1,4-Dichlorobenzene         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| 2-Butanone                  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| 2-Hexanone                  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| 4-Methyl-2-Pentanone(MIBK)  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Acetone                     | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Acrylonitrile               | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Benzene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Bromochloromethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Bromodichloromethane        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Bromoform                   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Bromomethane                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Carbon Disulfide            | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Carbon Tetrachloride        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Chlorobenzene               | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Chlorodibromomethane        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Chloroethane                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Chloroform                  | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Chloromethane               | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| cis-1,2-Dichloroethene      | 41.3   |      | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Dibromomethane              | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Ethylbenzene                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Iodomethane                 | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Methylene Chloride          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | DW-3       | Collected   | 08/06/2024 09:45 |
| Lab Sample ID    | 3372682002 | Lab Receipt | 08/08/2024 08:47 |

VOLATILE ORGANICS (cont.)

| Compound                    | Result | Flag | Units | LOQ | LOD  | DL   | Method      | Dilution | Analysis Date/Time | By  | Cntr |
|-----------------------------|--------|------|-------|-----|------|------|-------------|----------|--------------------|-----|------|
| mp-Xylene                   | 1.5U   | U    | ug/L  | 2.0 | 1.5  | 0.66 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| o-Xylene                    | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Styrene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Tetrachloroethene           | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Toluene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Total Xylenes               | 2.3U   | U    | ug/L  | 3.0 | 2.3  | 1.0  | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| trans-1,2-Dichloroethene    | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| trans-1,3-Dichloropropene   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| trans-1,4-Dichloro-2-butene | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.35 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Trichloroethene             | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Trichlorofluoromethane      | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Vinyl Acetate               | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |
| Vinyl Chloride              | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:26   | TMP | A    |

SURROGATES

| Compound              | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|-----------------------|------------|----------|-----------|--------------------|------------|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 101%     | 81 – 118  | 08/16/2024 13:26   |            |
| 4-Bromofluorobenzene  | 460-00-4   | 96.3%    | 85 – 114  | 08/16/2024 13:26   |            |
| Dibromofluoromethane  | 1868-53-7  | 95.7%    | 80 – 119  | 08/16/2024 13:26   |            |
| Toluene-d8            | 2037-26-5  | 97.6%    | 89 – 112  | 08/16/2024 13:26   |            |

Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | SW-9       | Collected   | 08/06/2024 10:40 |
| Lab Sample ID    | 3372682003 | Lab Receipt | 08/08/2024 08:47 |

SEMIVOLATILE SIM

| Compound    | Result | Flag | Units | LOQ  | LOD  | DL    | Method             | Dilution | Analysis Date/Time | By  | Cntr |
|-------------|--------|------|-------|------|------|-------|--------------------|----------|--------------------|-----|------|
| 1,4-Dioxane | 0.20U  | U    | ug/L  | 0.50 | 0.20 | 0.068 | SW846 8270E<br>SIM | 1        | 08/12/2024 12:08   | S7M | E    |

SURROGATES

| Compound               | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|------------------------|------------|----------|-----------|--------------------|------------|
| 2-Methylnapthalene-d10 | 7297-45-2  | 97.8%    | 29 – 112  | 08/12/2024 12:08   |            |
| Fluoranthene-d10       | 93951-69-0 | 116%     | 45 – 130  | 08/12/2024 12:08   |            |

VOLATILE ORGANICS

| Compound                    | Result | Flag | Units | LOQ | LOD  | DL   | Method      | Dilution | Analysis Date/Time | By  | Cntr |
|-----------------------------|--------|------|-------|-----|------|------|-------------|----------|--------------------|-----|------|
| 1,1,1,2-Tetrachloroethane   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| 1,1,1-Trichloroethane       | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| 1,1,2,2-Tetrachloroethane   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| 1,1,2-Trichloroethane       | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| 1,1-Dichloroethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| 1,1-Dichloroethene          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| 1,2,3-Trichloropropane      | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| 1,2-Dibromo-3-chloropropane | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| 1,2-Dibromoethane           | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| 1,2-Dichlorobenzene         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| 1,2-Dichloroethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| 1,2-Dichloropropane         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| 1,4-Dichlorobenzene         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| 2-Butanone                  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| 2-Hexanone                  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| 4-Methyl-2-Pentanone(MIBK)  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Acetone                     | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Acrylonitrile               | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Benzene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Bromochloromethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Bromodichloromethane        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Bromoform                   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Bromomethane                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Carbon Disulfide            | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Carbon Tetrachloride        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Chlorobenzene               | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Chlorodibromomethane        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Chloroethane                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Chloroform                  | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Chloromethane               | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| cis-1,2-Dichloroethene      | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Dibromomethane              | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Ethylbenzene                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Iodomethane                 | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Methylene Chloride          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | SW-9       | Collected   | 08/06/2024 10:40 |
| Lab Sample ID    | 3372682003 | Lab Receipt | 08/08/2024 08:47 |

VOLATILE ORGANICS (cont.)

| Compound                    | Result | Flag | Units | LOQ | LOD  | DL   | Method      | Dilution | Analysis Date/Time | By  | Cntr |
|-----------------------------|--------|------|-------|-----|------|------|-------------|----------|--------------------|-----|------|
| mp-Xylene                   | 1.5U   | U    | ug/L  | 2.0 | 1.5  | 0.66 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| o-Xylene                    | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Styrene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Tetrachloroethene           | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Toluene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Total Xylenes               | 2.3U   | U    | ug/L  | 3.0 | 2.3  | 1.0  | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| trans-1,2-Dichloroethene    | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| trans-1,3-Dichloropropene   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| trans-1,4-Dichloro-2-butene | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.35 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Trichloroethene             | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Trichlorofluoromethane      | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Vinyl Acetate               | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |
| Vinyl Chloride              | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 13:46   | TMP | A    |

SURROGATES

| Compound              | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|-----------------------|------------|----------|-----------|--------------------|------------|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 101%     | 81 – 118  | 08/16/2024 13:46   |            |
| 4-Bromofluorobenzene  | 460-00-4   | 99%      | 85 – 114  | 08/16/2024 13:46   |            |
| Dibromofluoromethane  | 1868-53-7  | 96.6%    | 80 – 119  | 08/16/2024 13:46   |            |
| Toluene-d8            | 2037-26-5  | 99.3%    | 89 – 112  | 08/16/2024 13:46   |            |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | SW-4RE     | Collected   | 08/06/2024 11:00 |
| Lab Sample ID    | 3372682004 | Lab Receipt | 08/08/2024 08:47 |

SEMIVOLATILE SIM

| Compound    | Result | Flag | Units | LOQ  | LOD  | DL    | Method             | Dilution | Analysis Date/Time | By  | Cntr |
|-------------|--------|------|-------|------|------|-------|--------------------|----------|--------------------|-----|------|
| 1,4-Dioxane | 0.41J  | J    | ug/L  | 0.57 | 0.23 | 0.077 | SW846 8270E<br>SIM | 1        | 08/12/2024 12:35   | S7M | K    |

SURROGATES

| Compound               | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|------------------------|------------|----------|-----------|--------------------|------------|
| 2-Methylnapthalene-d10 | 7297-45-2  | 83.5%    | 29 – 112  | 08/12/2024 12:35   |            |
| Fluoranthene-d10       | 93951-69-0 | 101%     | 45 – 130  | 08/12/2024 12:35   |            |

VOLATILE ORGANICS

| Compound                    | Result | Flag    | Units | LOQ | LOD  | DL   | Method      | Dilution | Analysis Date/Time | By  | Cntr |
|-----------------------------|--------|---------|-------|-----|------|------|-------------|----------|--------------------|-----|------|
| 1,1,1,2-Tetrachloroethane   | 0.75U  | U       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| 1,1,1-Trichloroethane       | 0.37J  | J       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| 1,1,2,2-Tetrachloroethane   | 0.75U  | U       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| 1,1,2-Trichloroethane       | 0.75U  | U       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| 1,1-Dichloroethane          | 0.75U  | U       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| 1,1-Dichloroethene          | 0.75U  | U       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| 1,2,3-Trichloropropane      | 2.5U   | U       | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| 1,2-Dibromo-3-chloropropane | 2.5U   | U       | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| 1,2-Dibromoethane           | 0.75U  | U       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| 1,2-Dichlorobenzene         | 0.75U  | U       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| 1,2-Dichloroethane          | 0.75U  | U       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| 1,2-Dichloropropane         | 0.75U  | U       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| 1,4-Dichlorobenzene         | 0.75U  | U       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| 2-Butanone                  | 3.8U   | U       | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| 2-Hexanone                  | 3.8U   | U       | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| 4-Methyl-2-Pentanone(MIBK)  | 3.8U   | U       | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Acetone                     | 3.8U   | U       | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Acrylonitrile               | 3.8U   | U       | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Benzene                     | 0.75U  | U       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Bromochloromethane          | 0.75U  | U       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Bromodichloromethane        | 0.75U  | U       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Bromoform                   | 0.75U  | U       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Bromomethane                | 0.75U  | U,1     | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Carbon Disulfide            | 0.75U  | U       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Carbon Tetrachloride        | 0.75U  | U       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Chlorobenzene               | 0.75U  | U       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Chlorodibromomethane        | 0.75U  | U       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Chloroethane                | 0.75U  | U       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Chloroform                  | 0.75U  | U       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Chloromethane               | 0.75U  | U       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| cis-1,2-Dichloroethene      | 0.73J  | J       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Dibromomethane              | 0.75U  | U       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Ethylbenzene                | 0.75U  | U       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Iodomethane                 | 0.75U  | U,2,3,4 | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Methylene Chloride          | 0.75U  | U       | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | SW-4RE     | Collected   | 08/06/2024 11:00 |
| Lab Sample ID    | 3372682004 | Lab Receipt | 08/08/2024 08:47 |

VOLATILE ORGANICS (cont.)

| Compound                    | Result | Flag | Units | LOQ | LOD  | DL   | Method      | Dilution | Analysis Date/Time | By  | Cntr |
|-----------------------------|--------|------|-------|-----|------|------|-------------|----------|--------------------|-----|------|
| mp-Xylene                   | 1.5U   | U    | ug/L  | 2.0 | 1.5  | 0.66 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| o-Xylene                    | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Styrene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Tetrachloroethene           | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Toluene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Total Xylenes               | 2.3U   | U    | ug/L  | 3.0 | 2.3  | 1.0  | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| trans-1,2-Dichloroethene    | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| trans-1,3-Dichloropropene   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| trans-1,4-Dichloro-2-butene | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.35 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Trichloroethene             | 3.9    |      | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Trichlorofluoromethane      | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Vinyl Acetate               | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |
| Vinyl Chloride              | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:05   | TMP | A    |

SURROGATES

| Compound              | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|-----------------------|------------|----------|-----------|--------------------|------------|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 103%     | 81 – 118  | 08/16/2024 14:05   |            |
| 4-Bromofluorobenzene  | 460-00-4   | 99.1%    | 85 – 114  | 08/16/2024 14:05   |            |
| Dibromofluoromethane  | 1868-53-7  | 97.1%    | 80 – 119  | 08/16/2024 14:05   |            |
| Toluene-d8            | 2037-26-5  | 99.9%    | 89 – 112  | 08/16/2024 14:05   |            |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | URS-3D     | Collected   | 08/06/2024 12:55 |
| Lab Sample ID    | 3372682005 | Lab Receipt | 08/08/2024 08:47 |

SEMIVOLATILE SIM

| Compound    | Result | Flag | Units | LOQ  | LOD  | DL    | Method             | Dilution | Analysis Date/Time | By  | Cntr |
|-------------|--------|------|-------|------|------|-------|--------------------|----------|--------------------|-----|------|
| 1,4-Dioxane | 2.5    |      | ug/L  | 0.50 | 0.20 | 0.068 | SW846 8270E<br>SIM | 1        | 08/12/2024 13:56   | S7M | E    |

SURROGATES

| Compound               | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|------------------------|------------|----------|-----------|--------------------|------------|
| 2-Methylnapthalene-d10 | 7297-45-2  | 79.5 %   | 29 – 112  | 08/12/2024 13:56   |            |
| Fluoranthene-d10       | 93951-69-0 | 114 %    | 45 – 130  | 08/12/2024 13:56   |            |

VOLATILE ORGANICS

| Compound                    | Result | Flag | Units | LOQ | LOD  | DL   | Method      | Dilution | Analysis Date/Time | By  | Cntr |
|-----------------------------|--------|------|-------|-----|------|------|-------------|----------|--------------------|-----|------|
| 1,1,1,2-Tetrachloroethane   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| 1,1,1-Trichloroethane       | 0.86J  | J    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| 1,1,2,2-Tetrachloroethane   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| 1,1,2-Trichloroethane       | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| 1,1-Dichloroethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| 1,1-Dichloroethene          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| 1,2,3-Trichloropropane      | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| 1,2-Dibromo-3-chloropropane | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| 1,2-Dibromoethane           | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| 1,2-Dichlorobenzene         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| 1,2-Dichloroethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| 1,2-Dichloropropane         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| 1,4-Dichlorobenzene         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| 2-Butanone                  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| 2-Hexanone                  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| 4-Methyl-2-Pentanone(MIBK)  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Acetone                     | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Acrylonitrile               | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Benzene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Bromochloromethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Bromodichloromethane        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Bromoform                   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Bromomethane                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Carbon Disulfide            | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Carbon Tetrachloride        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Chlorobenzene               | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Chlorodibromomethane        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Chloroethane                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Chloroform                  | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Chloromethane               | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| cis-1,2-Dichloroethene      | 0.63J  | J    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Dibromomethane              | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Ethylbenzene                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Iodomethane                 | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Methylene Chloride          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | URS-3D     | Collected   | 08/06/2024 12:55 |
| Lab Sample ID    | 3372682005 | Lab Receipt | 08/08/2024 08:47 |

VOLATILE ORGANICS (cont.)

| Compound                    | Result | Flag | Units | LOQ | LOD  | DL   | Method      | Dilution | Analysis Date/Time | By  | Cntr |
|-----------------------------|--------|------|-------|-----|------|------|-------------|----------|--------------------|-----|------|
| mp-Xylene                   | 1.5U   | U    | ug/L  | 2.0 | 1.5  | 0.66 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| o-Xylene                    | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Styrene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Tetrachloroethene           | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Toluene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Total Xylenes               | 2.3U   | U    | ug/L  | 3.0 | 2.3  | 1.0  | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| trans-1,2-Dichloroethene    | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| trans-1,3-Dichloropropene   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| trans-1,4-Dichloro-2-butene | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.35 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Trichloroethene             | 0.51J  | J    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Trichlorofluoromethane      | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Vinyl Acetate               | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |
| Vinyl Chloride              | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:25   | TMP | A    |

SURROGATES

| Compound              | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|-----------------------|------------|----------|-----------|--------------------|------------|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 102%     | 81 – 118  | 08/16/2024 14:25   |            |
| 4-Bromofluorobenzene  | 460-00-4   | 99.6%    | 85 – 114  | 08/16/2024 14:25   |            |
| Dibromofluoromethane  | 1868-53-7  | 95.6%    | 80 – 119  | 08/16/2024 14:25   |            |
| Toluene-d8            | 2037-26-5  | 98.7%    | 89 – 112  | 08/16/2024 14:25   |            |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | URS-3DC    | Collected   | 08/06/2024 12:55 |
| Lab Sample ID    | 3372682006 | Lab Receipt | 08/08/2024 08:47 |

SEMIVOLATILE SIM

| Compound    | Result | Flag | Units | LOQ  | LOD  | DL    | Method             | Dilution | Analysis Date/Time | By  | Cntr |
|-------------|--------|------|-------|------|------|-------|--------------------|----------|--------------------|-----|------|
| 1,4-Dioxane | 2.6    |      | ug/L  | 0.50 | 0.20 | 0.068 | SW846 8270E<br>SIM | 1        | 08/12/2024 14:24   | S7M | E    |

SURROGATES

| Compound               | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|------------------------|------------|----------|-----------|--------------------|------------|
| 2-Methylnapthalene-d10 | 7297-45-2  | 77.2%    | 29 – 112  | 08/12/2024 14:24   |            |
| Fluoranthene-d10       | 93951-69-0 | 111%     | 45 – 130  | 08/12/2024 14:24   |            |

VOLATILE ORGANICS

| Compound                    | Result | Flag | Units | LOQ | LOD  | DL   | Method      | Dilution | Analysis Date/Time | By  | Cntr |
|-----------------------------|--------|------|-------|-----|------|------|-------------|----------|--------------------|-----|------|
| 1,1,1,2-Tetrachloroethane   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| 1,1,1-Trichloroethane       | 0.87J  | J    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| 1,1,2,2-Tetrachloroethane   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| 1,1,2-Trichloroethane       | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| 1,1-Dichloroethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| 1,1-Dichloroethene          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| 1,2,3-Trichloropropane      | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| 1,2-Dibromo-3-chloropropane | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| 1,2-Dibromoethane           | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| 1,2-Dichlorobenzene         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| 1,2-Dichloroethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| 1,2-Dichloropropane         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| 1,4-Dichlorobenzene         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| 2-Butanone                  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| 2-Hexanone                  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| 4-Methyl-2-Pentanone(MIBK)  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Acetone                     | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Acrylonitrile               | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Benzene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Bromochloromethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Bromodichloromethane        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Bromoform                   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Bromomethane                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Carbon Disulfide            | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Carbon Tetrachloride        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Chlorobenzene               | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Chlorodibromomethane        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Chloroethane                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Chloroform                  | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Chloromethane               | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| cis-1,2-Dichloroethene      | 0.59J  | J    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Dibromomethane              | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Ethylbenzene                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Iodomethane                 | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Methylene Chloride          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | URS-3DC    | Collected   | 08/06/2024 12:55 |
| Lab Sample ID    | 3372682006 | Lab Receipt | 08/08/2024 08:47 |

VOLATILE ORGANICS (cont.)

| Compound                    | Result | Flag | Units | LOQ | LOD  | DL   | Method      | Dilution | Analysis Date/Time | By  | Cntr |
|-----------------------------|--------|------|-------|-----|------|------|-------------|----------|--------------------|-----|------|
| mp-Xylene                   | 1.5U   | U    | ug/L  | 2.0 | 1.5  | 0.66 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| o-Xylene                    | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Styrene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Tetrachloroethene           | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Toluene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Total Xylenes               | 2.3U   | U    | ug/L  | 3.0 | 2.3  | 1.0  | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| trans-1,2-Dichloroethene    | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| trans-1,3-Dichloropropene   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| trans-1,4-Dichloro-2-butene | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.35 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Trichloroethene             | 0.53J  | J    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Trichlorofluoromethane      | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Vinyl Acetate               | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |
| Vinyl Chloride              | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 14:45   | TMP | A    |

SURROGATES

| Compound              | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|-----------------------|------------|----------|-----------|--------------------|------------|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 102%     | 81 – 118  | 08/16/2024 14:45   |            |
| 4-Bromofluorobenzene  | 460-00-4   | 98.2%    | 85 – 114  | 08/16/2024 14:45   |            |
| Dibromofluoromethane  | 1868-53-7  | 95.3%    | 80 – 119  | 08/16/2024 14:45   |            |
| Toluene-d8            | 2037-26-5  | 99.2%    | 89 – 112  | 08/16/2024 14:45   |            |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | SW-7RE     | Collected   | 08/06/2024 14:40 |
| Lab Sample ID    | 3372682007 | Lab Receipt | 08/08/2024 08:47 |

SEMIVOLATILE SIM

| Compound    | Result | Flag | Units | LOQ  | LOD  | DL    | Method             | Dilution | Analysis Date/Time | By  | Cntr |
|-------------|--------|------|-------|------|------|-------|--------------------|----------|--------------------|-----|------|
| 1,4-Dioxane | 1.7    |      | ug/L  | 0.50 | 0.20 | 0.068 | SW846 8270E<br>SIM | 1        | 08/12/2024 15:19   | S7M | E    |

SURROGATES

| Compound               | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|------------------------|------------|----------|-----------|--------------------|------------|
| 2-Methylnapthalene-d10 | 7297-45-2  | 95.7%    | 29 – 112  | 08/12/2024 15:19   |            |
| Fluoranthene-d10       | 93951-69-0 | 118%     | 45 – 130  | 08/12/2024 15:19   |            |

VOLATILE ORGANICS

| Compound                    | Result | Flag | Units | LOQ | LOD  | DL   | Method      | Dilution | Analysis Date/Time | By  | Cntr |
|-----------------------------|--------|------|-------|-----|------|------|-------------|----------|--------------------|-----|------|
| 1,1,1,2-Tetrachloroethane   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| 1,1,1-Trichloroethane       | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| 1,1,2,2-Tetrachloroethane   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| 1,1,2-Trichloroethane       | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| 1,1-Dichloroethane          | 2.6    |      | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| 1,1-Dichloroethene          | 0.34J  | J    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| 1,2,3-Trichloropropane      | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| 1,2-Dibromo-3-chloropropane | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| 1,2-Dibromoethane           | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| 1,2-Dichlorobenzene         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| 1,2-Dichloroethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| 1,2-Dichloropropane         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| 1,4-Dichlorobenzene         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| 2-Butanone                  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| 2-Hexanone                  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| 4-Methyl-2-Pentanone(MIBK)  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Acetone                     | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Acrylonitrile               | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Benzene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Bromochloromethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Bromodichloromethane        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Bromoform                   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Bromomethane                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Carbon Disulfide            | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Carbon Tetrachloride        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Chlorobenzene               | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Chlorodibromomethane        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Chloroethane                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Chloroform                  | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Chloromethane               | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| cis-1,2-Dichloroethene      | 28.3   |      | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Dibromomethane              | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Ethylbenzene                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Iodomethane                 | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Methylene Chloride          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | SW-7RE     | Collected   | 08/06/2024 14:40 |
| Lab Sample ID    | 3372682007 | Lab Receipt | 08/08/2024 08:47 |

VOLATILE ORGANICS (cont.)

| Compound                    | Result | Flag | Units | LOQ | LOD  | DL   | Method      | Dilution | Analysis Date/Time | By  | Cntr |
|-----------------------------|--------|------|-------|-----|------|------|-------------|----------|--------------------|-----|------|
| mp-Xylene                   | 1.5U   | U    | ug/L  | 2.0 | 1.5  | 0.66 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| o-Xylene                    | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Styrene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Tetrachloroethene           | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Toluene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Total Xylenes               | 2.3U   | U    | ug/L  | 3.0 | 2.3  | 1.0  | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| trans-1,2-Dichloroethene    | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| trans-1,3-Dichloropropene   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| trans-1,4-Dichloro-2-butene | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.35 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Trichloroethene             | 5.7    |      | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Trichlorofluoromethane      | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Vinyl Acetate               | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |
| Vinyl Chloride              | 0.48J  | J    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:05   | TMP | A    |

SURROGATES

| Compound              | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|-----------------------|------------|----------|-----------|--------------------|------------|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 100%     | 81 – 118  | 08/16/2024 15:05   |            |
| 4-Bromofluorobenzene  | 460-00-4   | 99.7%    | 85 – 114  | 08/16/2024 15:05   |            |
| Dibromofluoromethane  | 1868-53-7  | 95.1%    | 80 – 119  | 08/16/2024 15:05   |            |
| Toluene-d8            | 2037-26-5  | 98.4%    | 89 – 112  | 08/16/2024 15:05   |            |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | URS-2D     | Collected   | 08/06/2024 16:40 |
| Lab Sample ID    | 3372682008 | Lab Receipt | 08/08/2024 08:47 |

SEMIVOLATILE SIM

| Compound    | Result | Flag | Units | LOQ  | LOD  | DL    | Method             | Dilution | Analysis Date/Time | By  | Cntr |
|-------------|--------|------|-------|------|------|-------|--------------------|----------|--------------------|-----|------|
| 1,4-Dioxane | 7.9    |      | ug/L  | 0.54 | 0.22 | 0.074 | SW846 8270E<br>SIM | 1        | 08/12/2024 15:47   | S7M | E    |

SURROGATES

| Compound               | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|------------------------|------------|----------|-----------|--------------------|------------|
| 2-Methylnapthalene-d10 | 7297-45-2  | 59.9%    | 29 – 112  | 08/12/2024 15:47   |            |
| Fluoranthene-d10       | 93951-69-0 | 74.9%    | 45 – 130  | 08/12/2024 15:47   |            |

VOLATILE ORGANICS

| Compound                    | Result | Flag | Units | LOQ | LOD  | DL   | Method      | Dilution | Analysis Date/Time | By  | Cntr |
|-----------------------------|--------|------|-------|-----|------|------|-------------|----------|--------------------|-----|------|
| 1,1,1,2-Tetrachloroethane   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| 1,1,1-Trichloroethane       | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| 1,1,2,2-Tetrachloroethane   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| 1,1,2-Trichloroethane       | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| 1,1-Dichloroethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| 1,1-Dichloroethene          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| 1,2,3-Trichloropropane      | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| 1,2-Dibromo-3-chloropropane | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| 1,2-Dibromoethane           | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| 1,2-Dichlorobenzene         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| 1,2-Dichloroethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| 1,2-Dichloropropane         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| 1,4-Dichlorobenzene         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| 2-Butanone                  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| 2-Hexanone                  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| 4-Methyl-2-Pentanone(MIBK)  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Acetone                     | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Acrylonitrile               | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Benzene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Bromochloromethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Bromodichloromethane        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Bromoform                   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Bromomethane                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Carbon Disulfide            | 0.49J  | J    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Carbon Tetrachloride        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Chlorobenzene               | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Chlorodibromomethane        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Chloroethane                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Chloroform                  | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Chloromethane               | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| cis-1,2-Dichloroethene      | 56.1   |      | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Dibromomethane              | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Ethylbenzene                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Iodomethane                 | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Methylene Chloride          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | URS-2D     | Collected   | 08/06/2024 16:40 |
| Lab Sample ID    | 3372682008 | Lab Receipt | 08/08/2024 08:47 |

VOLATILE ORGANICS (cont.)

| Compound                    | Result | Flag | Units | LOQ | LOD  | DL   | Method      | Dilution | Analysis Date/Time | By  | Cntr |
|-----------------------------|--------|------|-------|-----|------|------|-------------|----------|--------------------|-----|------|
| mp-Xylene                   | 1.5U   | U    | ug/L  | 2.0 | 1.5  | 0.66 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| o-Xylene                    | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Styrene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Tetrachloroethene           | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Toluene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Total Xylenes               | 2.3U   | U    | ug/L  | 3.0 | 2.3  | 1.0  | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| trans-1,2-Dichloroethene    | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| trans-1,3-Dichloropropene   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| trans-1,4-Dichloro-2-butene | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.35 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Trichloroethene             | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Trichlorofluoromethane      | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Vinyl Acetate               | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |
| Vinyl Chloride              | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:25   | TMP | A    |

SURROGATES

| Compound              | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|-----------------------|------------|----------|-----------|--------------------|------------|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 101%     | 81 – 118  | 08/16/2024 15:25   |            |
| 4-Bromofluorobenzene  | 460-00-4   | 98.4%    | 85 – 114  | 08/16/2024 15:25   |            |
| Dibromofluoromethane  | 1868-53-7  | 97.4%    | 80 – 119  | 08/16/2024 15:25   |            |
| Toluene-d8            | 2037-26-5  | 98.5%    | 89 – 112  | 08/16/2024 15:25   |            |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | FB-080624  | Collected   | 08/06/2024 13:50 |
| Lab Sample ID    | 3372682009 | Lab Receipt | 08/08/2024 08:47 |

SEMIVOLATILE SIM

| Compound    | Result | Flag | Units | LOQ  | LOD  | DL    | Method             | Dilution | Analysis Date/Time | By  | Cntr |
|-------------|--------|------|-------|------|------|-------|--------------------|----------|--------------------|-----|------|
| 1,4-Dioxane | 0.22U  | U    | ug/L  | 0.54 | 0.22 | 0.074 | SW846 8270E<br>SIM | 1        | 08/12/2024 14:52   | S7M | E    |

SURROGATES

| Compound               | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|------------------------|------------|----------|-----------|--------------------|------------|
| 2-Methylnapthalene-d10 | 7297-45-2  | 86.9%    | 29 – 112  | 08/12/2024 14:52   |            |
| Fluoranthene-d10       | 93951-69-0 | 120%     | 45 – 130  | 08/12/2024 14:52   |            |

VOLATILE ORGANICS

| Compound                    | Result | Flag | Units | LOQ | LOD  | DL   | Method      | Dilution | Analysis Date/Time | By  | Cntr |
|-----------------------------|--------|------|-------|-----|------|------|-------------|----------|--------------------|-----|------|
| 1,1,1,2-Tetrachloroethane   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| 1,1,1-Trichloroethane       | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| 1,1,2,2-Tetrachloroethane   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| 1,1,2-Trichloroethane       | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| 1,1-Dichloroethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| 1,1-Dichloroethene          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| 1,2,3-Trichloropropane      | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| 1,2-Dibromo-3-chloropropane | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| 1,2-Dibromoethane           | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| 1,2-Dichlorobenzene         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| 1,2-Dichloroethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| 1,2-Dichloropropane         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| 1,4-Dichlorobenzene         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| 2-Butanone                  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| 2-Hexanone                  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| 4-Methyl-2-Pentanone(MIBK)  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Acetone                     | 5.6    |      | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Acrylonitrile               | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Benzene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Bromochloromethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Bromodichloromethane        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Bromoform                   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Bromomethane                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Carbon Disulfide            | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Carbon Tetrachloride        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Chlorobenzene               | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Chlorodibromomethane        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Chloroethane                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Chloroform                  | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Chloromethane               | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| cis-1,2-Dichloroethene      | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Dibromomethane              | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Ethylbenzene                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Iodomethane                 | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Methylene Chloride          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | FB-080624  | Collected   | 08/06/2024 13:50 |
| Lab Sample ID    | 3372682009 | Lab Receipt | 08/08/2024 08:47 |

VOLATILE ORGANICS (cont.)

| Compound                    | Result | Flag | Units | LOQ | LOD  | DL   | Method      | Dilution | Analysis Date/Time | By  | Cntr |
|-----------------------------|--------|------|-------|-----|------|------|-------------|----------|--------------------|-----|------|
| mp-Xylene                   | 1.5U   | U    | ug/L  | 2.0 | 1.5  | 0.66 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| o-Xylene                    | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Styrene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Tetrachloroethene           | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Toluene                     | 0.40J  | J    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Total Xylenes               | 2.3U   | U    | ug/L  | 3.0 | 2.3  | 1.0  | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| trans-1,2-Dichloroethene    | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| trans-1,3-Dichloropropene   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| trans-1,4-Dichloro-2-butene | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.35 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Trichloroethene             | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Trichlorofluoromethane      | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Vinyl Acetate               | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |
| Vinyl Chloride              | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:26   | TMP | A    |

SURROGATES

| Compound              | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|-----------------------|------------|----------|-----------|--------------------|------------|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 100%     | 81 – 118  | 08/16/2024 12:26   |            |
| 4-Bromofluorobenzene  | 460-00-4   | 99%      | 85 – 114  | 08/16/2024 12:26   |            |
| Dibromofluoromethane  | 1868-53-7  | 95%      | 80 – 119  | 08/16/2024 12:26   |            |
| Toluene-d8            | 2037-26-5  | 101%     | 89 – 112  | 08/16/2024 12:26   |            |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | EB-080624  | Collected   | 08/06/2024 16:40 |
| Lab Sample ID    | 3372682010 | Lab Receipt | 08/08/2024 08:47 |

SEMIVOLATILE SIM

| Compound    | Result | Flag | Units | LOQ  | LOD  | DL    | Method             | Dilution | Analysis Date/Time | By  | Cntr |
|-------------|--------|------|-------|------|------|-------|--------------------|----------|--------------------|-----|------|
| 1,4-Dioxane | 0.20U  | U    | ug/L  | 0.50 | 0.20 | 0.068 | SW846 8270E<br>SIM | 1        | 08/12/2024 16:15   | S7M | E    |

SURROGATES

| Compound               | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|------------------------|------------|----------|-----------|--------------------|------------|
| 2-Methylnapthalene-d10 | 7297-45-2  | 84.7%    | 29 – 112  | 08/12/2024 16:15   |            |
| Fluoranthene-d10       | 93951-69-0 | 103%     | 45 – 130  | 08/12/2024 16:15   |            |

VOLATILE ORGANICS

| Compound                    | Result | Flag | Units | LOQ | LOD  | DL   | Method      | Dilution | Analysis Date/Time | By  | Cntr |
|-----------------------------|--------|------|-------|-----|------|------|-------------|----------|--------------------|-----|------|
| 1,1,1,2-Tetrachloroethane   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| 1,1,1-Trichloroethane       | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| 1,1,2,2-Tetrachloroethane   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| 1,1,2-Trichloroethane       | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| 1,1-Dichloroethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| 1,1-Dichloroethene          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| 1,2,3-Trichloropropane      | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| 1,2-Dibromo-3-chloropropane | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| 1,2-Dibromoethane           | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| 1,2-Dichlorobenzene         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| 1,2-Dichloroethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| 1,2-Dichloropropane         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| 1,4-Dichlorobenzene         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| 2-Butanone                  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| 2-Hexanone                  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| 4-Methyl-2-Pentanone(MIBK)  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Acetone                     | 5.1    |      | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Acrylonitrile               | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Benzene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Bromochloromethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Bromodichloromethane        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Bromoform                   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Bromomethane                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Carbon Disulfide            | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Carbon Tetrachloride        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Chlorobenzene               | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Chlorodibromomethane        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Chloroethane                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Chloroform                  | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Chloromethane               | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| cis-1,2-Dichloroethene      | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Dibromomethane              | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Ethylbenzene                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Iodomethane                 | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Methylene Chloride          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | EB-080624  | Collected   | 08/06/2024 16:40 |
| Lab Sample ID    | 3372682010 | Lab Receipt | 08/08/2024 08:47 |

VOLATILE ORGANICS (cont.)

| Compound                    | Result | Flag | Units | LOQ | LOD  | DL   | Method      | Dilution | Analysis Date/Time | By  | Cntr |
|-----------------------------|--------|------|-------|-----|------|------|-------------|----------|--------------------|-----|------|
| mp-Xylene                   | 1.5U   | U    | ug/L  | 2.0 | 1.5  | 0.66 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| o-Xylene                    | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Styrene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Tetrachloroethene           | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Toluene                     | 0.42J  | J    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Total Xylenes               | 2.3U   | U    | ug/L  | 3.0 | 2.3  | 1.0  | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| trans-1,2-Dichloroethene    | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| trans-1,3-Dichloropropene   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| trans-1,4-Dichloro-2-butene | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.35 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Trichloroethene             | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Trichlorofluoromethane      | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Vinyl Acetate               | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |
| Vinyl Chloride              | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:46   | TMP | A    |

SURROGATES

| Compound              | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|-----------------------|------------|----------|-----------|--------------------|------------|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 99.5%    | 81 – 118  | 08/16/2024 12:46   |            |
| 4-Bromofluorobenzene  | 460-00-4   | 96.1%    | 85 – 114  | 08/16/2024 12:46   |            |
| Dibromofluoromethane  | 1868-53-7  | 93.1%    | 80 – 119  | 08/16/2024 12:46   |            |
| Toluene-d8            | 2037-26-5  | 97.5%    | 89 – 112  | 08/16/2024 12:46   |            |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | JC-2       | Collected   | 08/05/2024 09:20 |
| Lab Sample ID    | 3372682011 | Lab Receipt | 08/08/2024 08:47 |

SEMIVOLATILE SIM

| Compound    | Result | Flag | Units | LOQ  | LOD  | DL    | Method             | Dilution | Analysis Date/Time | By  | Cntr |
|-------------|--------|------|-------|------|------|-------|--------------------|----------|--------------------|-----|------|
| 1,4-Dioxane | 0.23J  | J    | ug/L  | 0.50 | 0.20 | 0.068 | SW846 8270E<br>SIM | 1        | 08/12/2024 09:27   | S7M | B    |

SURROGATES

| Compound               | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|------------------------|------------|----------|-----------|--------------------|------------|
| 2-Methylnapthalene-d10 | 7297-45-2  | 79.1%    | 29 – 112  | 08/12/2024 09:27   |            |
| Fluoranthene-d10       | 93951-69-0 | 118%     | 45 – 130  | 08/12/2024 09:27   |            |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | JC-2C      | Collected   | 08/05/2024 09:20 |
| Lab Sample ID    | 3372682012 | Lab Receipt | 08/08/2024 08:47 |

SEMIVOLATILE SIM

| Compound    | Result | Flag | Units | LOQ  | LOD  | DL    | Method             | Dilution | Analysis Date/Time | By  | Cntr |
|-------------|--------|------|-------|------|------|-------|--------------------|----------|--------------------|-----|------|
| 1,4-Dioxane | 0.37J  | J    | ug/L  | 0.50 | 0.20 | 0.068 | SW846 8270E<br>SIM | 1        | 08/12/2024 09:54   | S7M | B    |

SURROGATES

| Compound               | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|------------------------|------------|----------|-----------|--------------------|------------|
| 2-Methylnapthalene-d10 | 7297-45-2  | 92.9%    | 29 – 112  | 08/12/2024 09:54   |            |
| Fluoranthene-d10       | 93951-69-0 | 113%     | 45 – 130  | 08/12/2024 09:54   |            |



Results

|                  |                |             |                  |
|------------------|----------------|-------------|------------------|
| Client Sample ID | Post-Treatment | Collected   | 08/05/2024 09:50 |
| Lab Sample ID    | 3372682013     | Lab Receipt | 08/08/2024 08:47 |

SEMIVOLATILE SIM

| Compound    | Result | Flag | Units | LOQ  | LOD  | DL    | Method             | Dilution | Analysis Date/Time | By  | Cntr |
|-------------|--------|------|-------|------|------|-------|--------------------|----------|--------------------|-----|------|
| 1,4-Dioxane | 0.32J  | J    | ug/L  | 0.50 | 0.20 | 0.068 | SW846 8270E<br>SIM | 1        | 08/12/2024 10:48   | S7M | B    |

SURROGATES

| Compound               | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|------------------------|------------|----------|-----------|--------------------|------------|
| 2-Methylnapthalene-d10 | 7297-45-2  | 85.7%    | 29 – 112  | 08/12/2024 10:48   |            |
| Fluoranthene-d10       | 93951-69-0 | 113%     | 45 – 130  | 08/12/2024 10:48   |            |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | Trip-Blank | Collected   | 08/05/2024 00:00 |
| Lab Sample ID    | 3372682014 | Lab Receipt | 08/08/2024 08:47 |

VOLATILE ORGANICS

| Compound                    | Result | Flag | Units | LOQ | LOD  | DL   | Method      | Dilution | Analysis Date/Time | By  | Cntr |
|-----------------------------|--------|------|-------|-----|------|------|-------------|----------|--------------------|-----|------|
| 1,1,1,2-Tetrachloroethane   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| 1,1,1-Trichloroethane       | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| 1,1,2,2-Tetrachloroethane   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| 1,1,2-Trichloroethane       | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| 1,1-Dichloroethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| 1,1-Dichloroethene          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| 1,2,3-Trichloropropane      | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| 1,2-Dibromo-3-chloropropane | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| 1,2-Dibromoethane           | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| 1,2-Dichlorobenzene         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| 1,2-Dichloroethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| 1,2-Dichloropropane         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| 1,4-Dichlorobenzene         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| 2-Butanone                  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| 2-Hexanone                  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| 4-Methyl-2-Pentanone(MIBK)  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| Acetone                     | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| Acrylonitrile               | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| Benzene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| Bromochloromethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| Bromodichloromethane        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| Bromoform                   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| Bromomethane                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| Carbon Disulfide            | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| Carbon Tetrachloride        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| Chlorobenzene               | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| Chlorodibromomethane        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| Chloroethane                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| Chloroform                  | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| Chloromethane               | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| cis-1,2-Dichloroethene      | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| Dibromomethane              | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| Ethylbenzene                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| Iodomethane                 | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| Methylene Chloride          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| mp-Xylene                   | 1.5U   | U    | ug/L  | 2.0 | 1.5  | 0.66 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| o-Xylene                    | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| Styrene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| Tetrachloroethene           | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| Toluene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| Total Xylenes               | 2.3U   | U    | ug/L  | 3.0 | 2.3  | 1.0  | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| trans-1,2-Dichloroethene    | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| trans-1,3-Dichloropropene   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| trans-1,4-Dichloro-2-butene | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.35 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| Trichloroethene             | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| Trichlorofluoromethane      | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |
| Vinyl Acetate               | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | Trip-Blank | Collected   | 08/05/2024 00:00 |
| Lab Sample ID    | 3372682014 | Lab Receipt | 08/08/2024 08:47 |

VOLATILE ORGANICS (cont.)

| Compound       | Result | Flag | Units | LOQ | LOD  | DL   | Method      | Dilution | Analysis Date/Time | By  | Cntr |
|----------------|--------|------|-------|-----|------|------|-------------|----------|--------------------|-----|------|
| Vinyl Chloride | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 12:06   | TMP | A    |

SURROGATES

| Compound              | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|-----------------------|------------|----------|-----------|--------------------|------------|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 100%     | 81 – 118  | 08/16/2024 12:06   |            |
| 4-Bromofluorobenzene  | 460-00-4   | 101%     | 85 – 114  | 08/16/2024 12:06   |            |
| Dibromofluoromethane  | 1868-53-7  | 96.3%    | 80 – 119  | 08/16/2024 12:06   |            |
| Toluene-d8            | 2037-26-5  | 100%     | 89 – 112  | 08/16/2024 12:06   |            |



Sample - Method Cross Reference Table

| Lab ID     | Sample ID      | Analysis Method                | Preparation Method | Leachate Method |
|------------|----------------|--------------------------------|--------------------|-----------------|
| 3372682001 | DW-9           | SW846 8270E SIM<br>SW846 8260D | SW846 3510C<br>N/A |                 |
| 3372682002 | DW-3           | SW846 8270E SIM<br>SW846 8260D | SW846 3510C<br>N/A |                 |
| 3372682003 | SW-9           | SW846 8270E SIM<br>SW846 8260D | SW846 3510C<br>N/A |                 |
| 3372682004 | SW-4RE         | SW846 8270E SIM<br>SW846 8260D | SW846 3510C<br>N/A |                 |
| 3372682005 | URS-3D         | SW846 8270E SIM<br>SW846 8260D | SW846 3510C<br>N/A |                 |
| 3372682006 | URS-3DC        | SW846 8270E SIM<br>SW846 8260D | SW846 3510C<br>N/A |                 |
| 3372682007 | SW-7RE         | SW846 8270E SIM<br>SW846 8260D | SW846 3510C<br>N/A |                 |
| 3372682008 | URS-2D         | SW846 8270E SIM<br>SW846 8260D | SW846 3510C<br>N/A |                 |
| 3372682009 | FB-080624      | SW846 8270E SIM<br>SW846 8260D | SW846 3510C<br>N/A |                 |
| 3372682010 | EB-080624      | SW846 8270E SIM<br>SW846 8260D | SW846 3510C<br>N/A |                 |
| 3372682011 | JC-2           | SW846 8270E SIM                | SW846 3510C        |                 |
| 3372682012 | JC-2C          | SW846 8270E SIM                | SW846 3510C        |                 |
| 3372682013 | Post-Treatment | SW846 8270E SIM                | SW846 3510C        |                 |
| 3372682014 | Trip-Blank     | SW846 8260D                    | N/A                |                 |



QUALITY CONTROL SAMPLES

SEMIVOLATILE SIM

QC Batch

|          |                  |                 |                 |
|----------|------------------|-----------------|-----------------|
| QC Batch | 1272216          | Prep Method     | SW846 3510C     |
| Date     | 08/11/2024 14:45 | Analysis Method | SW846 8270E SIM |
| Tech.    | BMP              |                 |                 |

Associated Samples

|            |            |            |            |
|------------|------------|------------|------------|
| 3372682001 | 3372682002 | 3372682003 | 3372682004 |
| 3372682005 | 3372682006 | 3372682007 | 3372682008 |
| 3372682009 | 3372682010 | 3372682011 | 3372682012 |
| 3372682013 |            |            |            |

Method Blank 3863522 (MB) Created on 08/11/2024 12:15 For QC Batch 1272216

RESULTS

| Compound    | CAS No   |     | Result | Units | LOQ  | Qualifiers |
|-------------|----------|-----|--------|-------|------|------------|
| 1,4-Dioxane | 123-91-1 | BLK | 0.20U  | ug/L  | 0.50 | U          |

SURROGATES

| Compound               | CAS No     |     | Result<br>(ug/L) | Expected<br>(ug/L) | Rec.<br>(%) | Limits (%) | Qualifiers |
|------------------------|------------|-----|------------------|--------------------|-------------|------------|------------|
| 2-Methylnapthalene-d10 | 7297-45-2  | BLK | 0.84             | 1                  | 84.4        | 29 - 112   |            |
| Fluoranthene-d10       | 93951-69-0 | BLK | 1.10             | 1                  | 107         | 45 - 130   |            |

Lab Control Standard 3863523 (LCS) Created on 08/11/2024 12:15 For QC Batch 1272216

RESULTS

| Compound    | CAS No   |     | Result<br>(ug/L) | Orig.<br>Result<br>(ug/L) | Spk<br>Added<br>(ug/L) | Rec.<br>(%) | Limits (%) | RPD Limit (%) | Qualifiers |
|-------------|----------|-----|------------------|---------------------------|------------------------|-------------|------------|---------------|------------|
| 1,4-Dioxane | 123-91-1 | LCS | 0.67             |                           | 1                      | 67          | 22 - 75    |               |            |

SURROGATES

| Compound               | CAS No     |     | Result<br>(ug/L) | Expected<br>(ug/L) | Rec.<br>(%) | Limits (%) | Qualifiers |
|------------------------|------------|-----|------------------|--------------------|-------------|------------|------------|
| 2-Methylnapthalene-d10 | 7297-45-2  | LCS | 1                | 1                  | 100         | 29 - 112   |            |
| Fluoranthene-d10       | 93951-69-0 | LCS | 1.20             | 1                  | 118         | 45 - 130   |            |

Matrix Spike 3863524 (MS) 3372682004 For QC Batch 1272216

\*\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Matrix Spike Duplicate 3863525 (MSD) 3372682004 For QC Batch 1272216

RESULTS

| Compound    | CAS No   |     | Result<br>(ug/L) | Orig.<br>Result<br>(ug/L) | Spk<br>Added<br>(ug/L) | Rec.<br>(%) | Limits (%) | RPD Limit (%)     | Qualifiers |
|-------------|----------|-----|------------------|---------------------------|------------------------|-------------|------------|-------------------|------------|
| 1,4-Dioxane | 123-91-1 | MS  | 0.97             | 0.41                      | 1                      | 56.2        | 22 - 75    |                   |            |
| 1,4-Dioxane | 123-91-1 | MSD | 1                | 0.41                      | 1                      | 63.1        | 22 - 75    | RPD 6.89 (Max-30) |            |



QUALITY CONTROL SAMPLES

SEMIVOLATILE SIM (cont.)

SURROGATES

| Compound               | CAS No     |     | Result<br>(ug/L) | Expected<br>(ug/L) | Rec.<br>(%) | Limits (%) | Qualifiers |
|------------------------|------------|-----|------------------|--------------------|-------------|------------|------------|
| 2-Methylnapthalene-d10 | 7297-45-2  | MS  | 0.86             | 1                  | 85.7        | 29 - 112   |            |
| 2-Methylnapthalene-d10 | 7297-45-2  | MSD | 0.91             | 1                  | 90.7        | 29 - 112   |            |
| Fluoranthene-d10       | 93951-69-0 | MS  | 1.10             | 1                  | 109         | 45 - 130   |            |
| Fluoranthene-d10       | 93951-69-0 | MSD | 1                | 1                  | 104         | 45 - 130   |            |



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS

QC Batch

|          |         |                 |             |
|----------|---------|-----------------|-------------|
| QC Batch | 1277070 | Prep Method     | N/A         |
| Date     | N/A     | Analysis Method | SW846 8260D |
| Tech.    |         |                 |             |

Associated Samples

|            |            |            |            |
|------------|------------|------------|------------|
| 3372682001 | 3372682002 | 3372682003 | 3372682004 |
| 3372682005 | 3372682006 | 3372682007 | 3372682008 |
| 3372682009 | 3372682010 | 3372682014 |            |

Matrix Spike 3864890 (MS) 3372682004 For QC Batch 1277070

\*\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Matrix Spike Duplicate 3864891 (MSD) 3372682004 For QC Batch 1277070

RESULTS

| Compound                    | CAS No   |     | Result<br>(ug/L) | Orig.<br>Result<br>(ug/L) | Spk<br>Added<br>(ug/L) | Rec.<br>(%) | Limits (%) | RPD Limit (%)     | Qualifiers |
|-----------------------------|----------|-----|------------------|---------------------------|------------------------|-------------|------------|-------------------|------------|
| 1,1,1,2-Tetrachloroethane   | 630-20-6 | MS  | 19.90            | 0                         | 20                     | 99.5        | 78 - 124   |                   |            |
| 1,1,1,2-Tetrachloroethane   | 630-20-6 | MSD | 20.80            | 0                         | 20                     | 104         | 78 - 124   | RPD 4.48 (Max-30) |            |
| 1,1,1-Trichloroethane       | 71-55-6  | MS  | 20.70            | 0.37                      | 20                     | 102         | 74 - 131   |                   |            |
| 1,1,1-Trichloroethane       | 71-55-6  | MSD | 22               | 0.37                      | 20                     | 108         | 74 - 131   | RPD 5.95 (Max-30) |            |
| 1,1,2,2-Tetrachloroethane   | 79-34-5  | MS  | 20.50            | 0                         | 20                     | 103         | 71 - 121   |                   |            |
| 1,1,2,2-Tetrachloroethane   | 79-34-5  | MSD | 21.40            | 0                         | 20                     | 107         | 71 - 121   | RPD 4.16 (Max-30) |            |
| 1,1,2-Trichloroethane       | 79-00-5  | MS  | 19.90            | 0                         | 20                     | 99.3        | 80 - 119   |                   |            |
| 1,1,2-Trichloroethane       | 79-00-5  | MSD | 20.20            | 0                         | 20                     | 101         | 80 - 119   | RPD 1.51 (Max-30) |            |
| 1,1-Dichloroethane          | 75-34-3  | MS  | 20.70            | 0.31                      | 20                     | 102         | 77 - 125   |                   |            |
| 1,1-Dichloroethane          | 75-34-3  | MSD | 21.90            | 0.31                      | 20                     | 108         | 77 - 125   | RPD 5.45 (Max-30) |            |
| 1,1-Dichloroethene          | 75-35-4  | MS  | 22.40            | 0                         | 20                     | 112         | 71 - 131   |                   |            |
| 1,1-Dichloroethene          | 75-35-4  | MSD | 23.60            | 0                         | 20                     | 118         | 71 - 131   | RPD 5.09 (Max-30) |            |
| 1,2,3-Trichloropropane      | 96-18-4  | MS  | 19.30            | 0                         | 20                     | 96.3        | 73 - 122   |                   |            |
| 1,2,3-Trichloropropane      | 96-18-4  | MSD | 20.30            | 0                         | 20                     | 102         | 73 - 122   | RPD 5.42 (Max-30) |            |
| 1,2-Dibromo-3-chloropropane | 96-12-8  | MS  | 18.30            | 0                         | 20                     | 91.4        | 62 - 128   |                   |            |
| 1,2-Dibromo-3-chloropropane | 96-12-8  | MSD | 19.50            | 0                         | 20                     | 97.5        | 62 - 128   | RPD 6.42 (Max-30) |            |
| 1,2-Dibromoethane           | 106-93-4 | MS  | 19.10            | 0                         | 20                     | 95.4        | 77 - 121   |                   |            |
| 1,2-Dibromoethane           | 106-93-4 | MSD | 20               | 0                         | 20                     | 100         | 77 - 121   | RPD 4.77 (Max-30) |            |
| 1,2-Dichlorobenzene         | 95-50-1  | MS  | 19.30            | 0                         | 20                     | 96.3        | 80 - 119   |                   |            |
| 1,2-Dichlorobenzene         | 95-50-1  | MSD | 20.50            | 0                         | 20                     | 102         | 80 - 119   | RPD 6.26 (Max-30) |            |
| 1,2-Dichloroethane          | 107-06-2 | MS  | 18.80            | 0                         | 20                     | 93.8        | 73 - 128   |                   |            |
| 1,2-Dichloroethane          | 107-06-2 | MSD | 19.70            | 0                         | 20                     | 98.7        | 73 - 128   | RPD 5.13 (Max-30) |            |
| 1,2-Dichloropropane         | 78-87-5  | MS  | 20.30            | 0                         | 20                     | 101         | 78 - 122   |                   |            |
| 1,2-Dichloropropane         | 78-87-5  | MSD | 21.20            | 0                         | 20                     | 106         | 78 - 122   | RPD 4.21 (Max-30) |            |
| 1,4-Dichlorobenzene         | 106-46-7 | MS  | 18.90            | 0                         | 20                     | 94.5        | 79 - 118   |                   |            |
| 1,4-Dichlorobenzene         | 106-46-7 | MSD | 20.10            | 0                         | 20                     | 101         | 79 - 118   | RPD 6.19 (Max-30) |            |
| 2-Butanone                  | 78-93-3  | MS  | 88.20            | 0                         | 100                    | 88.2        | 56 - 143   |                   |            |
| 2-Butanone                  | 78-93-3  | MSD | 94.30            | 0                         | 100                    | 94.3        | 56 - 143   | RPD 6.63 (Max-30) |            |
| 2-Hexanone                  | 591-78-6 | MS  | 102              | 0                         | 100                    | 102         | 57 - 139   |                   |            |
| 2-Hexanone                  | 591-78-6 | MSD | 106              | 0                         | 100                    | 106         | 57 - 139   | RPD 3.59 (Max-30) |            |
| 4-Methyl-2-Pentanone(MIBK)  | 108-10-1 | MS  | 102              | 0                         | 100                    | 102         | 67 - 130   |                   |            |
| 4-Methyl-2-Pentanone(MIBK)  | 108-10-1 | MSD | 106              | 0                         | 100                    | 106         | 67 - 130   | RPD 3.45 (Max-30) |            |
| Acetone                     | 67-64-1  | MS  | 89.30            | 0                         | 100                    | 89.3        | 39 - 160   |                   |            |
| Acetone                     | 67-64-1  | MSD | 93.10            | 0                         | 100                    | 93.1        | 39 - 160   | RPD 4.19 (Max-30) |            |
| Acrylonitrile               | 107-13-1 | MS  | 101              | 0                         | 100                    | 101         | 63 - 135   |                   |            |



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

| Compound                 | CAS No        |     | Result<br>(ug/L) | Orig.<br>Result<br>(ug/L) | Spk<br>Added<br>(ug/L) | Rec.<br>(%) | Limits (%) | RPD Limit (%)       | Qualifiers |
|--------------------------|---------------|-----|------------------|---------------------------|------------------------|-------------|------------|---------------------|------------|
| Acrylonitrile            | 107-13-1      | MSD | 111              | 0                         | 100                    | 111         | 63 - 135   | RPD 9.34 (Max-30)   |            |
| Benzene                  | 71-43-2       | MS  | 19.90            | 0                         | 20                     | 99.6        | 79 - 120   |                     |            |
| Benzene                  | 71-43-2       | MSD | 20.90            | 0                         | 20                     | 104         | 79 - 120   | RPD 4.73 (Max-30)   |            |
| Bromochloromethane       | 74-97-5       | MS  | 19.50            | 0                         | 20                     | 97.6        | 78 - 123   |                     |            |
| Bromochloromethane       | 74-97-5       | MSD | 20.80            | 0                         | 20                     | 104         | 78 - 123   | RPD 6.15 (Max-30)   |            |
| Bromodichloromethane     | 75-27-4       | MS  | 20.30            | 0                         | 20                     | 101         | 79 - 125   |                     |            |
| Bromodichloromethane     | 75-27-4       | MSD | 21.60            | 0                         | 20                     | 108         | 79 - 125   | RPD 6.46 (Max-30)   |            |
| Bromoform                | 75-25-2       | MS  | 16.90            | 0                         | 20                     | 84.7        | 66 - 130   |                     |            |
| Bromoform                | 75-25-2       | MSD | 17.70            | 0                         | 20                     | 88.3        | 66 - 130   | RPD 4.16 (Max-30)   |            |
| Bromomethane             | 74-83-9       | MS  | 10.20            | 0                         | 20                     | 51.1*       | 53 - 141   |                     |            |
| Bromomethane             | 74-83-9       | MSD | 12.70            | 0                         | 20                     | 63.4        | 53 - 141   | RPD 21.40 (Max-30)  |            |
| Carbon Disulfide         | 75-15-0       | MS  | 20.80            | 0                         | 20                     | 104         | 64 - 133   |                     |            |
| Carbon Disulfide         | 75-15-0       | MSD | 22.30            | 0                         | 20                     | 112         | 64 - 133   | RPD 6.88 (Max-30)   |            |
| Carbon Tetrachloride     | 56-23-5       | MS  | 19.70            | 0                         | 20                     | 98.6        | 72 - 136   |                     |            |
| Carbon Tetrachloride     | 56-23-5       | MSD | 20.60            | 0                         | 20                     | 103         | 72 - 136   | RPD 4.46 (Max-30)   |            |
| Chlorobenzene            | 108-90-7      | MS  | 19.30            | 0                         | 20                     | 96.5        | 82 - 118   |                     |            |
| Chlorobenzene            | 108-90-7      | MSD | 20.20            | 0                         | 20                     | 101         | 82 - 118   | RPD 4.75 (Max-30)   |            |
| Chlorodibromomethane     | 124-48-1      | MS  | 19.20            | 0                         | 20                     | 96          | 74 - 126   |                     |            |
| Chlorodibromomethane     | 124-48-1      | MSD | 20.30            | 0                         | 20                     | 102         | 74 - 126   | RPD 5.71 (Max-30)   |            |
| Chloroethane             | 75-00-3       | MS  | 18.10            | 0                         | 20                     | 90.7        | 60 - 138   |                     |            |
| Chloroethane             | 75-00-3       | MSD | 18.10            | 0                         | 20                     | 90.5        | 60 - 138   | RPD 0.25 (Max-30)   |            |
| Chloroform               | 67-66-3       | MS  | 19.30            | 0                         | 20                     | 96.6        | 79 - 124   |                     |            |
| Chloroform               | 67-66-3       | MSD | 20.10            | 0                         | 20                     | 101         | 79 - 124   | RPD 4.03 (Max-30)   |            |
| Chloromethane            | 74-87-3       | MS  | 18.40            | 0                         | 20                     | 92          | 50 - 139   |                     |            |
| Chloromethane            | 74-87-3       | MSD | 20.30            | 0                         | 20                     | 102         | 50 - 139   | RPD 9.89 (Max-30)   |            |
| cis-1,2-Dichloroethene   | 156-59-2      | MS  | 22.90            | 0.73                      | 20                     | 111         | 78 - 123   |                     |            |
| cis-1,2-Dichloroethene   | 156-59-2      | MSD | 22.90            | 0.73                      | 20                     | 111         | 78 - 123   | RPD 0.36 (Max-30)   |            |
| Dibromomethane           | 74-95-3       | MS  | 19.20            | 0                         | 20                     | 95.9        | 79 - 123   |                     |            |
| Dibromomethane           | 74-95-3       | MSD | 20.40            | 0                         | 20                     | 102         | 79 - 123   | RPD 6.11 (Max-30)   |            |
| Ethylbenzene             | 100-41-4      | MS  | 19.50            | 0                         | 20                     | 97.3        | 79 - 121   |                     |            |
| Ethylbenzene             | 100-41-4      | MSD | 20.60            | 0                         | 20                     | 103         | 79 - 121   | RPD 5.54 (Max-30)   |            |
| Iodomethane              | 74-88-4       | MS  | 5.40             | 0                         | 20                     | 26.9*       | 69 - 131   |                     |            |
| Iodomethane              | 74-88-4       | MSD | 8.20             | 0                         | 20                     | 41.1*       | 69 - 131   | RPD 41.60* (Max-30) |            |
| Methylene Chloride       | 75-09-2       | MS  | 20.30            | 0                         | 20                     | 101         | 74 - 124   |                     |            |
| Methylene Chloride       | 75-09-2       | MSD | 21.20            | 0                         | 20                     | 106         | 74 - 124   | RPD 4.47 (Max-30)   |            |
| mp-Xylene                | 108383/106423 | MS  | 39.50            | 0                         | 40                     | 98.8        | 80 - 121   |                     |            |
| mp-Xylene                | 108383/106423 | MSD | 41.20            | 0                         | 40                     | 103         | 80 - 121   | RPD 4.06 (Max-30)   |            |
| o-Xylene                 | 95-47-6       | MS  | 19.80            | 0                         | 20                     | 99.2        | 78 - 122   |                     |            |
| o-Xylene                 | 95-47-6       | MSD | 20.70            | 0                         | 20                     | 104         | 78 - 122   | RPD 4.32 (Max-30)   |            |
| Styrene                  | 100-42-5      | MS  | 20.80            | 0                         | 20                     | 104         | 78 - 123   |                     |            |
| Styrene                  | 100-42-5      | MSD | 21.70            | 0                         | 20                     | 108         | 78 - 123   | RPD 4.44 (Max-30)   |            |
| Tetrachloroethene        | 127-18-4      | MS  | 16.20            | 0                         | 20                     | 80.8        | 74 - 129   |                     |            |
| Tetrachloroethene        | 127-18-4      | MSD | 17.10            | 0                         | 20                     | 85.5        | 74 - 129   | RPD 5.69 (Max-30)   |            |
| Toluene                  | 108-88-3      | MS  | 19.60            | 0                         | 20                     | 97.9        | 80 - 121   |                     |            |
| Toluene                  | 108-88-3      | MSD | 20.60            | 0                         | 20                     | 103         | 80 - 121   | RPD 4.98 (Max-30)   |            |
| Total Xylenes            | 1330-20-7     | MS  | 59.40            | 0                         | 60                     | 98.9        | 79 - 121   |                     |            |
| Total Xylenes            | 1330-20-7     | MSD | 61.90            | 0                         | 60                     | 103         | 79 - 121   | RPD 4.15 (Max-30)   |            |
| trans-1,2-Dichloroethene | 156-60-5      | MS  | 20.90            | 0                         | 20                     | 104         | 75 - 124   |                     |            |
| trans-1,2-Dichloroethene | 156-60-5      | MSD | 21.90            | 0                         | 20                     | 109         | 75 - 124   | RPD 4.69 (Max-30)   |            |



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

| Compound                    | CAS No     |     | Result<br>(ug/L) | Orig.<br>Result<br>(ug/L) | Spk<br>Added<br>(ug/L) | Rec.<br>(%) | Limits (%) | RPD Limit (%)     | Qualifiers |
|-----------------------------|------------|-----|------------------|---------------------------|------------------------|-------------|------------|-------------------|------------|
| trans-1,3-Dichloropropene   | 10061-02-6 | MS  | 20               | 0                         | 20                     | 100         | 73 - 127   |                   |            |
| trans-1,3-Dichloropropene   | 10061-02-6 | MSD | 20.90            | 0                         | 20                     | 104         | 73 - 127   | RPD 4.21 (Max-30) |            |
| trans-1,4-Dichloro-2-butene | 110-57-6   | MS  | 17.90            | 0                         | 20                     | 89.7        | 43 - 140   |                   |            |
| trans-1,4-Dichloro-2-butene | 110-57-6   | MSD | 19               | 0                         | 20                     | 94.9        | 43 - 140   | RPD 5.63 (Max-30) |            |
| Trichloroethene             | 79-01-6    | MS  | 22.60            | 3.90                      | 20                     | 93.5        | 79 - 123   |                   |            |
| Trichloroethene             | 79-01-6    | MSD | 23.40            | 3.90                      | 20                     | 97.4        | 79 - 123   | RPD 3.45 (Max-30) |            |
| Trichlorofluoromethane      | 75-69-4    | MS  | 19.80            | 0                         | 20                     | 98.9        | 65 - 141   |                   |            |
| Trichlorofluoromethane      | 75-69-4    | MSD | 20.30            | 0                         | 20                     | 102         | 65 - 141   | RPD 2.82 (Max-30) |            |
| Vinyl Acetate               | 108-05-4   | MS  | 16               | 0                         | 20                     | 80.1        | 54 - 146   |                   |            |
| Vinyl Acetate               | 108-05-4   | MSD | 16.90            | 0                         | 20                     | 84.3        | 54 - 146   | RPD 5.11 (Max-30) |            |
| Vinyl Chloride              | 75-01-4    | MS  | 21.10            | 0                         | 20                     | 106         | 58 - 137   |                   |            |
| Vinyl Chloride              | 75-01-4    | MSD | 21.50            | 0                         | 20                     | 108         | 58 - 137   | RPD 1.94 (Max-30) |            |

SURROGATES

| Compound              | CAS No     |     | Result<br>(ug/L) | Expected<br>(ug/L) | Rec.<br>(%) | Limits (%) | Qualifiers |
|-----------------------|------------|-----|------------------|--------------------|-------------|------------|------------|
| 1,2-Dichloroethane-d4 | 17060-07-0 | MS  | 32.80            | 30                 | 109         | 81 - 118   |            |
| 1,2-Dichloroethane-d4 | 17060-07-0 | MSD | 31.50            | 30                 | 105         | 81 - 118   |            |
| 4-Bromofluorobenzene  | 460-00-4   | MS  | 31.10            | 30                 | 104         | 85 - 114   |            |
| 4-Bromofluorobenzene  | 460-00-4   | MSD | 29.10            | 30                 | 97.1        | 85 - 114   |            |
| Dibromofluoromethane  | 1868-53-7  | MS  | 31.60            | 30                 | 105         | 80 - 119   |            |
| Dibromofluoromethane  | 1868-53-7  | MSD | 30               | 30                 | 100         | 80 - 119   |            |
| Toluene-d8            | 2037-26-5  | MS  | 31.50            | 30                 | 105         | 89 - 112   |            |
| Toluene-d8            | 2037-26-5  | MSD | 29.50            | 30                 | 98.3        | 89 - 112   |            |

Method Blank 3866109 (MB) Created on 08/16/2024 09:33 For QC Batch 1277070

RESULTS

| Compound                    | CAS No   |     | Result | Units | LOQ | Qualifiers |
|-----------------------------|----------|-----|--------|-------|-----|------------|
| 1,1,1,2-Tetrachloroethane   | 630-20-6 | BLK | 0.75U  | ug/L  | 1.0 | U          |
| 1,1,1-Trichloroethane       | 71-55-6  | BLK | 0.75U  | ug/L  | 1.0 | U          |
| 1,1,2,2-Tetrachloroethane   | 79-34-5  | BLK | 0.75U  | ug/L  | 1.0 | U          |
| 1,1,2-Trichloroethane       | 79-00-5  | BLK | 0.75U  | ug/L  | 1.0 | U          |
| 1,1-Dichloroethane          | 75-34-3  | BLK | 0.75U  | ug/L  | 1.0 | U          |
| 1,1-Dichloroethene          | 75-35-4  | BLK | 0.75U  | ug/L  | 1.0 | U          |
| 1,2,3-Trichloropropane      | 96-18-4  | BLK | 2.5U   | ug/L  | 5.0 | U          |
| 1,2-Dibromo-3-chloropropane | 96-12-8  | BLK | 2.5U   | ug/L  | 5.0 | U          |
| 1,2-Dibromoethane           | 106-93-4 | BLK | 0.75U  | ug/L  | 1.0 | U          |
| 1,2-Dichlorobenzene         | 95-50-1  | BLK | 0.75U  | ug/L  | 1.0 | U          |
| 1,2-Dichloroethane          | 107-06-2 | BLK | 0.75U  | ug/L  | 1.0 | U          |
| 1,2-Dichloropropane         | 78-87-5  | BLK | 0.75U  | ug/L  | 1.0 | U          |
| 1,4-Dichlorobenzene         | 106-46-7 | BLK | 0.75U  | ug/L  | 1.0 | U          |
| 2-Butanone                  | 78-93-3  | BLK | 3.8U   | ug/L  | 5.0 | U          |
| 2-Hexanone                  | 591-78-6 | BLK | 3.8U   | ug/L  | 5.0 | U          |
| 4-Methyl-2-Pentanone(MIBK)  | 108-10-1 | BLK | 3.8U   | ug/L  | 5.0 | U          |



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

| Compound                    | CAS No        |     | Result | Units | LOQ | Qualifiers |
|-----------------------------|---------------|-----|--------|-------|-----|------------|
| Acetone                     | 67-64-1       | BLK | 3.8U   | ug/L  | 5.0 | U          |
| Acrylonitrile               | 107-13-1      | BLK | 3.8U   | ug/L  | 5.0 | U          |
| Benzene                     | 71-43-2       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Bromochloromethane          | 74-97-5       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Bromodichloromethane        | 75-27-4       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Bromoform                   | 75-25-2       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Bromomethane                | 74-83-9       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Carbon Disulfide            | 75-15-0       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Carbon Tetrachloride        | 56-23-5       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Chlorobenzene               | 108-90-7      | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Chlorodibromomethane        | 124-48-1      | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Chloroethane                | 75-00-3       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Chloroform                  | 67-66-3       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Chloromethane               | 74-87-3       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| cis-1,2-Dichloroethene      | 156-59-2      | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Dibromomethane              | 74-95-3       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Ethylbenzene                | 100-41-4      | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Iodomethane                 | 74-88-4       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Methylene Chloride          | 75-09-2       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| mp-Xylene                   | 108383/106423 | BLK | 1.5U   | ug/L  | 2.0 | U          |
| o-Xylene                    | 95-47-6       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Styrene                     | 100-42-5      | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Tetrachloroethene           | 127-18-4      | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Toluene                     | 108-88-3      | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Total Xylenes               | 1330-20-7     | BLK | 2.3U   | ug/L  | 3.0 | U          |
| trans-1,2-Dichloroethene    | 156-60-5      | BLK | 0.75U  | ug/L  | 1.0 | U          |
| trans-1,3-Dichloropropene   | 10061-02-6    | BLK | 0.75U  | ug/L  | 1.0 | U          |
| trans-1,4-Dichloro-2-butene | 110-57-6      | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Trichloroethene             | 79-01-6       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Trichlorofluoromethane      | 75-69-4       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Vinyl Acetate               | 108-05-4      | BLK | 2.5U   | ug/L  | 5.0 | U          |
| Vinyl Chloride              | 75-01-4       | BLK | 0.75U  | ug/L  | 1.0 | U          |

SURROGATES

| Compound              | CAS No     |     | Result<br>(ug/L) | Expected<br>(ug/L) | Rec.<br>(%) | Limits (%) | Qualifiers |
|-----------------------|------------|-----|------------------|--------------------|-------------|------------|------------|
| 1,2-Dichloroethane-d4 | 17060-07-0 | BLK | 29.90            | 30                 | 99.6        | 81 - 118   |            |
| 4-Bromofluorobenzene  | 460-00-4   | BLK | 29.80            | 30                 | 99.2        | 85 - 114   |            |
| Dibromofluoromethane  | 1868-53-7  | BLK | 28.90            | 30                 | 96.4        | 80 - 119   |            |
| Toluene-d8            | 2037-26-5  | BLK | 30.10            | 30                 | 100         | 89 - 112   |            |

Lab Control Standard 3866110 (LCS) Created on 08/16/2024 09:33 For QC Batch 1277070

RESULTS

| Compound | CAS No | Result<br>(ug/L) | Orig.<br>Result<br>(ug/L) | Spk<br>Added<br>(ug/L) | Rec.<br>(%) | Limits (%) | RPD Limit (%) | Qualifiers |
|----------|--------|------------------|---------------------------|------------------------|-------------|------------|---------------|------------|
|----------|--------|------------------|---------------------------|------------------------|-------------|------------|---------------|------------|



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

| Compound                    | CAS No        |     | Result<br>(ug/L) | Orig.<br>Result<br>(ug/L) | Spk<br>Added<br>(ug/L) | Rec.<br>(%) | Limits (%) | RPD Limit (%) | Qualifiers |
|-----------------------------|---------------|-----|------------------|---------------------------|------------------------|-------------|------------|---------------|------------|
| 1,1,1,2-Tetrachloroethane   | 630-20-6      | LCS | 20.10            |                           | 20                     | 100         | 78 - 124   |               |            |
| 1,1,1-Trichloroethane       | 71-55-6       | LCS | 20.80            |                           | 20                     | 104         | 74 - 131   |               |            |
| 1,1,2,2-Tetrachloroethane   | 79-34-5       | LCS | 20.40            |                           | 20                     | 102         | 71 - 121   |               |            |
| 1,1,2-Trichloroethane       | 79-00-5       | LCS | 19.50            |                           | 20                     | 97.4        | 80 - 119   |               |            |
| 1,1-Dichloroethane          | 75-34-3       | LCS | 20.30            |                           | 20                     | 102         | 77 - 125   |               |            |
| 1,1-Dichloroethene          | 75-35-4       | LCS | 22.30            |                           | 20                     | 111         | 71 - 131   |               |            |
| 1,2,3-Trichloropropane      | 96-18-4       | LCS | 19.30            |                           | 20                     | 96.5        | 73 - 122   |               |            |
| 1,2-Dibromo-3-chloropropane | 96-12-8       | LCS | 18.80            |                           | 20                     | 94.1        | 62 - 128   |               |            |
| 1,2-Dibromoethane           | 106-93-4      | LCS | 19.20            |                           | 20                     | 96.2        | 77 - 121   |               |            |
| 1,2-Dichlorobenzene         | 95-50-1       | LCS | 19.80            |                           | 20                     | 98.8        | 80 - 119   |               |            |
| 1,2-Dichloroethane          | 107-06-2      | LCS | 19.20            |                           | 20                     | 95.8        | 73 - 128   |               |            |
| 1,2-Dichloropropane         | 78-87-5       | LCS | 19.90            |                           | 20                     | 99.3        | 78 - 122   |               |            |
| 1,4-Dichlorobenzene         | 106-46-7      | LCS | 19.60            |                           | 20                     | 98.1        | 79 - 118   |               |            |
| 2-Butanone                  | 78-93-3       | LCS | 101              |                           | 100                    | 101         | 56 - 143   |               |            |
| 2-Hexanone                  | 591-78-6      | LCS | 104              |                           | 100                    | 104         | 57 - 139   |               |            |
| 4-Methyl-2-Pentanone(MIBK)  | 108-10-1      | LCS | 102              |                           | 100                    | 102         | 67 - 130   |               |            |
| Acetone                     | 67-64-1       | LCS | 106              |                           | 100                    | 106         | 39 - 160   |               |            |
| Acrylonitrile               | 107-13-1      | LCS | 103              |                           | 100                    | 103         | 63 - 135   |               |            |
| Benzene                     | 71-43-2       | LCS | 19.90            |                           | 20                     | 99.3        | 79 - 120   |               |            |
| Bromochloromethane          | 74-97-5       | LCS | 20.30            |                           | 20                     | 102         | 78 - 123   |               |            |
| Bromodichloromethane        | 75-27-4       | LCS | 20.70            |                           | 20                     | 104         | 79 - 125   |               |            |
| Bromoform                   | 75-25-2       | LCS | 17.30            |                           | 20                     | 86.7        | 66 - 130   |               |            |
| Bromomethane                | 74-83-9       | LCS | 18.10            |                           | 20                     | 90.4        | 53 - 141   |               |            |
| Carbon Disulfide            | 75-15-0       | LCS | 21.80            |                           | 20                     | 109         | 64 - 133   |               |            |
| Carbon Tetrachloride        | 56-23-5       | LCS | 20               |                           | 20                     | 99.9        | 72 - 136   |               |            |
| Chlorobenzene               | 108-90-7      | LCS | 19.30            |                           | 20                     | 96.6        | 82 - 118   |               |            |
| Chlorodibromomethane        | 124-48-1      | LCS | 19.60            |                           | 20                     | 97.8        | 74 - 126   |               |            |
| Chloroethane                | 75-00-3       | LCS | 17.50            |                           | 20                     | 87.4        | 60 - 138   |               |            |
| Chloroform                  | 67-66-3       | LCS | 19.40            |                           | 20                     | 97.2        | 79 - 124   |               |            |
| Chloromethane               | 74-87-3       | LCS | 22               |                           | 20                     | 110         | 50 - 139   |               |            |
| cis-1,2-Dichloroethene      | 156-59-2      | LCS | 20.30            |                           | 20                     | 102         | 78 - 123   |               |            |
| Dibromomethane              | 74-95-3       | LCS | 19.40            |                           | 20                     | 96.9        | 79 - 123   |               |            |
| Ethylbenzene                | 100-41-4      | LCS | 19.50            |                           | 20                     | 97.7        | 79 - 121   |               |            |
| Iodomethane                 | 74-88-4       | LCS | 15.20            |                           | 20                     | 75.8        | 69 - 131   |               |            |
| Methylene Chloride          | 75-09-2       | LCS | 20.20            |                           | 20                     | 101         | 74 - 124   |               |            |
| mp-Xylene                   | 108383/106423 | LCS | 40               |                           | 40                     | 100         | 80 - 121   |               |            |
| o-Xylene                    | 95-47-6       | LCS | 20               |                           | 20                     | 100         | 78 - 122   |               |            |
| Styrene                     | 100-42-5      | LCS | 20.90            |                           | 20                     | 105         | 78 - 123   |               |            |
| Tetrachloroethene           | 127-18-4      | LCS | 18               |                           | 20                     | 90.2        | 74 - 129   |               |            |
| Toluene                     | 108-88-3      | LCS | 19.50            |                           | 20                     | 97.7        | 80 - 121   |               |            |
| Total Xylenes               | 1330-20-7     | LCS | 60.10            |                           | 60                     | 100         | 79 - 121   |               |            |
| trans-1,2-Dichloroethene    | 156-60-5      | LCS | 21.10            |                           | 20                     | 106         | 75 - 124   |               |            |
| trans-1,3-Dichloropropene   | 10061-02-6    | LCS | 20.80            |                           | 20                     | 104         | 73 - 127   |               |            |
| trans-1,4-Dichloro-2-butene | 110-57-6      | LCS | 20.70            |                           | 20                     | 103         | 43 - 140   |               |            |
| Trichloroethene             | 79-01-6       | LCS | 19.20            |                           | 20                     | 96          | 79 - 123   |               |            |
| Trichlorofluoromethane      | 75-69-4       | LCS | 20.40            |                           | 20                     | 102         | 65 - 141   |               |            |
| Vinyl Acetate               | 108-05-4      | LCS | 20               |                           | 20                     | 100         | 54 - 146   |               |            |



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

| Compound       | CAS No  |     | Result<br>(ug/L) | Orig.<br>Result<br>(ug/L) | Spk<br>Added<br>(ug/L) | Rec.<br>(%) | Limits (%) | RPD Limit (%) | Qualifiers |
|----------------|---------|-----|------------------|---------------------------|------------------------|-------------|------------|---------------|------------|
| Vinyl Chloride | 75-01-4 | LCS | 21.70            |                           | 20                     | 109         | 58 - 137   |               |            |

SURROGATES

| Compound              | CAS No     |     | Result<br>(ug/L) | Expected<br>(ug/L) | Rec.<br>(%) | Limits (%) | Qualifiers |
|-----------------------|------------|-----|------------------|--------------------|-------------|------------|------------|
| 1,2-Dichloroethane-d4 | 17060-07-0 | LCS | 30.90            | 30                 | 103         | 81 - 118   |            |
| 4-Bromofluorobenzene  | 460-00-4   | LCS | 29.60            | 30                 | 98.5        | 85 - 114   |            |
| Dibromofluoromethane  | 1868-53-7  | LCS | 29.90            | 30                 | 99.7        | 80 - 119   |            |
| Toluene-d8            | 2037-26-5  | LCS | 29.60            | 30                 | 98.6        | 89 - 112   |            |



QUALITY CONTROL DATA CROSS REFERENCE TABLE

| Lab ID     | Sample ID      | Preparation Method | Prep Batch     | Prep Date/Time          | By  | Analysis Method                | Anly Batch         |
|------------|----------------|--------------------|----------------|-------------------------|-----|--------------------------------|--------------------|
| 3372682001 | DW-9           | SW846 3510C<br>N/A | 1272216<br>N/A | 08/11/2024 14:45<br>N/A | BMP | SW846 8270E SIM<br>SW846 8260D | 1272451<br>1277070 |
| 3372682002 | DW-3           | SW846 3510C<br>N/A | 1272216<br>N/A | 08/11/2024 14:45<br>N/A | BMP | SW846 8270E SIM<br>SW846 8260D | 1272451<br>1277070 |
| 3372682003 | SW-9           | SW846 3510C<br>N/A | 1272216<br>N/A | 08/11/2024 14:45<br>N/A | BMP | SW846 8270E SIM<br>SW846 8260D | 1272451<br>1277070 |
| 3372682004 | SW-4RE         | SW846 3510C<br>N/A | 1272216<br>N/A | 08/11/2024 14:45<br>N/A | BMP | SW846 8270E SIM<br>SW846 8260D | 1272451<br>1277070 |
| 3372682005 | URS-3D         | SW846 3510C<br>N/A | 1272216<br>N/A | 08/11/2024 14:45<br>N/A | BMP | SW846 8270E SIM<br>SW846 8260D | 1272451<br>1277070 |
| 3372682006 | URS-3DC        | SW846 3510C<br>N/A | 1272216<br>N/A | 08/11/2024 14:45<br>N/A | BMP | SW846 8270E SIM<br>SW846 8260D | 1272451<br>1277070 |
| 3372682007 | SW-7RE         | SW846 3510C<br>N/A | 1272216<br>N/A | 08/11/2024 14:45<br>N/A | BMP | SW846 8270E SIM<br>SW846 8260D | 1272451<br>1277070 |
| 3372682008 | URS-2D         | SW846 3510C<br>N/A | 1272216<br>N/A | 08/11/2024 14:45<br>N/A | BMP | SW846 8270E SIM<br>SW846 8260D | 1272451<br>1277070 |
| 3372682009 | FB-080624      | SW846 3510C<br>N/A | 1272216<br>N/A | 08/11/2024 14:45<br>N/A | BMP | SW846 8270E SIM<br>SW846 8260D | 1272451<br>1277070 |
| 3372682010 | EB-080624      | SW846 3510C<br>N/A | 1272216<br>N/A | 08/11/2024 14:45<br>N/A | BMP | SW846 8270E SIM<br>SW846 8260D | 1272451<br>1277070 |
| 3372682011 | JC-2           | SW846 3510C        | 1272216        | 08/11/2024 14:45        | BMP | SW846 8270E SIM                | 1272451            |
| 3372682012 | JC-2C          | SW846 3510C        | 1272216        | 08/11/2024 14:45        | BMP | SW846 8270E SIM                | 1272451            |
| 3372682013 | Post-Treatment | SW846 3510C        | 1272216        | 08/11/2024 14:45        | BMP | SW846 8270E SIM                | 1272451            |
| 3372682014 | Trip-Blank     | N/A                | N/A            | N/A                     |     | SW846 8260D                    | 1277070            |





301 Fulling Mill Rd, Suite A  
Middletown, PA 17057  
P. 717-944-5541

CHAIN OF CUSTODY/  
REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT /  
SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: 3372682  
ALS Quote #: 2 of 2

|                                                                                      |  |                                                       |  |                                        |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                       |  |
|--------------------------------------------------------------------------------------|--|-------------------------------------------------------|--|----------------------------------------|--|--|--|--|--|--|--|--|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Client Name: Arcadis U.S. Inc.                                                       |  | Container Type: VOA Amber                             |  |                                        |  |  |  |  |  |  |  |  |  | Receipt Information (completed by Receiving Lab)                                                                                                                                                      |  |
| Address: 110 W. Fayette St.<br>Syracuse NY, 13202<br>Suite 300                       |  | Container Size: 40mL 250 mL                           |  |                                        |  |  |  |  |  |  |  |  |  | Temp Taken By: Therm ID: WO Temp (°C)                                                                                                                                                                 |  |
| Contact: Suzie Bower                                                                 |  | Preservative: HCl None                                |  |                                        |  |  |  |  |  |  |  |  |  | Receipt Info completed by: WV Containers 0-6°C Y N NA                                                                                                                                                 |  |
| Phone#: 315-569-1663                                                                 |  | Orthophosphate Filtered? Yes (No)                     |  | Hexavalent Chromium Filtered? Yes (No) |  |  |  |  |  |  |  |  |  | Cooler Custody Seals Intact Y N NA                                                                                                                                                                    |  |
| Project Name/ID: AF Plant 59 / 30036646                                              |  |                                                       |  |                                        |  |  |  |  |  |  |  |  |  | Sample Custody Seal Intact Y N NA                                                                                                                                                                     |  |
| Bill To: Client                                                                      |  |                                                       |  |                                        |  |  |  |  |  |  |  |  |  | Received on Ice Y N NA                                                                                                                                                                                |  |
| Purchase Order #:                                                                    |  |                                                       |  |                                        |  |  |  |  |  |  |  |  |  | Coolers & Samples Intact Y N                                                                                                                                                                          |  |
| TAT: <input checked="" type="checkbox"/> Normal-Standard TAT is 10-12 business days. |  |                                                       |  |                                        |  |  |  |  |  |  |  |  |  | Correct Containers Provided Y N                                                                                                                                                                       |  |
| <input type="checkbox"/> Rush-Subject to ALS approval and surcharges.                |  |                                                       |  |                                        |  |  |  |  |  |  |  |  |  | Sample Label/COC Agree Y N                                                                                                                                                                            |  |
| Date Required: Approved?                                                             |  |                                                       |  |                                        |  |  |  |  |  |  |  |  |  | Adequate Sample Volumes Y N                                                                                                                                                                           |  |
| Email: <input type="checkbox"/>                                                      |  |                                                       |  |                                        |  |  |  |  |  |  |  |  |  | VOA only: Trip Blank Y N NA                                                                                                                                                                           |  |
|                                                                                      |  |                                                       |  |                                        |  |  |  |  |  |  |  |  |  | NJ ≤ 4 days? Y N                                                                                                                                                                                      |  |
|                                                                                      |  |                                                       |  |                                        |  |  |  |  |  |  |  |  |  | Courier/Tracking #                                                                                                                                                                                    |  |
|                                                                                      |  |                                                       |  |                                        |  |  |  |  |  |  |  |  |  | Sample(s) for Radiation testing? Y N                                                                                                                                                                  |  |
|                                                                                      |  |                                                       |  |                                        |  |  |  |  |  |  |  |  |  | Reportable SDWA Sample(s)? Y N                                                                                                                                                                        |  |
|                                                                                      |  |                                                       |  |                                        |  |  |  |  |  |  |  |  |  | SDWA State of Origin?                                                                                                                                                                                 |  |
|                                                                                      |  |                                                       |  |                                        |  |  |  |  |  |  |  |  |  | PWSID #                                                                                                                                                                                               |  |
|                                                                                      |  |                                                       |  |                                        |  |  |  |  |  |  |  |  |  | PWS Contact: PWS Phone #:                                                                                                                                                                             |  |
|                                                                                      |  |                                                       |  |                                        |  |  |  |  |  |  |  |  |  | SDWA Sample Type Key: D=Distribution E=Entry Point                                                                                                                                                    |  |
|                                                                                      |  |                                                       |  |                                        |  |  |  |  |  |  |  |  |  | R=Raw P=Plant C=Check S=Special A=Annual Startup                                                                                                                                                      |  |
|                                                                                      |  |                                                       |  |                                        |  |  |  |  |  |  |  |  |  | Sample/COC Remarks                                                                                                                                                                                    |  |
|                                                                                      |  |                                                       |  |                                        |  |  |  |  |  |  |  |  |  | Contains Short Hold Testing YES NO                                                                                                                                                                    |  |
|                                                                                      |  |                                                       |  |                                        |  |  |  |  |  |  |  |  |  | Internal Use: If less than 48 hours - notify lab upon receipt                                                                                                                                         |  |
| Circle Sample Collector: ALS Tech / Client                                           |  | Comments: ID: VRS-25 not included on this chain       |  |                                        |  |  |  |  |  |  |  |  |  | Data Deliverables                                                                                                                                                                                     |  |
| Name: ID:                                                                            |  |                                                       |  |                                        |  |  |  |  |  |  |  |  |  | Standard Lvl 1 <input type="checkbox"/> CLP-like <input type="checkbox"/> HSCA <input type="checkbox"/>                                                                                               |  |
| Date: 8/7/24 Time: 1230                                                              |  | Relinquished By / Company Name: Kyle Barber / Arcadis |  | Received By / Company Name: Fedex      |  |  |  |  |  |  |  |  |  | Standard Lvl 2 <input checked="" type="checkbox"/> Standard Lvl 3 <input type="checkbox"/> Standard Lvl 4 <input type="checkbox"/>                                                                    |  |
| 8/8/24 847                                                                           |  | 3 Fedex                                               |  | 4                                      |  |  |  |  |  |  |  |  |  | NJ RED <input type="checkbox"/> NJ Full <input type="checkbox"/>                                                                                                                                      |  |
|                                                                                      |  | 5                                                     |  | 6                                      |  |  |  |  |  |  |  |  |  | Excel Summary <input type="checkbox"/> Equis <input checked="" type="checkbox"/> Custom <input type="checkbox"/>                                                                                      |  |
|                                                                                      |  | 7                                                     |  | 8                                      |  |  |  |  |  |  |  |  |  | Sample Disposal Lab <input type="checkbox"/> Special <input type="checkbox"/>                                                                                                                         |  |
|                                                                                      |  | 9                                                     |  | 10                                     |  |  |  |  |  |  |  |  |  | State Samples Collected In NY <input type="checkbox"/> NJ <input type="checkbox"/> PA <input type="checkbox"/> WV <input type="checkbox"/> FL <input type="checkbox"/> other <input type="checkbox"/> |  |

\* G=Grab; C=Composite \*\*Matrix: A=Air; D=Drinking Water; GW=Groundwater; O=Oil; LW=Liquid Waste; S=Solid/Soil/Sludge; SW=Surface Water; WP=Wipe; WW=Wastewater

ALS SHIPPING ADDRESS: 301 Fulling Mill Road, Suite A, Middletown, PA 17057

Rev 05.01.2024



Main Site: 301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | [www.alsglobal.com](http://www.alsglobal.com)  
Associated Site: 20 Riverside Drive | Spring City, PA 19475 | Phone: 610-948-4903 | Fax: 717-944-1430 |

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618  
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343, NJ PA101

Analytical Results Report For

**ARCADIS US Inc - Clifton Park, NY**

Project AF Plant 59/30036646

Workorder 3372683

Report ID 347382 on 8/19/2024

## Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Aug 08, 2024.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Susan Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

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ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

### Recipient(s):

Andy Vitolins - Arcadis  
Erika Denkenberger - Arcadis  
Kyle Barber - Arcadis US Inc  
Carissa Koski - ARCADIS  
Corey Averill - Arcadis  
Suzie Bower - Arcadis US Inc

*Susan Scherer*

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

**Susan Scherer**  
Project Coordinator

(ALS Digital Signature)



Sample Summary

| Lab ID     | Sample ID      | Matrix           | Date Collected   | Date Received    | Collector | Collection Company  |
|------------|----------------|------------------|------------------|------------------|-----------|---------------------|
| 3372683001 | JC-2           | NY Potable Water | 08/05/2024 09:20 | 08/08/2024 08:47 | CBC       | Collected By Client |
| 3372683002 | JC-2C          | NY Potable Water | 08/05/2024 09:20 | 08/08/2024 08:47 | CBC       | Collected By Client |
| 3372683003 | Post-Treatment | NY Potable Water | 08/05/2024 09:50 | 08/08/2024 08:47 | CBC       | Collected By Client |
| 3372683004 | Trip-Blank     | NY Potable Water | 08/05/2024 09:50 | 08/08/2024 08:47 | CBC       | Collected By Client |



Reference

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136, including but not limited to the following EPA Method reference revisions:  
EPA 300.1 Rev. 1.0-1997  
EPA 300.0 Rev. 2.1-1993  
EPA 353.2 Rev. 2.0-1993  
EPA 410.4 Rev. 1.0-1993  
EPA 420.4 Rev. 1.0-1993  
EPA 365.1 Rev. 2.0-1993  
EPA 200.7 Rev. 4.4-1994  
EPA 200.8 Rev. 5.4-1994  
EPA 245.1 Rev. 3.0-1994
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

Standard Acronyms/Flags

|        |                                                                                                                                      |
|--------|--------------------------------------------------------------------------------------------------------------------------------------|
| J      | Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte     |
| U      | Indicates that the analyte was Not Detected (ND) above the MDL                                                                       |
| N      | Indicates presumptive evidence of the presence of a compound                                                                         |
| MDL    | Method Detection Limit                                                                                                               |
| PQL    | Practical Quantitation Limit                                                                                                         |
| RDL    | Practical Quantitation Limit for this Project                                                                                        |
| ND     | Not Detected - indicates that the analyte was Not Detected                                                                           |
| Cntr   | Analysis was performed using this container                                                                                          |
| RegLmt | Regulatory Limit                                                                                                                     |
| LCS    | Laboratory Control Sample                                                                                                            |
| MS     | Matrix Spike                                                                                                                         |
| MSD    | Matrix Spike Duplicate                                                                                                               |
| DUP    | Sample Duplicate                                                                                                                     |
| %Rec   | Percent Recovery                                                                                                                     |
| RPD    | Relative Percent Difference                                                                                                          |
| LOD    | DoD Limit of Detection                                                                                                               |
| LOQ    | DoD Limit of Quantitation                                                                                                            |
| DL     | DoD Detection Limit                                                                                                                  |
| I      | Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL) |
| (S)    | Surrogate Compound                                                                                                                   |
| NC     | Not Calculated                                                                                                                       |
| *      | Result outside of QC limits                                                                                                          |
| #      | Please reference the result in the Results Section for analyte-level flags.                                                          |



Project Notations

Sample Notations

Lab ID

Sample ID

Result Notations

| Notation Ref. |                                                                                                                                                                                   |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1             | The QC sample type MS for method EPA 524.2 was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 131 and the control limits were 70 to 130. |



Detected Results Summary

Not applicable for this WO.



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | JC-2       | Collected   | 08/05/2024 09:20 |
| Lab Sample ID    | 3372683001 | Lab Receipt | 08/08/2024 08:47 |

VOLATILE ORGANICS

| Compound                  | Result | Flag | Units | RDL  | Method    | Dilution | Analysis Date/Time | By  | Cntr |
|---------------------------|--------|------|-------|------|-----------|----------|--------------------|-----|------|
| 1,1,1,2-Tetrachloroethane | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| 1,1,1-Trichloroethane     | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| 1,1,2,2-Tetrachloroethane | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| 1,1,2-Trichloroethane     | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| 1,1-Dichloroethane        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| 1,1-Dichloroethene        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| 1,1-Dichloropropene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| 1,2,3-Trichlorobenzene    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| 1,2,3-Trichloropropane    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| 1,2,4-Trichlorobenzene    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| 1,2,4-Trimethylbenzene    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| 1,2-Dichlorobenzene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| 1,2-Dichloroethane        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| 1,2-Dichloropropane       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| 1,3,5-Trimethylbenzene    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| 1,3-Dichlorobenzene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| 1,3-Dichloropropane       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| 1,4-Dichlorobenzene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| 2,2-Dichloropropane       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| Benzene                   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| Bromobenzene              | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| Bromochloromethane        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| Bromomethane              | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| Carbon Tetrachloride      | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| Chlorobenzene             | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| Chloroethane              | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| Chloromethane             | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| cis-1,2-Dichloroethene    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| cis-1,3-Dichloropropene   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| Dibromomethane            | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| Dichlorodifluoromethane   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| Ethylbenzene              | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| Hexachlorobutadiene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| Isopropylbenzene          | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| Methylene Chloride        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| mp-Xylene                 | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| n-Butylbenzene            | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| n-Propylbenzene           | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| o-Chlorotoluene           | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| o-Xylene                  | ND     | ND   | ug/L  | 0.25 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| p-Chlorotoluene           | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| p-Isopropyltoluene        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| sec-Butylbenzene          | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| Styrene                   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| tert-Butylbenzene         | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| Tetrachloroethene         | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| Toluene                   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | JC-2       | Collected   | 08/05/2024 09:20 |
| Lab Sample ID    | 3372683001 | Lab Receipt | 08/08/2024 08:47 |

VOLATILE ORGANICS (cont.)

| Compound                  | Result | Flag | Units | RDL  | Method    | Dilution | Analysis Date/Time | By  | Cntr |
|---------------------------|--------|------|-------|------|-----------|----------|--------------------|-----|------|
| trans-1,2-Dichloroethene  | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| trans-1,3-Dichloropropene | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| Trichloroethene           | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |
| Trichlorofluoromethane    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:51   | ILY | A    |

SURROGATES

| Compound               | CAS No    | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|------------------------|-----------|----------|-----------|--------------------|------------|
| 1,2-Dichlorobenzene-d4 | 2199-69-1 | 89.1%    | 70 – 130  | 08/15/2024 18:51   |            |
| 4-Bromofluorobenzene   | 460-00-4  | 95.5%    | 70 – 130  | 08/15/2024 18:51   |            |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | JC-2C      | Collected   | 08/05/2024 09:20 |
| Lab Sample ID    | 3372683002 | Lab Receipt | 08/08/2024 08:47 |

VOLATILE ORGANICS

| Compound                  | Result | Flag | Units | RDL  | Method    | Dilution | Analysis Date/Time | By  | Cntr |
|---------------------------|--------|------|-------|------|-----------|----------|--------------------|-----|------|
| 1,1,1,2-Tetrachloroethane | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| 1,1,1-Trichloroethane     | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| 1,1,2,2-Tetrachloroethane | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| 1,1,2-Trichloroethane     | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| 1,1-Dichloroethane        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| 1,1-Dichloroethene        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| 1,1-Dichloropropene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| 1,2,3-Trichlorobenzene    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| 1,2,3-Trichloropropane    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| 1,2,4-Trichlorobenzene    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| 1,2,4-Trimethylbenzene    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| 1,2-Dichlorobenzene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| 1,2-Dichloroethane        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| 1,2-Dichloropropane       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| 1,3,5-Trimethylbenzene    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| 1,3-Dichlorobenzene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| 1,3-Dichloropropane       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| 1,4-Dichlorobenzene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| 2,2-Dichloropropane       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| Benzene                   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| Bromobenzene              | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| Bromochloromethane        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| Bromomethane              | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| Carbon Tetrachloride      | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| Chlorobenzene             | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| Chloroethane              | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| Chloromethane             | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| cis-1,2-Dichloroethene    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| cis-1,3-Dichloropropene   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| Dibromomethane            | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| Dichlorodifluoromethane   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| Ethylbenzene              | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| Hexachlorobutadiene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| Isopropylbenzene          | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| Methylene Chloride        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| mp-Xylene                 | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| n-Butylbenzene            | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| n-Propylbenzene           | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| o-Chlorotoluene           | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| o-Xylene                  | ND     | ND   | ug/L  | 0.25 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| p-Chlorotoluene           | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| p-Isopropyltoluene        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| sec-Butylbenzene          | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| Styrene                   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| tert-Butylbenzene         | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| Tetrachloroethene         | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| Toluene                   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | JC-2C      | Collected   | 08/05/2024 09:20 |
| Lab Sample ID    | 3372683002 | Lab Receipt | 08/08/2024 08:47 |

VOLATILE ORGANICS (cont.)

| Compound                  | Result | Flag | Units | RDL  | Method    | Dilution | Analysis Date/Time | By  | Cntr |
|---------------------------|--------|------|-------|------|-----------|----------|--------------------|-----|------|
| trans-1,2-Dichloroethene  | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| trans-1,3-Dichloropropene | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| Trichloroethene           | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |
| Trichlorofluoromethane    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:01   | ILY | A    |

SURROGATES

| Compound               | CAS No    | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|------------------------|-----------|----------|-----------|--------------------|------------|
| 1,2-Dichlorobenzene-d4 | 2199-69-1 | 93.1%    | 70 – 130  | 08/15/2024 18:01   |            |
| 4-Bromofluorobenzene   | 460-00-4  | 95.7%    | 70 – 130  | 08/15/2024 18:01   |            |



Results

|                  |                |             |                  |
|------------------|----------------|-------------|------------------|
| Client Sample ID | Post-Treatment | Collected   | 08/05/2024 09:50 |
| Lab Sample ID    | 3372683003     | Lab Receipt | 08/08/2024 08:47 |

VOLATILE ORGANICS

| Compound                  | Result | Flag | Units | RDL  | Method    | Dilution | Analysis Date/Time | By  | Cntr |
|---------------------------|--------|------|-------|------|-----------|----------|--------------------|-----|------|
| 1,1,1,2-Tetrachloroethane | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| 1,1,1-Trichloroethane     | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| 1,1,2,2-Tetrachloroethane | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| 1,1,2-Trichloroethane     | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| 1,1-Dichloroethane        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| 1,1-Dichloroethene        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| 1,1-Dichloropropene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| 1,2,3-Trichlorobenzene    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| 1,2,3-Trichloropropane    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| 1,2,4-Trichlorobenzene    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| 1,2,4-Trimethylbenzene    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| 1,2-Dichlorobenzene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| 1,2-Dichloroethane        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| 1,2-Dichloropropane       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| 1,3,5-Trimethylbenzene    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| 1,3-Dichlorobenzene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| 1,3-Dichloropropane       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| 1,4-Dichlorobenzene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| 2,2-Dichloropropane       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| Benzene                   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| Bromobenzene              | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| Bromochloromethane        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| Bromomethane              | ND     | ND,1 | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| Carbon Tetrachloride      | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| Chlorobenzene             | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| Chloroethane              | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| Chloromethane             | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| cis-1,2-Dichloroethene    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| cis-1,3-Dichloropropene   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| Dibromomethane            | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| Dichlorodifluoromethane   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| Ethylbenzene              | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| Hexachlorobutadiene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| Isopropylbenzene          | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| Methylene Chloride        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| mp-Xylene                 | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| n-Butylbenzene            | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| n-Propylbenzene           | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| o-Chlorotoluene           | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| o-Xylene                  | ND     | ND   | ug/L  | 0.25 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| p-Chlorotoluene           | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| p-Isopropyltoluene        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| sec-Butylbenzene          | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| Styrene                   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| tert-Butylbenzene         | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| Tetrachloroethene         | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| Toluene                   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |



Results

|                  |                |             |                  |
|------------------|----------------|-------------|------------------|
| Client Sample ID | Post-Treatment | Collected   | 08/05/2024 09:50 |
| Lab Sample ID    | 3372683003     | Lab Receipt | 08/08/2024 08:47 |

VOLATILE ORGANICS (cont.)

| Compound                  | Result | Flag | Units | RDL  | Method    | Dilution | Analysis Date/Time | By  | Cntr |
|---------------------------|--------|------|-------|------|-----------|----------|--------------------|-----|------|
| trans-1,2-Dichloroethene  | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| trans-1,3-Dichloropropene | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| Trichloroethene           | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |
| Trichlorofluoromethane    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 18:26   | ILY | A    |

SURROGATES

| Compound               | CAS No    | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|------------------------|-----------|----------|-----------|--------------------|------------|
| 1,2-Dichlorobenzene-d4 | 2199-69-1 | 96.6%    | 70 – 130  | 08/15/2024 18:26   |            |
| 4-Bromofluorobenzene   | 460-00-4  | 96.7%    | 70 – 130  | 08/15/2024 18:26   |            |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | Trip-Blank | Collected   | 08/05/2024 09:50 |
| Lab Sample ID    | 3372683004 | Lab Receipt | 08/08/2024 08:47 |

VOLATILE ORGANICS

| Compound                  | Result | Flag | Units | RDL  | Method    | Dilution | Analysis Date/Time | By  | Cntr |
|---------------------------|--------|------|-------|------|-----------|----------|--------------------|-----|------|
| 1,1,1,2-Tetrachloroethane | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| 1,1,1-Trichloroethane     | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| 1,1,2,2-Tetrachloroethane | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| 1,1,2-Trichloroethane     | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| 1,1-Dichloroethane        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| 1,1-Dichloroethene        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| 1,1-Dichloropropene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| 1,2,3-Trichlorobenzene    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| 1,2,3-Trichloropropane    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| 1,2,4-Trichlorobenzene    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| 1,2,4-Trimethylbenzene    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| 1,2-Dichlorobenzene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| 1,2-Dichloroethane        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| 1,2-Dichloropropane       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| 1,3,5-Trimethylbenzene    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| 1,3-Dichlorobenzene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| 1,3-Dichloropropane       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| 1,4-Dichlorobenzene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| 2,2-Dichloropropane       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| Benzene                   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| Bromobenzene              | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| Bromochloromethane        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| Bromomethane              | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| Carbon Tetrachloride      | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| Chlorobenzene             | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| Chloroethane              | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| Chloromethane             | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| cis-1,2-Dichloroethene    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| cis-1,3-Dichloropropene   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| Dibromomethane            | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| Dichlorodifluoromethane   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| Ethylbenzene              | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| Hexachlorobutadiene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| Isopropylbenzene          | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| Methylene Chloride        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| mp-Xylene                 | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| n-Butylbenzene            | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| n-Propylbenzene           | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| o-Chlorotoluene           | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| o-Xylene                  | ND     | ND   | ug/L  | 0.25 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| p-Chlorotoluene           | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| p-Isopropyltoluene        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| sec-Butylbenzene          | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| Styrene                   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| tert-Butylbenzene         | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| Tetrachloroethene         | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| Toluene                   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | Trip-Blank | Collected   | 08/05/2024 09:50 |
| Lab Sample ID    | 3372683004 | Lab Receipt | 08/08/2024 08:47 |

VOLATILE ORGANICS (cont.)

| Compound                  | Result | Flag | Units | RDL  | Method    | Dilution | Analysis Date/Time | By  | Cntr |
|---------------------------|--------|------|-------|------|-----------|----------|--------------------|-----|------|
| trans-1,2-Dichloroethene  | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| trans-1,3-Dichloropropene | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| Trichloroethene           | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |
| Trichlorofluoromethane    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:11   | ILY | A    |

SURROGATES

| Compound               | CAS No    | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|------------------------|-----------|----------|-----------|--------------------|------------|
| 1,2-Dichlorobenzene-d4 | 2199-69-1 | 91.6%    | 70 – 130  | 08/15/2024 17:11   |            |
| 4-Bromofluorobenzene   | 460-00-4  | 99.7%    | 70 – 130  | 08/15/2024 17:11   |            |



Sample - Method Cross Reference Table

| Lab ID     | Sample ID      | Analysis Method | Preparation Method | Leachate Method |
|------------|----------------|-----------------|--------------------|-----------------|
| 3372683001 | JC-2           | EPA 524.2       | N/A                |                 |
| 3372683002 | JC-2C          | EPA 524.2       | N/A                |                 |
| 3372683003 | Post-Treatment | EPA 524.2       | N/A                |                 |
| 3372683004 | Trip-Blank     | EPA 524.2       | N/A                |                 |



QUALITY CONTROL DATA CROSS REFERENCE TABLE

| Lab ID     | Sample ID      | Preparation Method | Prep Batch | Prep Date/Time | By | Analysis Method | Anly Batch |
|------------|----------------|--------------------|------------|----------------|----|-----------------|------------|
| 3372683001 | JC-2           | N/A                | N/A        | N/A            |    | EPA 524.2       | 1276726    |
| 3372683002 | JC-2C          | N/A                | N/A        | N/A            |    | EPA 524.2       | 1276726    |
| 3372683003 | Post-Treatment | N/A                | N/A        | N/A            |    | EPA 524.2       | 1276726    |
| 3372683004 | Trip-Blank     | N/A                | N/A        | N/A            |    | EPA 524.2       | 1276726    |



301 Fulling Mill Rd, Suite A  
Middletown, PA 17057  
P. 717-944-5541

# CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT /  
SAMPLER. INSTRUCTIONS ON THE BACK.

COC #:



3372683

Logged By: KSB  
PM: SJB



of

ALS Que

ent Name: Arcaders V.S. Inc.

dress: 110 W. Fayette St.  
Syracuse, NY 13202

Suite 300

ntact: Suzie Bower

one#: 315-569-1663

ject Name#: AP Plant 59 / 30036646

I To: Client

urchase Order #:

TAT ☒ Normal-Standard TAT is 10-12 business days.  
☐ Rush-Subject to ALS approval and surcharges.

te Required: Approved?

all? ☐

Container Type VOA

Container

Size 40mL

Preservative ASCT  
HCl

Orthophosphate Filtered? Yes ☒ No

Hexavalent Chromium Filtered? Yes ☒ No

## ANALYSIS / METHOD REQUESTED

SDWA Sample Type (see key)

\*G or C

\*\*Matrix (See bottom of COC)

EPA 524.2  
DOD 812000

Enter Number of Containers Per Sample or Field Results Below.

| Sample Description/Location<br>(as it will appear on the lab report) | Date Collected<br>mm/dd/yy | Time<br>hh:mm | SDWA Sample Type | *G or C | **Matrix | Containers |
|----------------------------------------------------------------------|----------------------------|---------------|------------------|---------|----------|------------|
| 1 3C-2                                                               | 08/05/24                   | 0920          | 6D               | 3X      | MJE      |            |
| 2 3C-2C                                                              | 08/05/24                   | 0920          | 6D               | 1X      | 8/8/24   |            |
| 3 Post Treatment                                                     | 08/05/24                   | 0950          | 6D               | 1X      |          |            |
| 4 TRIP BLANK                                                         |                            |               |                  | X       |          |            |
| 5                                                                    |                            |               |                  |         |          |            |
| 6                                                                    |                            |               |                  |         |          |            |
| 7                                                                    |                            |               |                  |         |          |            |
| 8                                                                    |                            |               |                  |         |          |            |
| 9                                                                    |                            |               |                  |         |          |            |
| 10                                                                   |                            |               |                  |         |          |            |

Temp Taken By: MJE

Therm ID: 569

WO Temp (\*C) 60

Receipt Info completed by: MJE

WV Containers 0-6°C Y N NA

Cooler Custody Seals Intact

Y N NA

Deviations? NO YES

Sample Custody Seal Intact

Y N NA

If YES, list below

Received on Ice

Y N NA

Coolers & Samples Intact

Y N NA

Correct Containers Provided

Y N NA

Sample Label/COC Agree

Y N NA

Adequate Sample Volumes

Y N NA

VOA only: Trip Blank

Y N NA

NJ ≤ 4 days? Y N

Courier/Tracking #

278007667013

Sample(s) for Radiation testing? Y N

Rad Screen (uCi) —

Reportable SDWA Sample(s)? Y N

New Source? Y N

SDWA State of Origin? —

New Source Contact: —

PWSID # —

PWS Contact: —

PWS Phone #: —

PWS Contact: —

PWS Phone #: —

SDWA Sample Type Key: D=Distribution E=Entry Point

R=Raw P=Plant C=Check S=Special A=Annual Startup

Sample/COC Remarks

Contains Short Hold Testing YES NO

Internal Use: if less than 48 hours - notify lab upon receipt

role Sample Collector: ALS Tech / Client

me: ID: —

Comments:

te: Time Relinquished By / Company Name

7/24 1230 1 KYLE BOWER / 8/7 Arcaders

2/8/24 847 3 FedEx

5 6

7 8

9 10

Received By / Company Name

Fedex

Data Deliverables

☐ Standard Lvl 1

☐ CLP-like

☐ HSCA

State Samples Collected In

☒ Standard Lvl 2

☐ DOD

☐ Landfill

☐ NY

☐ Standard Lvl 3

☐ NJ RED

☐ NJ GW

☐ NJ

☐ Standard Lvl 4

☐ NJ Full

☐

☐ PA

EDDS

☐ Excel Summary

Sample Disposal

☒ Equis

Lab ☐

☐ Custom

Special ☐

☐ WV

☐ FL

other

EDDS:

Formal Type

\* G=Grab; C=Composite

\*\* Matrix - A=Air; D=Drinking Water; GW=Groundwater; O=Oil; LW=Liquid Waste; S=Solid/Sludge; SW=Surface Water; WP=Wipe; WW=Wastewater

ALS SHIPPING ADDRESS: 301 Fulling Mill Road, Suite A, Middletown, PA 17057

Rev 05.01.2024



Main Site: 301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | [www.alsglobal.com](http://www.alsglobal.com)  
Associated Site: 20 Riverside Drive | Spring City, PA 19475 | Phone: 610-948-4903 | Fax: 717-944-1430 |

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618  
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343, NJ PA101

Analytical Results Report For

**ARCADIS US Inc - Clifton Park, NY**

Project AUC074/AF Plant 59/30036646

Workorder 3372684

Report ID 347490 on 8/20/2024

## Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Aug 08, 2024.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Susan Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

This laboratory report may not be reproduced, except in full, without the written approval of ALS Global.  
ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

**Recipient(s):**

Andy Vitolins - Arcadis  
Erika Denkenberger - Arcadis  
Kyle Barber - Arcadis US Inc  
Carissa Koski - ARCADIS  
Corey Averill - Arcadis  
Suzie Bower - Arcadis US Inc

*Susan Scherer*

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

**Susan Scherer**  
Project Coordinator

(ALS Digital Signature)



Sample Summary

| Lab ID     | Sample ID | Matrix       | Date Collected   | Date Received    | Collector | Collection Company  |
|------------|-----------|--------------|------------------|------------------|-----------|---------------------|
| 3372684001 | JC-3      | Ground Water | 08/05/2024 09:30 | 08/08/2024 08:47 | CBC       | Collected By Client |
| 3372684002 | URS-2S    | Ground Water | 08/07/2024 10:20 | 08/08/2024 08:47 | CBC       | Collected By Client |



Reference

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136, including but not limited to the following EPA Method reference revisions:  
EPA 300.1 Rev. 1.0-1997  
EPA 300.0 Rev. 2.1-1993  
EPA 353.2 Rev. 2.0-1993  
EPA 410.4 Rev. 1.0-1993  
EPA 420.4 Rev. 1.0-1993  
EPA 365.1 Rev. 2.0-1993  
EPA 200.7 Rev. 4.4-1994  
EPA 200.8 Rev. 5.4-1994  
EPA 245.1 Rev. 3.0-1994
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

Standard Acronyms/Flags

|        |                                                                                                                                      |
|--------|--------------------------------------------------------------------------------------------------------------------------------------|
| J      | Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte     |
| U      | Indicates that the analyte was Not Detected (ND) above the MDL                                                                       |
| N      | Indicates presumptive evidence of the presence of a compound                                                                         |
| MDL    | Method Detection Limit                                                                                                               |
| PQL    | Practical Quantitation Limit                                                                                                         |
| RDL    | Practical Quantitation Limit for this Project                                                                                        |
| ND     | Not Detected - indicates that the analyte was Not Detected                                                                           |
| Cntr   | Analysis was performed using this container                                                                                          |
| RegLmt | Regulatory Limit                                                                                                                     |
| LCS    | Laboratory Control Sample                                                                                                            |
| MS     | Matrix Spike                                                                                                                         |
| MSD    | Matrix Spike Duplicate                                                                                                               |
| DUP    | Sample Duplicate                                                                                                                     |
| %Rec   | Percent Recovery                                                                                                                     |
| RPD    | Relative Percent Difference                                                                                                          |
| LOD    | DoD Limit of Detection                                                                                                               |
| LOQ    | DoD Limit of Quantitation                                                                                                            |
| DL     | DoD Detection Limit                                                                                                                  |
| I      | Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL) |
| (S)    | Surrogate Compound                                                                                                                   |
| NC     | Not Calculated                                                                                                                       |
| *      | Result outside of QC limits                                                                                                          |
| #      | Please reference the result in the Results Section for analyte-level flags.                                                          |



| Project Notations |  |
|-------------------|--|
|                   |  |

| Sample Notations |           |
|------------------|-----------|
| Lab ID           | Sample ID |

| Result Notations |  |
|------------------|--|
| Notation Ref.    |  |



Detected Results Summary

| Client Sample ID | JC-3       | Collected   | 08/05/2024 09:30 |      |       |                 |      |
|------------------|------------|-------------|------------------|------|-------|-----------------|------|
| Lab Sample ID    | 3372684001 | Lab Receipt | 08/08/2024 08:47 |      |       |                 |      |
| Compound         | Result     | Units       | LOQ              | LOD  | DL    | Method          | Flag |
| SEMIVOLATILE SIM |            |             |                  |      |       |                 |      |
| 1,4-Dioxane      | 0.37J      | ug/L        | 0.50             | 0.20 | 0.068 | SW846 8270E SIM | #    |



Detected Results Summary

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | URS-2S     | Collected   | 08/07/2024 10:20 |
| Lab Sample ID    | 3372684002 | Lab Receipt | 08/08/2024 08:47 |

| Compound               | Result | Units | LOQ  | LOD  | DL    | Method          | Flag |
|------------------------|--------|-------|------|------|-------|-----------------|------|
| SEMIVOLATILE SIM       |        |       |      |      |       |                 |      |
| 1,4-Dioxane            | 8.3    | ug/L  | 0.50 | 0.20 | 0.068 | SW846 8270E SIM | #    |
| VOLATILE ORGANICS      |        |       |      |      |       |                 |      |
| 1,1-Dichloroethane     | 3.0    | ug/L  | 1.0  | 0.75 | 0.33  | SW846 8260D     | #    |
| Acetone                | 5.8    | ug/L  | 5.0  | 3.8  | 1.6   | SW846 8260D     | #    |
| cis-1,2-Dichloroethene | 0.99J  | ug/L  | 1.0  | 0.75 | 0.33  | SW846 8260D     | #    |
| Trichloroethene        | 2.7    | ug/L  | 1.0  | 0.75 | 0.33  | SW846 8260D     | #    |

Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | JC-3       | Collected   | 08/05/2024 09:30 |
| Lab Sample ID    | 3372684001 | Lab Receipt | 08/08/2024 08:47 |

SEMIVOLATILE SIM

| Compound    | Result | Flag | Units | LOQ  | LOD  | DL    | Method             | Dilution | Analysis Date/Time | By  | Cntr |
|-------------|--------|------|-------|------|------|-------|--------------------|----------|--------------------|-----|------|
| 1,4-Dioxane | 0.37J  | J    | ug/L  | 0.50 | 0.20 | 0.068 | SW846 8270E<br>SIM | 1        | 08/12/2024 10:21   | S7M | B    |

SURROGATES

| Compound               | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|------------------------|------------|----------|-----------|--------------------|------------|
| 2-Methylnapthalene-d10 | 7297-45-2  | 91.5%    | 29 – 112  | 08/12/2024 10:21   |            |
| Fluoranthene-d10       | 93951-69-0 | 119%     | 45 – 130  | 08/12/2024 10:21   |            |

Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | URS-2S     | Collected   | 08/07/2024 10:20 |
| Lab Sample ID    | 3372684002 | Lab Receipt | 08/08/2024 08:47 |

SEMIVOLATILE SIM

| Compound    | Result | Flag | Units | LOQ  | LOD  | DL    | Method             | Dilution | Analysis Date/Time | By  | Cntr |
|-------------|--------|------|-------|------|------|-------|--------------------|----------|--------------------|-----|------|
| 1,4-Dioxane | 8.3    |      | ug/L  | 0.50 | 0.20 | 0.068 | SW846 8270E<br>SIM | 1        | 08/12/2024 16:42   | S7M | B    |

SURROGATES

| Compound               | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|------------------------|------------|----------|-----------|--------------------|------------|
| 2-Methylnapthalene-d10 | 7297-45-2  | 86.5%    | 29 – 112  | 08/12/2024 16:42   |            |
| Fluoranthene-d10       | 93951-69-0 | 84.7%    | 45 – 130  | 08/12/2024 16:42   |            |

VOLATILE ORGANICS

| Compound                    | Result | Flag | Units | LOQ | LOD  | DL   | Method      | Dilution | Analysis Date/Time | By  | Cntr |
|-----------------------------|--------|------|-------|-----|------|------|-------------|----------|--------------------|-----|------|
| 1,1,1,2-Tetrachloroethane   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| 1,1,1-Trichloroethane       | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| 1,1,2,2-Tetrachloroethane   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| 1,1,2-Trichloroethane       | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| 1,1-Dichloroethane          | 3.0    |      | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| 1,1-Dichloroethene          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| 1,2,3-Trichloropropane      | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| 1,2-Dibromo-3-chloropropane | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| 1,2-Dibromoethane           | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| 1,2-Dichlorobenzene         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| 1,2-Dichloroethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| 1,2-Dichloropropane         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| 1,4-Dichlorobenzene         | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| 2-Butanone                  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| 2-Hexanone                  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| 4-Methyl-2-Pentanone(MIBK)  | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Acetone                     | 5.8    |      | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Acrylonitrile               | 3.8U   | U    | ug/L  | 5.0 | 3.8  | 1.6  | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Benzene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Bromochloromethane          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Bromodichloromethane        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Bromoform                   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Bromomethane                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Carbon Disulfide            | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Carbon Tetrachloride        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Chlorobenzene               | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Chlorodibromomethane        | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Chloroethane                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Chloroform                  | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Chloromethane               | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| cis-1,2-Dichloroethene      | 0.99J  | J    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Dibromomethane              | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Ethylbenzene                | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Iodomethane                 | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Methylene Chloride          | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | URS-2S     | Collected   | 08/07/2024 10:20 |
| Lab Sample ID    | 3372684002 | Lab Receipt | 08/08/2024 08:47 |

VOLATILE ORGANICS (cont.)

| Compound                    | Result | Flag | Units | LOQ | LOD  | DL   | Method      | Dilution | Analysis Date/Time | By  | Cntr |
|-----------------------------|--------|------|-------|-----|------|------|-------------|----------|--------------------|-----|------|
| mp-Xylene                   | 1.5U   | U    | ug/L  | 2.0 | 1.5  | 0.66 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| o-Xylene                    | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Styrene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Tetrachloroethene           | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Toluene                     | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Total Xylenes               | 2.3U   | U    | ug/L  | 3.0 | 2.3  | 1.0  | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| trans-1,2-Dichloroethene    | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| trans-1,3-Dichloropropene   | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| trans-1,4-Dichloro-2-butene | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.35 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Trichloroethene             | 2.7    |      | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Trichlorofluoromethane      | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Vinyl Acetate               | 2.5U   | U    | ug/L  | 5.0 | 2.5  | 1.6  | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |
| Vinyl Chloride              | 0.75U  | U    | ug/L  | 1.0 | 0.75 | 0.33 | SW846 8260D | 1        | 08/16/2024 15:45   | TMP | D    |

SURROGATES

| Compound              | CAS No     | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|-----------------------|------------|----------|-----------|--------------------|------------|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 101%     | 81 – 118  | 08/16/2024 15:45   |            |
| 4-Bromofluorobenzene  | 460-00-4   | 99.2%    | 85 – 114  | 08/16/2024 15:45   |            |
| Dibromofluoromethane  | 1868-53-7  | 95.8%    | 80 – 119  | 08/16/2024 15:45   |            |
| Toluene-d8            | 2037-26-5  | 100%     | 89 – 112  | 08/16/2024 15:45   |            |



Sample - Method Cross Reference Table

| Lab ID     | Sample ID | Analysis Method | Preparation Method | Leachate Method |
|------------|-----------|-----------------|--------------------|-----------------|
| 3372684001 | JC-3      | SW846 8270E SIM | SW846 3510C        |                 |
| 3372684002 | URS-2S    | SW846 8270E SIM | SW846 3510C        |                 |
|            |           | SW846 8260D     | N/A                |                 |

## SEMIVOLATILE SIM

## Associated Samples

|            |            |
|------------|------------|
| 3372684001 | 3372684002 |
|------------|------------|

\*\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

## RESULTS

| <u>Compound</u> | <u>CAS No</u> |     | <u>Result</u><br>(ug/L) | <u>Orig.</u><br><u>Result</u><br>(ug/L) | <u>Spk</u><br><u>Added</u><br>(ug/L) | <u>Rec.</u><br>(%) | <u>Limits (%)</u> | <u>RPD Limit (%)</u> | <u>Qualifiers</u> |
|-----------------|---------------|-----|-------------------------|-----------------------------------------|--------------------------------------|--------------------|-------------------|----------------------|-------------------|
| 1,4-Dioxane     | 123-91-1      | MS  | 0.97                    | 0.41                                    | 1                                    | 56.2               | 22 - 75           |                      |                   |
| 1,4-Dioxane     | 123-91-1      | MSD | 1                       | 0.41                                    | 1                                    | 63.1               | 22 - 75           | RPD 6.89 (Max-30)    |                   |

## SURROGATES

| <u>Compound</u>         | <u>CAS No</u> |     | <u>Result</u><br>(ug/L) | <u>Expected</u><br>(ug/L) | <u>Rec.</u><br>(%) | <u>Limits (%)</u> | <u>Qualifiers</u> |
|-------------------------|---------------|-----|-------------------------|---------------------------|--------------------|-------------------|-------------------|
| 2-Methylnaphthalene-d10 | 7297-45-2     | MS  | 0.86                    | 1                         | 85.7               | 29 - 112          |                   |
| 2-Methylnaphthalene-d10 | 7297-45-2     | MSD | 0.91                    | 1                         | 90.7               | 29 - 112          |                   |
| Fluoranthene-d10        | 93951-69-0    | MS  | 1.10                    | 1                         | 109                | 45 - 130          |                   |
| Fluoranthene-d10        | 93951-69-0    | MSD | 1                       | 1                         | 104                | 45 - 130          |                   |

## RESULTS

| <u>Compound</u> | <u>CAS No</u> |     | <u>Result</u> | <u>Units</u> | <u>LOQ</u> | <u>Qualifiers</u> |
|-----------------|---------------|-----|---------------|--------------|------------|-------------------|
| 1,4-Dioxane     | 123-91-1      | BLK | 0.20U         | ug/L         | 0.50       | U                 |

## SURROGATES

| <u>Compound</u>        | <u>CAS No</u> |     | <u>Result</u><br>(ug/L) | <u>Expected</u><br>(ug/L) | <u>Rec.</u><br>(%) | <u>Limits (%)</u> | <u>Qualifiers</u> |
|------------------------|---------------|-----|-------------------------|---------------------------|--------------------|-------------------|-------------------|
| 2-Methylnapthalene-d10 | 7297-45-2     | BLK | 0.84                    | 1                         | 84.4               | 29 - 112          |                   |
| Fluoranthene-d10       | 93951-69-0    | BLK | 1.10                    | 1                         | 107                | 45 - 130          |                   |

## RESULTS

| <u>Compound</u> | <u>CAS No</u> |     | <u>Result</u><br>(ug/L) | <u>Orig.</u><br><u>Result</u><br>(ug/L) | <u>Spk</u><br><u>Added</u><br>(ug/L) | <u>Rec.</u><br>(%) | <u>Limits (%)</u> | <u>RPD Limit (%)</u> | <u>Qualifiers</u> |
|-----------------|---------------|-----|-------------------------|-----------------------------------------|--------------------------------------|--------------------|-------------------|----------------------|-------------------|
| 1,4-Dioxane     | 123-91-1      | LCS | 0.67                    |                                         | 1                                    | 67                 | 22 - 75           |                      |                   |



QUALITY CONTROL SAMPLES

SEMIVOLATILE SIM (cont.)

SURROGATES

| Compound               | CAS No     |     | Result<br>(ug/L) | Expected<br>(ug/L) | Rec.<br>(%) | Limits (%) | Qualifiers |
|------------------------|------------|-----|------------------|--------------------|-------------|------------|------------|
| 2-Methylnapthalene-d10 | 7297-45-2  | LCS | 1                | 1                  | 100         | 29 - 112   |            |
| Fluoranthene-d10       | 93951-69-0 | LCS | 1.20             | 1                  | 118         | 45 - 130   |            |

VOLATILE ORGANICS

QUALITY CONTROL SAMPLES

QC Batch

Associated Samples

QC Batch

1277070

Prep Method

N/A

Date

N/A

Analysis Method

SW846 8260D

Tech.

3372684002

Matrix Spike3864890 (MS)3372682004 (non-Project Sample)For QC Batch 1277070

\*\*\*\*NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Matrix Spike Duplicate3864891 (MSD)3372682004 (non-Project Sample)For QC Batch 1277070

RESULTS

| Compound                    | CAS No   |     | Result<br>(ug/L) | Orig.<br>Result<br>(ug/L) | Spk<br>Added<br>(ug/L) | Rec.<br>(%) | Limits (%) | RPD Limit (%)     | Qualifiers |
|-----------------------------|----------|-----|------------------|---------------------------|------------------------|-------------|------------|-------------------|------------|
| 1,1,1,2-Tetrachloroethane   | 630-20-6 | MS  | 19.90            | 0                         | 20                     | 99.5        | 78 - 124   |                   |            |
| 1,1,1,2-Tetrachloroethane   | 630-20-6 | MSD | 20.80            | 0                         | 20                     | 104         | 78 - 124   | RPD 4.48 (Max-30) |            |
| 1,1,1-Trichloroethane       | 71-55-6  | MS  | 20.70            | 0.37                      | 20                     | 102         | 74 - 131   |                   |            |
| 1,1,1-Trichloroethane       | 71-55-6  | MSD | 22               | 0.37                      | 20                     | 108         | 74 - 131   | RPD 5.95 (Max-30) |            |
| 1,1,2,2-Tetrachloroethane   | 79-34-5  | MS  | 20.50            | 0                         | 20                     | 103         | 71 - 121   |                   |            |
| 1,1,2,2-Tetrachloroethane   | 79-34-5  | MSD | 21.40            | 0                         | 20                     | 107         | 71 - 121   | RPD 4.16 (Max-30) |            |
| 1,1,2-Trichloroethane       | 79-00-5  | MS  | 19.90            | 0                         | 20                     | 99.3        | 80 - 119   |                   |            |
| 1,1,2-Trichloroethane       | 79-00-5  | MSD | 20.20            | 0                         | 20                     | 101         | 80 - 119   | RPD 1.51 (Max-30) |            |
| 1,1-Dichloroethane          | 75-34-3  | MS  | 20.70            | 0.31                      | 20                     | 102         | 77 - 125   |                   |            |
| 1,1-Dichloroethane          | 75-34-3  | MSD | 21.90            | 0.31                      | 20                     | 108         | 77 - 125   | RPD 5.45 (Max-30) |            |
| 1,1-Dichloroethene          | 75-35-4  | MS  | 22.40            | 0                         | 20                     | 112         | 71 - 131   |                   |            |
| 1,1-Dichloroethene          | 75-35-4  | MSD | 23.60            | 0                         | 20                     | 118         | 71 - 131   | RPD 5.09 (Max-30) |            |
| 1,2,3-Trichloropropane      | 96-18-4  | MS  | 19.30            | 0                         | 20                     | 96.3        | 73 - 122   |                   |            |
| 1,2,3-Trichloropropane      | 96-18-4  | MSD | 20.30            | 0                         | 20                     | 102         | 73 - 122   | RPD 5.42 (Max-30) |            |
| 1,2-Dibromo-3-chloropropane | 96-12-8  | MS  | 18.30            | 0                         | 20                     | 91.4        | 62 - 128   |                   |            |
| 1,2-Dibromo-3-chloropropane | 96-12-8  | MSD | 19.50            | 0                         | 20                     | 97.5        | 62 - 128   | RPD 6.42 (Max-30) |            |
| 1,2-Dibromoethane           | 106-93-4 | MS  | 19.10            | 0                         | 20                     | 95.4        | 77 - 121   |                   |            |
| 1,2-Dibromoethane           | 106-93-4 | MSD | 20               | 0                         | 20                     | 100         | 77 - 121   | RPD 4.77 (Max-30) |            |
| 1,2-Dichlorobenzene         | 95-50-1  | MS  | 19.30            | 0                         | 20                     | 96.3        | 80 - 119   |                   |            |
| 1,2-Dichlorobenzene         | 95-50-1  | MSD | 20.50            | 0                         | 20                     | 102         | 80 - 119   | RPD 6.26 (Max-30) |            |
| 1,2-Dichloroethane          | 107-06-2 | MS  | 18.80            | 0                         | 20                     | 93.8        | 73 - 128   |                   |            |
| 1,2-Dichloroethane          | 107-06-2 | MSD | 19.70            | 0                         | 20                     | 98.7        | 73 - 128   | RPD 5.13 (Max-30) |            |
| 1,2-Dichloropropane         | 78-87-5  | MS  | 20.30            | 0                         | 20                     | 101         | 78 - 122   |                   |            |
| 1,2-Dichloropropane         | 78-87-5  | MSD | 21.20            | 0                         | 20                     | 106         | 78 - 122   | RPD 4.21 (Max-30) |            |
| 1,4-Dichlorobenzene         | 106-46-7 | MS  | 18.90            | 0                         | 20                     | 94.5        | 79 - 118   |                   |            |
| 1,4-Dichlorobenzene         | 106-46-7 | MSD | 20.10            | 0                         | 20                     | 101         | 79 - 118   | RPD 6.19 (Max-30) |            |
| 2-Butanone                  | 78-93-3  | MS  | 88.20            | 0                         | 100                    | 88.2        | 56 - 143   |                   |            |
| 2-Butanone                  | 78-93-3  | MSD | 94.30            | 0                         | 100                    | 94.3        | 56 - 143   | RPD 6.63 (Max-30) |            |
| 2-Hexanone                  | 591-78-6 | MS  | 102              | 0                         | 100                    | 102         | 57 - 139   |                   |            |
| 2-Hexanone                  | 591-78-6 | MSD | 106              | 0                         | 100                    | 106         | 57 - 139   | RPD 3.59 (Max-30) |            |
| 4-Methyl-2-Pentanone(MIBK)  | 108-10-1 | MS  | 102              | 0                         | 100                    | 102         | 67 - 130   |                   |            |
| 4-Methyl-2-Pentanone(MIBK)  | 108-10-1 | MSD | 106              | 0                         | 100                    | 106         | 67 - 130   | RPD 3.45 (Max-30) |            |
| Acetone                     | 67-64-1  | MS  | 89.30            | 0                         | 100                    | 89.3        | 39 - 160   |                   |            |
| Acetone                     | 67-64-1  | MSD | 93.10            | 0                         | 100                    | 93.1        | 39 - 160   | RPD 4.19 (Max-30) |            |
| Acrylonitrile               | 107-13-1 | MS  | 101              | 0                         | 100                    | 101         | 63 - 135   |                   |            |



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

| Compound                 | CAS No        |     | Result<br>(ug/L) | Orig.<br>Result<br>(ug/L) | Spk<br>Added<br>(ug/L) | Rec.<br>(%) | Limits (%) | RPD | Limit (%)       | Qualifiers |
|--------------------------|---------------|-----|------------------|---------------------------|------------------------|-------------|------------|-----|-----------------|------------|
| Acrylonitrile            | 107-13-1      | MSD | 111              | 0                         | 100                    | 111         | 63 - 135   | RPD | 9.34 (Max-30)   |            |
| Benzene                  | 71-43-2       | MS  | 19.90            | 0                         | 20                     | 99.6        | 79 - 120   |     |                 |            |
| Benzene                  | 71-43-2       | MSD | 20.90            | 0                         | 20                     | 104         | 79 - 120   | RPD | 4.73 (Max-30)   |            |
| Bromochloromethane       | 74-97-5       | MS  | 19.50            | 0                         | 20                     | 97.6        | 78 - 123   |     |                 |            |
| Bromochloromethane       | 74-97-5       | MSD | 20.80            | 0                         | 20                     | 104         | 78 - 123   | RPD | 6.15 (Max-30)   |            |
| Bromodichloromethane     | 75-27-4       | MS  | 20.30            | 0                         | 20                     | 101         | 79 - 125   |     |                 |            |
| Bromodichloromethane     | 75-27-4       | MSD | 21.60            | 0                         | 20                     | 108         | 79 - 125   | RPD | 6.46 (Max-30)   |            |
| Bromoform                | 75-25-2       | MS  | 16.90            | 0                         | 20                     | 84.7        | 66 - 130   |     |                 |            |
| Bromoform                | 75-25-2       | MSD | 17.70            | 0                         | 20                     | 88.3        | 66 - 130   | RPD | 4.16 (Max-30)   |            |
| Bromomethane             | 74-83-9       | MS  | 10.20            | 0                         | 20                     | 51.1*       | 53 - 141   |     |                 |            |
| Bromomethane             | 74-83-9       | MSD | 12.70            | 0                         | 20                     | 63.4        | 53 - 141   | RPD | 21.40 (Max-30)  |            |
| Carbon Disulfide         | 75-15-0       | MS  | 20.80            | 0                         | 20                     | 104         | 64 - 133   |     |                 |            |
| Carbon Disulfide         | 75-15-0       | MSD | 22.30            | 0                         | 20                     | 112         | 64 - 133   | RPD | 6.88 (Max-30)   |            |
| Carbon Tetrachloride     | 56-23-5       | MS  | 19.70            | 0                         | 20                     | 98.6        | 72 - 136   |     |                 |            |
| Carbon Tetrachloride     | 56-23-5       | MSD | 20.60            | 0                         | 20                     | 103         | 72 - 136   | RPD | 4.46 (Max-30)   |            |
| Chlorobenzene            | 108-90-7      | MS  | 19.30            | 0                         | 20                     | 96.5        | 82 - 118   |     |                 |            |
| Chlorobenzene            | 108-90-7      | MSD | 20.20            | 0                         | 20                     | 101         | 82 - 118   | RPD | 4.75 (Max-30)   |            |
| Chlorodibromomethane     | 124-48-1      | MS  | 19.20            | 0                         | 20                     | 96          | 74 - 126   |     |                 |            |
| Chlorodibromomethane     | 124-48-1      | MSD | 20.30            | 0                         | 20                     | 102         | 74 - 126   | RPD | 5.71 (Max-30)   |            |
| Chloroethane             | 75-00-3       | MS  | 18.10            | 0                         | 20                     | 90.7        | 60 - 138   |     |                 |            |
| Chloroethane             | 75-00-3       | MSD | 18.10            | 0                         | 20                     | 90.5        | 60 - 138   | RPD | 0.25 (Max-30)   |            |
| Chloroform               | 67-66-3       | MS  | 19.30            | 0                         | 20                     | 96.6        | 79 - 124   |     |                 |            |
| Chloroform               | 67-66-3       | MSD | 20.10            | 0                         | 20                     | 101         | 79 - 124   | RPD | 4.03 (Max-30)   |            |
| Chloromethane            | 74-87-3       | MS  | 18.40            | 0                         | 20                     | 92          | 50 - 139   |     |                 |            |
| Chloromethane            | 74-87-3       | MSD | 20.30            | 0                         | 20                     | 102         | 50 - 139   | RPD | 9.89 (Max-30)   |            |
| cis-1,2-Dichloroethene   | 156-59-2      | MS  | 22.90            | 0.73                      | 20                     | 111         | 78 - 123   |     |                 |            |
| cis-1,2-Dichloroethene   | 156-59-2      | MSD | 22.90            | 0.73                      | 20                     | 111         | 78 - 123   | RPD | 0.36 (Max-30)   |            |
| Dibromomethane           | 74-95-3       | MS  | 19.20            | 0                         | 20                     | 95.9        | 79 - 123   |     |                 |            |
| Dibromomethane           | 74-95-3       | MSD | 20.40            | 0                         | 20                     | 102         | 79 - 123   | RPD | 6.11 (Max-30)   |            |
| Ethylbenzene             | 100-41-4      | MS  | 19.50            | 0                         | 20                     | 97.3        | 79 - 121   |     |                 |            |
| Ethylbenzene             | 100-41-4      | MSD | 20.60            | 0                         | 20                     | 103         | 79 - 121   | RPD | 5.54 (Max-30)   |            |
| Iodomethane              | 74-88-4       | MS  | 5.40             | 0                         | 20                     | 26.9*       | 69 - 131   |     |                 |            |
| Iodomethane              | 74-88-4       | MSD | 8.20             | 0                         | 20                     | 41.1*       | 69 - 131   | RPD | 41.60* (Max-30) |            |
| Methylene Chloride       | 75-09-2       | MS  | 20.30            | 0                         | 20                     | 101         | 74 - 124   |     |                 |            |
| Methylene Chloride       | 75-09-2       | MSD | 21.20            | 0                         | 20                     | 106         | 74 - 124   | RPD | 4.47 (Max-30)   |            |
| mp-Xylene                | 108383/106423 | MS  | 39.50            | 0                         | 40                     | 98.8        | 80 - 121   |     |                 |            |
| mp-Xylene                | 108383/106423 | MSD | 41.20            | 0                         | 40                     | 103         | 80 - 121   | RPD | 4.06 (Max-30)   |            |
| o-Xylene                 | 95-47-6       | MS  | 19.80            | 0                         | 20                     | 99.2        | 78 - 122   |     |                 |            |
| o-Xylene                 | 95-47-6       | MSD | 20.70            | 0                         | 20                     | 104         | 78 - 122   | RPD | 4.32 (Max-30)   |            |
| Styrene                  | 100-42-5      | MS  | 20.80            | 0                         | 20                     | 104         | 78 - 123   |     |                 |            |
| Styrene                  | 100-42-5      | MSD | 21.70            | 0                         | 20                     | 108         | 78 - 123   | RPD | 4.44 (Max-30)   |            |
| Tetrachloroethene        | 127-18-4      | MS  | 16.20            | 0                         | 20                     | 80.8        | 74 - 129   |     |                 |            |
| Tetrachloroethene        | 127-18-4      | MSD | 17.10            | 0                         | 20                     | 85.5        | 74 - 129   | RPD | 5.69 (Max-30)   |            |
| Toluene                  | 108-88-3      | MS  | 19.60            | 0                         | 20                     | 97.9        | 80 - 121   |     |                 |            |
| Toluene                  | 108-88-3      | MSD | 20.60            | 0                         | 20                     | 103         | 80 - 121   | RPD | 4.98 (Max-30)   |            |
| Total Xylenes            | 1330-20-7     | MS  | 59.40            | 0                         | 60                     | 98.9        | 79 - 121   |     |                 |            |
| Total Xylenes            | 1330-20-7     | MSD | 61.90            | 0                         | 60                     | 103         | 79 - 121   | RPD | 4.15 (Max-30)   |            |
| trans-1,2-Dichloroethene | 156-60-5      | MS  | 20.90            | 0                         | 20                     | 104         | 75 - 124   |     |                 |            |
| trans-1,2-Dichloroethene | 156-60-5      | MSD | 21.90            | 0                         | 20                     | 109         | 75 - 124   | RPD | 4.69 (Max-30)   |            |



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

| Compound                    | CAS No     |     | Result<br>(ug/L) | Orig.<br>Result<br>(ug/L) | Spk<br>Added<br>(ug/L) | Rec.<br>(%) | Limits (%) | RPD Limit (%)     | Qualifiers |
|-----------------------------|------------|-----|------------------|---------------------------|------------------------|-------------|------------|-------------------|------------|
| trans-1,3-Dichloropropene   | 10061-02-6 | MS  | 20               | 0                         | 20                     | 100         | 73 - 127   |                   |            |
| trans-1,3-Dichloropropene   | 10061-02-6 | MSD | 20.90            | 0                         | 20                     | 104         | 73 - 127   | RPD 4.21 (Max-30) |            |
| trans-1,4-Dichloro-2-butene | 110-57-6   | MS  | 17.90            | 0                         | 20                     | 89.7        | 43 - 140   |                   |            |
| trans-1,4-Dichloro-2-butene | 110-57-6   | MSD | 19               | 0                         | 20                     | 94.9        | 43 - 140   | RPD 5.63 (Max-30) |            |
| Trichloroethene             | 79-01-6    | MS  | 22.60            | 3.90                      | 20                     | 93.5        | 79 - 123   |                   |            |
| Trichloroethene             | 79-01-6    | MSD | 23.40            | 3.90                      | 20                     | 97.4        | 79 - 123   | RPD 3.45 (Max-30) |            |
| Trichlorofluoromethane      | 75-69-4    | MS  | 19.80            | 0                         | 20                     | 98.9        | 65 - 141   |                   |            |
| Trichlorofluoromethane      | 75-69-4    | MSD | 20.30            | 0                         | 20                     | 102         | 65 - 141   | RPD 2.82 (Max-30) |            |
| Vinyl Acetate               | 108-05-4   | MS  | 16               | 0                         | 20                     | 80.1        | 54 - 146   |                   |            |
| Vinyl Acetate               | 108-05-4   | MSD | 16.90            | 0                         | 20                     | 84.3        | 54 - 146   | RPD 5.11 (Max-30) |            |
| Vinyl Chloride              | 75-01-4    | MS  | 21.10            | 0                         | 20                     | 106         | 58 - 137   |                   |            |
| Vinyl Chloride              | 75-01-4    | MSD | 21.50            | 0                         | 20                     | 108         | 58 - 137   | RPD 1.94 (Max-30) |            |

SURROGATES

| Compound              | CAS No     |     | Result<br>(ug/L) | Expected<br>(ug/L) | Rec.<br>(%) | Limits (%) | Qualifiers |
|-----------------------|------------|-----|------------------|--------------------|-------------|------------|------------|
| 1,2-Dichloroethane-d4 | 17060-07-0 | MS  | 32.80            | 30                 | 109         | 81 - 118   |            |
| 1,2-Dichloroethane-d4 | 17060-07-0 | MSD | 31.50            | 30                 | 105         | 81 - 118   |            |
| 4-Bromofluorobenzene  | 460-00-4   | MS  | 31.10            | 30                 | 104         | 85 - 114   |            |
| 4-Bromofluorobenzene  | 460-00-4   | MSD | 29.10            | 30                 | 97.1        | 85 - 114   |            |
| Dibromofluoromethane  | 1868-53-7  | MS  | 31.60            | 30                 | 105         | 80 - 119   |            |
| Dibromofluoromethane  | 1868-53-7  | MSD | 30               | 30                 | 100         | 80 - 119   |            |
| Toluene-d8            | 2037-26-5  | MS  | 31.50            | 30                 | 105         | 89 - 112   |            |
| Toluene-d8            | 2037-26-5  | MSD | 29.50            | 30                 | 98.3        | 89 - 112   |            |

Method Blank 3866109 (MB) Created on 08/16/2024 09:33 For QC Batch 1277070

RESULTS

| Compound                    | CAS No   |     | Result | Units | LOQ | Qualifiers |
|-----------------------------|----------|-----|--------|-------|-----|------------|
| 1,1,1,2-Tetrachloroethane   | 630-20-6 | BLK | 0.75U  | ug/L  | 1.0 | U          |
| 1,1,1-Trichloroethane       | 71-55-6  | BLK | 0.75U  | ug/L  | 1.0 | U          |
| 1,1,2,2-Tetrachloroethane   | 79-34-5  | BLK | 0.75U  | ug/L  | 1.0 | U          |
| 1,1,2-Trichloroethane       | 79-00-5  | BLK | 0.75U  | ug/L  | 1.0 | U          |
| 1,1-Dichloroethane          | 75-34-3  | BLK | 0.75U  | ug/L  | 1.0 | U          |
| 1,1-Dichloroethene          | 75-35-4  | BLK | 0.75U  | ug/L  | 1.0 | U          |
| 1,2,3-Trichloropropane      | 96-18-4  | BLK | 2.5U   | ug/L  | 5.0 | U          |
| 1,2-Dibromo-3-chloropropane | 96-12-8  | BLK | 2.5U   | ug/L  | 5.0 | U          |
| 1,2-Dibromoethane           | 106-93-4 | BLK | 0.75U  | ug/L  | 1.0 | U          |
| 1,2-Dichlorobenzene         | 95-50-1  | BLK | 0.75U  | ug/L  | 1.0 | U          |
| 1,2-Dichloroethane          | 107-06-2 | BLK | 0.75U  | ug/L  | 1.0 | U          |
| 1,2-Dichloropropane         | 78-87-5  | BLK | 0.75U  | ug/L  | 1.0 | U          |
| 1,4-Dichlorobenzene         | 106-46-7 | BLK | 0.75U  | ug/L  | 1.0 | U          |
| 2-Butanone                  | 78-93-3  | BLK | 3.8U   | ug/L  | 5.0 | U          |
| 2-Hexanone                  | 591-78-6 | BLK | 3.8U   | ug/L  | 5.0 | U          |
| 4-Methyl-2-Pentanone(MIBK)  | 108-10-1 | BLK | 3.8U   | ug/L  | 5.0 | U          |

VOLATILE ORGANICS (cont.)

QUALITY CONTROL SAMPLES

RESULTS

| Compound                    | CAS No        |     | Result | Units | LOQ | Qualifiers |
|-----------------------------|---------------|-----|--------|-------|-----|------------|
| Acetone                     | 67-64-1       | BLK | 3.8U   | ug/L  | 5.0 | U          |
| Acrylonitrile               | 107-13-1      | BLK | 3.8U   | ug/L  | 5.0 | U          |
| Benzene                     | 71-43-2       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Bromochloromethane          | 74-97-5       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Bromodichloromethane        | 75-27-4       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Bromoform                   | 75-25-2       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Bromomethane                | 74-83-9       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Carbon Disulfide            | 75-15-0       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Carbon Tetrachloride        | 56-23-5       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Chlorobenzene               | 108-90-7      | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Chlorodibromomethane        | 124-48-1      | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Chloroethane                | 75-00-3       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Chloroform                  | 67-66-3       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Chloromethane               | 74-87-3       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| cis-1,2-Dichloroethene      | 156-59-2      | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Dibromomethane              | 74-95-3       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Ethylbenzene                | 100-41-4      | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Iodomethane                 | 74-88-4       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Methylene Chloride          | 75-09-2       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| mp-Xylene                   | 108383/106423 | BLK | 1.5U   | ug/L  | 2.0 | U          |
| o-Xylene                    | 95-47-6       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Styrene                     | 100-42-5      | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Tetrachloroethene           | 127-18-4      | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Toluene                     | 108-88-3      | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Total Xylenes               | 1330-20-7     | BLK | 2.3U   | ug/L  | 3.0 | U          |
| trans-1,2-Dichloroethene    | 156-60-5      | BLK | 0.75U  | ug/L  | 1.0 | U          |
| trans-1,3-Dichloropropene   | 10061-02-6    | BLK | 0.75U  | ug/L  | 1.0 | U          |
| trans-1,4-Dichloro-2-butene | 110-57-6      | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Trichloroethene             | 79-01-6       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Trichlorofluoromethane      | 75-69-4       | BLK | 0.75U  | ug/L  | 1.0 | U          |
| Vinyl Acetate               | 108-05-4      | BLK | 2.5U   | ug/L  | 5.0 | U          |
| Vinyl Chloride              | 75-01-4       | BLK | 0.75U  | ug/L  | 1.0 | U          |

SURROGATES

| Compound              | CAS No     |     | Result<br>(ug/L) | Expected<br>(ug/L) | Rec.<br>(%) | Limits (%) | Qualifiers |
|-----------------------|------------|-----|------------------|--------------------|-------------|------------|------------|
| 1,2-Dichloroethane-d4 | 17060-07-0 | BLK | 29.90            | 30                 | 99.6        | 81 - 118   |            |
| 4-Bromofluorobenzene  | 460-00-4   | BLK | 29.80            | 30                 | 99.2        | 85 - 114   |            |
| Dibromofluoromethane  | 1868-53-7  | BLK | 28.90            | 30                 | 96.4        | 80 - 119   |            |
| Toluene-d8            | 2037-26-5  | BLK | 30.10            | 30                 | 100         | 89 - 112   |            |

Lab Control Standard

3866110 (LCS)

Created on 08/16/2024 09:33

For QC Batch 1277070

RESULTS

| Compound | CAS No | Result<br>(ug/L) | Orig.<br>Result<br>(ug/L) | Spk<br>Added<br>(ug/L) | Rec.<br>(%) | Limits (%) | RPD Limit (%) | Qualifiers |
|----------|--------|------------------|---------------------------|------------------------|-------------|------------|---------------|------------|
|----------|--------|------------------|---------------------------|------------------------|-------------|------------|---------------|------------|



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

| Compound                    | CAS No        |     | Result<br>(ug/L) | Orig.<br>Result<br>(ug/L) | Spk<br>Added<br>(ug/L) | Rec.<br>(%) | Limits (%) | RPD Limit (%) | Qualifiers |
|-----------------------------|---------------|-----|------------------|---------------------------|------------------------|-------------|------------|---------------|------------|
| 1,1,1,2-Tetrachloroethane   | 630-20-6      | LCS | 20.10            |                           | 20                     | 100         | 78 - 124   |               |            |
| 1,1,1-Trichloroethane       | 71-55-6       | LCS | 20.80            |                           | 20                     | 104         | 74 - 131   |               |            |
| 1,1,2,2-Tetrachloroethane   | 79-34-5       | LCS | 20.40            |                           | 20                     | 102         | 71 - 121   |               |            |
| 1,1,2-Trichloroethane       | 79-00-5       | LCS | 19.50            |                           | 20                     | 97.4        | 80 - 119   |               |            |
| 1,1-Dichloroethane          | 75-34-3       | LCS | 20.30            |                           | 20                     | 102         | 77 - 125   |               |            |
| 1,1-Dichloroethene          | 75-35-4       | LCS | 22.30            |                           | 20                     | 111         | 71 - 131   |               |            |
| 1,2,3-Trichloropropane      | 96-18-4       | LCS | 19.30            |                           | 20                     | 96.5        | 73 - 122   |               |            |
| 1,2-Dibromo-3-chloropropane | 96-12-8       | LCS | 18.80            |                           | 20                     | 94.1        | 62 - 128   |               |            |
| 1,2-Dibromoethane           | 106-93-4      | LCS | 19.20            |                           | 20                     | 96.2        | 77 - 121   |               |            |
| 1,2-Dichlorobenzene         | 95-50-1       | LCS | 19.80            |                           | 20                     | 98.8        | 80 - 119   |               |            |
| 1,2-Dichloroethane          | 107-06-2      | LCS | 19.20            |                           | 20                     | 95.8        | 73 - 128   |               |            |
| 1,2-Dichloropropane         | 78-87-5       | LCS | 19.90            |                           | 20                     | 99.3        | 78 - 122   |               |            |
| 1,4-Dichlorobenzene         | 106-46-7      | LCS | 19.60            |                           | 20                     | 98.1        | 79 - 118   |               |            |
| 2-Butanone                  | 78-93-3       | LCS | 101              |                           | 100                    | 101         | 56 - 143   |               |            |
| 2-Hexanone                  | 591-78-6      | LCS | 104              |                           | 100                    | 104         | 57 - 139   |               |            |
| 4-Methyl-2-Pentanone(MIBK)  | 108-10-1      | LCS | 102              |                           | 100                    | 102         | 67 - 130   |               |            |
| Acetone                     | 67-64-1       | LCS | 106              |                           | 100                    | 106         | 39 - 160   |               |            |
| Acrylonitrile               | 107-13-1      | LCS | 103              |                           | 100                    | 103         | 63 - 135   |               |            |
| Benzene                     | 71-43-2       | LCS | 19.90            |                           | 20                     | 99.3        | 79 - 120   |               |            |
| Bromochloromethane          | 74-97-5       | LCS | 20.30            |                           | 20                     | 102         | 78 - 123   |               |            |
| Bromodichloromethane        | 75-27-4       | LCS | 20.70            |                           | 20                     | 104         | 79 - 125   |               |            |
| Bromoform                   | 75-25-2       | LCS | 17.30            |                           | 20                     | 86.7        | 66 - 130   |               |            |
| Bromomethane                | 74-83-9       | LCS | 18.10            |                           | 20                     | 90.4        | 53 - 141   |               |            |
| Carbon Disulfide            | 75-15-0       | LCS | 21.80            |                           | 20                     | 109         | 64 - 133   |               |            |
| Carbon Tetrachloride        | 56-23-5       | LCS | 20               |                           | 20                     | 99.9        | 72 - 136   |               |            |
| Chlorobenzene               | 108-90-7      | LCS | 19.30            |                           | 20                     | 96.6        | 82 - 118   |               |            |
| Chlorodibromomethane        | 124-48-1      | LCS | 19.60            |                           | 20                     | 97.8        | 74 - 126   |               |            |
| Chloroethane                | 75-00-3       | LCS | 17.50            |                           | 20                     | 87.4        | 60 - 138   |               |            |
| Chloroform                  | 67-66-3       | LCS | 19.40            |                           | 20                     | 97.2        | 79 - 124   |               |            |
| Chloromethane               | 74-87-3       | LCS | 22               |                           | 20                     | 110         | 50 - 139   |               |            |
| cis-1,2-Dichloroethene      | 156-59-2      | LCS | 20.30            |                           | 20                     | 102         | 78 - 123   |               |            |
| Dibromomethane              | 74-95-3       | LCS | 19.40            |                           | 20                     | 96.9        | 79 - 123   |               |            |
| Ethylbenzene                | 100-41-4      | LCS | 19.50            |                           | 20                     | 97.7        | 79 - 121   |               |            |
| Iodomethane                 | 74-88-4       | LCS | 15.20            |                           | 20                     | 75.8        | 69 - 131   |               |            |
| Methylene Chloride          | 75-09-2       | LCS | 20.20            |                           | 20                     | 101         | 74 - 124   |               |            |
| mp-Xylene                   | 108383/106423 | LCS | 40               |                           | 40                     | 100         | 80 - 121   |               |            |
| o-Xylene                    | 95-47-6       | LCS | 20               |                           | 20                     | 100         | 78 - 122   |               |            |
| Styrene                     | 100-42-5      | LCS | 20.90            |                           | 20                     | 105         | 78 - 123   |               |            |
| Tetrachloroethene           | 127-18-4      | LCS | 18               |                           | 20                     | 90.2        | 74 - 129   |               |            |
| Toluene                     | 108-88-3      | LCS | 19.50            |                           | 20                     | 97.7        | 80 - 121   |               |            |
| Total Xylenes               | 1330-20-7     | LCS | 60.10            |                           | 60                     | 100         | 79 - 121   |               |            |
| trans-1,2-Dichloroethene    | 156-60-5      | LCS | 21.10            |                           | 20                     | 106         | 75 - 124   |               |            |
| trans-1,3-Dichloropropene   | 10061-02-6    | LCS | 20.80            |                           | 20                     | 104         | 73 - 127   |               |            |
| trans-1,4-Dichloro-2-butene | 110-57-6      | LCS | 20.70            |                           | 20                     | 103         | 43 - 140   |               |            |
| Trichloroethene             | 79-01-6       | LCS | 19.20            |                           | 20                     | 96          | 79 - 123   |               |            |
| Trichlorofluoromethane      | 75-69-4       | LCS | 20.40            |                           | 20                     | 102         | 65 - 141   |               |            |
| Vinyl Acetate               | 108-05-4      | LCS | 20               |                           | 20                     | 100         | 54 - 146   |               |            |



QUALITY CONTROL SAMPLES

VOLATILE ORGANICS (cont.)

RESULTS

| Compound       | CAS No  |     | <u>Result</u><br>(ug/L) | <u>Orig.</u><br><u>Result</u><br>(ug/L) | <u>Spk</u><br><u>Added</u><br>(ug/L) | <u>Rec.</u><br>(%) | <u>Limits (%)</u> | <u>RPD Limit (%)</u> | <u>Qualifiers</u> |
|----------------|---------|-----|-------------------------|-----------------------------------------|--------------------------------------|--------------------|-------------------|----------------------|-------------------|
| Vinyl Chloride | 75-01-4 | LCS | 21.70                   |                                         | 20                                   | 109                | 58 - 137          |                      |                   |

SURROGATES

| Compound              | CAS No     |     | <u>Result</u><br>(ug/L) | <u>Expected</u><br>(ug/L) | <u>Rec.</u><br>(%) | <u>Limits (%)</u> | <u>Qualifiers</u> |
|-----------------------|------------|-----|-------------------------|---------------------------|--------------------|-------------------|-------------------|
| 1,2-Dichloroethane-d4 | 17060-07-0 | LCS | 30.90                   | 30                        | 103                | 81 - 118          |                   |
| 4-Bromofluorobenzene  | 460-00-4   | LCS | 29.60                   | 30                        | 98.5               | 85 - 114          |                   |
| Dibromofluoromethane  | 1868-53-7  | LCS | 29.90                   | 30                        | 99.7               | 80 - 119          |                   |
| Toluene-d8            | 2037-26-5  | LCS | 29.60                   | 30                        | 98.6               | 89 - 112          |                   |



QUALITY CONTROL DATA CROSS REFERENCE TABLE

| Lab ID     | Sample ID | Preparation Method | Prep Batch | Prep Date/Time   | By  | Analysis Method | Anly Batch |
|------------|-----------|--------------------|------------|------------------|-----|-----------------|------------|
| 3372684001 | JC-3      | SW846 3510C        | 1272216    | 08/11/2024 14:45 | BMP | SW846 8270E SIM | 1272451    |
| 3372684002 | URS-2S    | SW846 3510C        | 1272216    | 08/11/2024 14:45 | BMP | SW846 8270E SIM | 1272451    |
|            |           | N/A                | N/A        | N/A              |     | SW846 8260D     | 1277070    |





Main Site: 301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | [www.alsglobal.com](http://www.alsglobal.com)  
Associated Site: 20 Riverside Drive | Spring City, PA 19475 | Phone: 610-948-4903 | Fax: 717-944-1430 |

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618  
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343, NJ PA101

Analytical Results Report For

**ARCADIS US Inc - Clifton Park, NY**

Project AUC075|AF Plant 59/30036646

Workorder 3372685

Report ID 347380 on 8/19/2024

## Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Aug 08, 2024.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Susan Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

This laboratory report may not be reproduced, except in full, without the written approval of ALS Global.  
ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

### Recipient(s):

Andy Vitolins - Arcadis  
Erika Denkenberger - Arcadis  
Kyle Barber - Arcadis US Inc  
Carissa Koski - ARCADIS  
Corey Averill - Arcadis  
Suzie Bower - Arcadis US Inc

*Susan Scherer*

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

**Susan Scherer**  
Project Coordinator

(ALS Digital Signature)



Sample Summary

| Lab ID     | Sample ID | Matrix           | Date Collected   | Date Received    | Collector | Collection Company  |
|------------|-----------|------------------|------------------|------------------|-----------|---------------------|
| 3372685001 | JC-3      | NY Potable Water | 08/05/2024 09:30 | 08/08/2024 08:47 | CBC       | Collected By Client |



Reference

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136, including but not limited to the following EPA Method reference revisions:  
EPA 300.1 Rev. 1.0-1997  
EPA 300.0 Rev. 2.1-1993  
EPA 353.2 Rev. 2.0-1993  
EPA 410.4 Rev. 1.0-1993  
EPA 420.4 Rev. 1.0-1993  
EPA 365.1 Rev. 2.0-1993  
EPA 200.7 Rev. 4.4-1994  
EPA 200.8 Rev. 5.4-1994  
EPA 245.1 Rev. 3.0-1994
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

Standard Acronyms/Flags

|        |                                                                                                                                      |
|--------|--------------------------------------------------------------------------------------------------------------------------------------|
| J      | Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte     |
| U      | Indicates that the analyte was Not Detected (ND) above the MDL                                                                       |
| N      | Indicates presumptive evidence of the presence of a compound                                                                         |
| MDL    | Method Detection Limit                                                                                                               |
| PQL    | Practical Quantitation Limit                                                                                                         |
| RDL    | Practical Quantitation Limit for this Project                                                                                        |
| ND     | Not Detected - indicates that the analyte was Not Detected                                                                           |
| Cntr   | Analysis was performed using this container                                                                                          |
| RegLmt | Regulatory Limit                                                                                                                     |
| LCS    | Laboratory Control Sample                                                                                                            |
| MS     | Matrix Spike                                                                                                                         |
| MSD    | Matrix Spike Duplicate                                                                                                               |
| DUP    | Sample Duplicate                                                                                                                     |
| %Rec   | Percent Recovery                                                                                                                     |
| RPD    | Relative Percent Difference                                                                                                          |
| LOD    | DoD Limit of Detection                                                                                                               |
| LOQ    | DoD Limit of Quantitation                                                                                                            |
| DL     | DoD Detection Limit                                                                                                                  |
| I      | Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL) |
| (S)    | Surrogate Compound                                                                                                                   |
| NC     | Not Calculated                                                                                                                       |
| *      | Result outside of QC limits                                                                                                          |
| #      | Please reference the result in the Results Section for analyte-level flags.                                                          |



Project Notations

Lab ID

Sample ID

Sample Notations

Notation Ref.

Result Notations



Detected Results Summary

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | JC-3       | Collected   | 08/05/2024 09:30 |
| Lab Sample ID    | 3372685001 | Lab Receipt | 08/08/2024 08:47 |

| Compound              | Result | Units | RDL  | Method    | Flag |
|-----------------------|--------|-------|------|-----------|------|
| VOLATILE ORGANICS     |        |       |      |           |      |
| 1,1,1-Trichloroethane | 0.54   | ug/L  | 0.50 | EPA 524.2 | #    |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | JC-3       | Collected   | 08/05/2024 09:30 |
| Lab Sample ID    | 3372685001 | Lab Receipt | 08/08/2024 08:47 |

VOLATILE ORGANICS

| Compound                  | Result | Flag | Units | RDL  | Method    | Dilution | Analysis Date/Time | By  | Cntr |
|---------------------------|--------|------|-------|------|-----------|----------|--------------------|-----|------|
| 1,1,1,2-Tetrachloroethane | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| 1,1,1-Trichloroethane     | 0.54   |      | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| 1,1,2,2-Tetrachloroethane | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| 1,1,2-Trichloroethane     | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| 1,1-Dichloroethane        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| 1,1-Dichloroethene        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| 1,1-Dichloropropene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| 1,2,3-Trichlorobenzene    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| 1,2,3-Trichloropropane    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| 1,2,4-Trichlorobenzene    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| 1,2,4-Trimethylbenzene    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| 1,2-Dichlorobenzene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| 1,2-Dichloroethane        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| 1,2-Dichloropropane       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| 1,3,5-Trimethylbenzene    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| 1,3-Dichlorobenzene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| 1,3-Dichloropropane       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| 1,4-Dichlorobenzene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| 2,2-Dichloropropane       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| Benzene                   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| Bromobenzene              | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| Bromochloromethane        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| Bromomethane              | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| Carbon Tetrachloride      | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| Chlorobenzene             | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| Chloroethane              | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| Chloromethane             | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| cis-1,2-Dichloroethene    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| cis-1,3-Dichloropropene   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| Dibromomethane            | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| Dichlorodifluoromethane   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| Ethylbenzene              | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| Hexachlorobutadiene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| Isopropylbenzene          | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| Methylene Chloride        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| mp-Xylene                 | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| n-Butylbenzene            | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| n-Propylbenzene           | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| o-Chlorotoluene           | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| o-Xylene                  | ND     | ND   | ug/L  | 0.25 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| p-Chlorotoluene           | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| p-Isopropyltoluene        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| sec-Butylbenzene          | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| Styrene                   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| tert-Butylbenzene         | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| Tetrachloroethene         | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| Toluene                   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |



Results

|                  |            |             |                  |
|------------------|------------|-------------|------------------|
| Client Sample ID | JC-3       | Collected   | 08/05/2024 09:30 |
| Lab Sample ID    | 3372685001 | Lab Receipt | 08/08/2024 08:47 |

VOLATILE ORGANICS (cont.)

| Compound                  | Result | Flag | Units | RDL  | Method    | Dilution | Analysis Date/Time | By  | Cntr |
|---------------------------|--------|------|-------|------|-----------|----------|--------------------|-----|------|
| trans-1,2-Dichloroethene  | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| trans-1,3-Dichloropropene | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| Trichloroethene           | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |
| Trichlorofluoromethane    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 | 1        | 08/15/2024 17:36   | ILY | A    |

SURROGATES

| Compound               | CAS No    | Recovery | Limits(%) | Analysis Date/Time | Qualifiers |
|------------------------|-----------|----------|-----------|--------------------|------------|
| 1,2-Dichlorobenzene-d4 | 2199-69-1 | 93.6%    | 70 – 130  | 08/15/2024 17:36   |            |
| 4-Bromofluorobenzene   | 460-00-4  | 95.3%    | 70 – 130  | 08/15/2024 17:36   |            |



Sample - Method Cross Reference Table

| Lab ID     | Sample ID | Analysis Method | Preparation Method | Leachate Method |
|------------|-----------|-----------------|--------------------|-----------------|
| 3372685001 | JC-3      | EPA 524.2       | N/A                |                 |



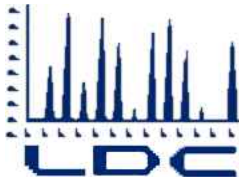
QUALITY CONTROL DATA CROSS REFERENCE TABLE

| Lab ID     | Sample ID | Preparation Method | Prep Batch | Prep Date/Time | By | Analysis Method | Anly Batch |
|------------|-----------|--------------------|------------|----------------|----|-----------------|------------|
| 3372685001 | JC-3      | N/A                | N/A        | N/A            |    | EPA 524.2       | 1276726    |



# Appendix C

## Validation Reports



## LABORATORY DATA CONSULTANTS, INC.

2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.  
10 Friends Ln, Suite 200  
Newtown, PA 18940  
ATTN: Ms. Erika Denkenberger  
[Erika.Denkenberger@arcadis.com](mailto:Erika.Denkenberger@arcadis.com)

October 31, 2024

SUBJECT: Johnson City NY AFP-59 - Data Validation

Dear Ms. Denkenberger,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on September 20, 2024. Attachment 1 is a summary of the samples that were reviewed for each analysis.

### **LDC Project #59760:**

#### **SDG #**

AUC074/3372684  
AUC075-3372685  
3372682  
3372683

#### **Fraction**

Volatiles, 1,4-Dioxane

The data validation was performed under Stage 2A guidelines. The analysis was validated using the following documents, as applicable to each method:

- U.S. Department of Defense (DoD)/Department of Energy (DoE) Consolidated Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.4 (2021)
- USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020)
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng  
[pgeng@lab-data.com](mailto:pgeng@lab-data.com)  
Project Manager/Senior Chemist

2A/4 90/10 (client select) LDC# 59760 (Arcadis - Highlands Ranch, CO / AFP 59) Project# 30036646

**Laboratory Data Consultants, Inc.**  
**Data Validation Report**

**Project/Site Name:** Johnson City NY AFP-59  
**LDC Report Date:** October 1, 2024  
**Parameters:** Volatile Organic Compounds  
**Validation Level:** Stage 4  
**Laboratory:** ALS Environmental, Middletown, PA  
**Sample Delivery Group (SDG):** AUC074/3372684

| <b>Sample Identification</b> | <b>Laboratory Sample Identification</b> | <b>Matrix</b> | <b>Collection Date</b> |
|------------------------------|-----------------------------------------|---------------|------------------------|
| URS-2S                       | 3372684002                              | Water         | 08/07/24               |

## **Introduction**

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the U.S. Department of Defense (DoD)/Department of Energy (DoE) Consolidated Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.4 (2021) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) SW 846 Method 8260D

All sample results were subjected to Stage 4 data validation, which is comprised of the quality control (QC) summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

- J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.
- U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).
- UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.
- X (Exclusion of data recommended): The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Exclusion of the data is recommended.
- NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

## **I. Sample Receipt and Technical Holding Times**

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

## **II. GC/MS Instrument Performance Check**

A bromofluorobenzene (BFB) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

## **III. Initial Calibration and Initial Calibration Verification**

An initial calibration was performed as required by the method.

For analytes where average relative response factors (RRFs) were utilized, the percent relative standard deviations (%RSD) were less than or equal to 15.0%.

In the case where the laboratory used a calibration curve to evaluate the analytes, all coefficients of determination ( $r^2$ ) were greater than or equal to 0.990.

Average relative response factors (RRF) for all analytes were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0% for all analytes.

## **IV. Continuing Calibration**

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all analytes.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0% for all analytes.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

## **V. Laboratory Blanks**

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

## **VI. Field Blanks**

No field blanks were identified in this SDG.

## **VII. Surrogates**

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

## **VIII. Matrix Spike/Matrix Spike Duplicates**

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

## **IX. Laboratory Control Samples**

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

## **X. Field Duplicates**

No field duplicates were identified in this SDG.

## **XI. Internal Standards**

All internal standard areas and retention times were within QC limits.

## **XII. Target Analyte Quantitation**

All target analyte quantitations met validation criteria.

## **XIII. Target Analyte Identification**

All target analyte identifications met validation criteria.

## **XIV. Overall Assessment of Data**

The analysis was conducted within all specifications of the method. No results were recommended for exclusion in this SDG.

**Johnson City NY AFP-59  
Volatile Organic Compounds - Data Qualification Summary - SDG  
AUC074/3372684**

No Sample Data Qualified in this SDG

**Johnson City NY AFP-59  
Volatile Organic Compounds - Laboratory Blank Data Qualification Summary -  
SDG AUC074/3372684**

No Sample Data Qualified in this SDG

**Johnson City NY AFP-59  
Volatile Organic Compounds - Field Blank Data Qualification Summary - SDG  
AUC074/3372684**

No Sample Data Qualified in this SDG

LDC #: 59760A1a **VALIDATION COMPLETENESS WORKSHEET**

SDG #: AUC074/3372684

Stage 4

Laboratory: ALS Environmental, Middletown, PA

Date: 9/27/24

Page: 1 of 1

Reviewer: 2nd Reviewer: **METHOD:** GC/MS Volatiles (EPA SW-846 Method 8260D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

|       | Validation Area                        |       | Comments                   |
|-------|----------------------------------------|-------|----------------------------|
| I.    | Sample receipt/Technical holding times | A / A |                            |
| II.   | GC/MS Instrument performance check     | A     |                            |
| III.  | Initial calibration/ICV                | A / A | RSD ≤ 15% $r^2$ ICV ≤ 20%. |
| IV.   | Continuing calibration /closing        | A     | Y.D ≤ 20/50                |
| V.    | Laboratory Blanks                      | A     |                            |
| VI.   | Field blanks                           | N     |                            |
| VII.  | Surrogate spikes                       | A     |                            |
| VIII. | Matrix spike/Matrix spike duplicates   | N     |                            |
| IX.   | Laboratory control samples             | A     | LCS                        |
| X.    | Field duplicates                       | N     |                            |
| XI.   | Internal standards                     | A     |                            |
| XII.  | Target analyte quantitation            | A     |                            |
| XIII. | Target analyte identification          | A     |                            |
| XIV.  | Overall assessment of data             | A     |                            |

Note: A = Acceptable  
N = Not provided/applicable  
SW = See worksheet

ND = No compounds detected  
R = Rinsate  
FB = Field blank

D = Duplicate  
TB = Trip blank  
EB = Equipment blank

SB=Source blank  
OTHER:

|    | Client ID | Lab ID     | Matrix | Date     |
|----|-----------|------------|--------|----------|
| 1  | URS-2S    | 3372684002 | Water  | 08/07/24 |
| 2  |           |            |        |          |
| 3  |           |            |        |          |
| 4  |           |            |        |          |
| 5  |           |            |        |          |
| 6  |           |            |        |          |
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| 8  |           |            |        |          |
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| 10 |           |            |        |          |

Notes:

|   |         |  |  |  |  |
|---|---------|--|--|--|--|
| 1 | 3566109 |  |  |  |  |
|   |         |  |  |  |  |
|   |         |  |  |  |  |
|   |         |  |  |  |  |

Method: Volatiles (EPA SW 846 Method 8260)

| Validation Area                                                                                                                                          | Yes | No | NA | Findings/Comments |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|----|-------------------|
| <b>I. Technical holding times</b>                                                                                                                        |     |    |    |                   |
| Were all technical holding times met?                                                                                                                    | ✓   |    |    |                   |
| Was cooler temperature criteria met?                                                                                                                     | ✓   |    |    |                   |
| <b>II. GC/MS Instrument performance check</b>                                                                                                            |     |    |    |                   |
| Were the BFB performance results reviewed and found to be within the specified criteria?                                                                 | ✓   |    |    |                   |
| Were all samples analyzed within the 12 hour clock criteria?                                                                                             | ✓   |    |    |                   |
| <b>IIIa. Initial calibration</b>                                                                                                                         |     |    |    |                   |
| Did the laboratory perform a 5 point calibration prior to sample analysis?                                                                               | ✓   |    |    |                   |
| Were all percent relative standard deviations (%RSD) ≤ 15% and relative response factors (RRF) within method criteria?                                   | ✓   |    |    |                   |
| Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?                              | ✓   |    |    |                   |
| <b>IIIb. Initial Calibration Verification</b>                                                                                                            |     |    |    |                   |
| Was an initial calibration verification standard analyzed after each initial calibration for each instrument?                                            | ✓   |    |    |                   |
| Were all percent differences (%D) ≤ 20%?                                                                                                                 |     | ✓  |    |                   |
| <b>IV. Continuing calibration</b>                                                                                                                        |     |    |    |                   |
| Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?                                                         | ✓   |    |    |                   |
| Were all percent differences (%D) ≤ 20% and relative response factors (RRF) within method criteria?                                                      | ✓   |    |    |                   |
| <b>V. Laboratory Blanks</b>                                                                                                                              |     |    |    |                   |
| Was a laboratory blank associated with every sample in this SDG?                                                                                         | ✓   |    |    |                   |
| Was a laboratory blank analyzed at least once every 12 hours for each matrix and concentration?                                                          | ✓   |    |    |                   |
| Was there contamination in the laboratory blanks? If yes, please see the Blanks validation findings worksheet.                                           |     | ✓  |    |                   |
| <b>VI. Field blanks</b>                                                                                                                                  |     |    |    |                   |
| Were field blanks were identified in this SDG?                                                                                                           |     | ✓  |    |                   |
| Were target analytes detected in the field blanks?                                                                                                       |     |    | ✓  |                   |
| <b>VII. Surrogate spikes</b>                                                                                                                             |     |    |    |                   |
| Were all surrogate percent recovery (%R) within QC limits?                                                                                               | ✓   |    |    |                   |
| If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria? |     |    | ✓  |                   |
| <b>VIII. Matrix spike/Matrix spike duplicates</b>                                                                                                        |     |    |    |                   |
| Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?                                                                            |     | ✓  |    |                   |
| Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?                                                 |     |    | ✓  |                   |

| Validation Area                                                                                                                             | Yes | No | NA | Findings/Comments |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----|----|----|-------------------|
| <b>IX. Laboratory control samples</b>                                                                                                       |     |    |    |                   |
| Was an LCS analyzed per analytical batch?                                                                                                   | ✓   |    |    |                   |
| Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?                                            | ✓   |    |    |                   |
| <b>X. Field duplicates</b>                                                                                                                  |     |    |    |                   |
| Were field duplicate pairs identified in this SDG?                                                                                          |     | ✓  |    |                   |
| Were target analytes detected in the field duplicates?                                                                                      |     |    | ✓  |                   |
| <b>XI. Internal standards</b>                                                                                                               |     |    |    |                   |
| Were internal standard area counts within -50% to +100% of the associated calibration standard?                                             | ✓   |    |    |                   |
| Were retention times within + 30 seconds of the associated calibration standard?                                                            | ✓   |    |    |                   |
| <b>XII. Target analyte quantitation</b>                                                                                                     |     |    |    |                   |
| Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?                                                                                         | ✓   |    |    |                   |
| Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the target analyte?         | ✓   |    |    |                   |
| Were target analyte quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation? | ✓   |    |    |                   |
| <b>XIII. Target analyte identification</b>                                                                                                  |     |    |    |                   |
| Were relative retention times (RRT's) within + 0.06 RRT units of the standard?                                                              | ✓   |    |    |                   |
| Did analyte spectra meet specified EPA "Functional Guidelines" criteria?                                                                    | ✓   |    |    |                   |
| Were chromatogram peaks verified and accounted for?                                                                                         | ✓   |    |    |                   |
| Were manual integrations reviewed and found acceptable?                                                                                     |     |    | ✓  |                   |
| Did the laboratory provide before and after integration printouts?                                                                          |     |    | ✓  |                   |
| <b>XIV. System performance</b>                                                                                                              |     |    |    |                   |
| System performance was found to be acceptable.                                                                                              | ✓   |    |    |                   |
| <b>XV. Overall assessment of data</b>                                                                                                       |     |    |    |                   |
| Overall assessment of data was found to be acceptable.                                                                                      | ✓   |    |    |                   |

LDC #: 59760A1a

**VALIDATION FINDINGS WORKSHEET**  
**Initial Calibration Calculation Verification**

Page: 1 of 1  
Reviewer: MN

METHOD: GC/MS VOA (EPA SW 846 Method 8260D)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$$RRF = (A_x)(C_{is}) / (A_{is})(C_x)$$

average RRF = sum of the RRFs/number of standards

$$\%RSD = 100 * (S/X)$$

 $A_x$  = Area of Compound $C_x$  = Concentration of compound,

S= Standard deviation of the RRFs,

 $A_{is}$  = Area of associated internal standard $C_{is}$  = Concentration of internal standard

X = Mean of the RRFs

| # | Standard ID | Calibration Date | Compound (IS)           | Reported RRF<br>(RRF 20 std) | Recalculated RRF<br>(RRF 20 std) | Reported Average RRF<br>(Initial) | Recalculated Average RRF<br>(Initial) | Reported %RSD | Recalculated %RSD |
|---|-------------|------------------|-------------------------|------------------------------|----------------------------------|-----------------------------------|---------------------------------------|---------------|-------------------|
| 1 | ICAL MS23   | 8/13/2024        | Trichloroethene (FBZ)   | 0.238                        | 0.238                            | 0.269                             | 0.269                                 | 10.15         | 10.15             |
|   |             |                  | Tetrachloroethene (CBZ) | 0.509                        | 0.509                            | 0.572                             | 0.572                                 | 12.6          | 12.6              |
|   |             |                  | 1,1,2,2 TCE (DCB)       | 0.857                        | 0.857                            | 0.931                             | 0.931                                 | 10.1          | 10.2              |

LDC # 59760A1a

**VALIDATION FINDINGS WORKSHEET**  
**Continuing Calibration Results Verification**

Page: 1 of 1  
Reviewer: MN

METHOD: GC/MS VOA (EPA SW 846 Method 8260D)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

$$\% \text{ Difference} = 100 * (\text{ave. RRF} - \text{RRF}) / \text{ave. RRF}$$
$$\text{RRF} = (\text{Ax})(\text{Cis}) / (\text{Ais})(\text{Cx})$$

Where:

ave. RRF = initial calibration average RRF

RRF = continuing calibration RRF

Ax = Area of compound,

Cx = Concentration of compound,

Ais = Area of associated internal standard

Cis = Concentration of internal standard

| # | Standard ID  | Calibration Date | Compound (IS)           | Average RRF (Initial) | Reported RRF (CC) | Recalculated RRF (CC) | Reported % D | Recalculated %D |
|---|--------------|------------------|-------------------------|-----------------------|-------------------|-----------------------|--------------|-----------------|
| 1 | 2324081601.D | 08/16/24         | Trichloroethene (FBZ)   | 0.269                 | 0.257             | 0.257                 | 4.307        | 4.410           |
|   |              |                  | Tetrachloroethene (CBZ) | 0.572                 | 0.494             | 0.494                 | 13.612       | 13.572          |
|   |              |                  | 1,1,2,2 TCE (DCB)       | 0.930                 | 0.957             | 0.957                 | 2.88         | 2.90            |

LDC#: 59760A1a

**VALIDATION FINDINGS WORKSHEET**  
**Surrogate Results Verification**

Page: 1 of 1  
Reviewer: MN

METHOD: GC/MS VOA (EPA SW 846 Method 8260D)

The percent recoveries (%R) of surrogate compounds were recalculated for the compounds identified below using the following calculation:

Surrogate Found = (Area surr) (Conc IS) / (Area IS) (average RRF surr)

%Recovery: Surrogate Found/Surrogate Spiked \* 100

Sample: 1

| Surrogate             | Surrogate<br>Spiked<br>(ug/L) | Surrogate<br>Found<br>(ug/L) | Percent Recovery<br>Reported | Percent Recovery<br>Recalculated | Percent<br>Difference |
|-----------------------|-------------------------------|------------------------------|------------------------------|----------------------------------|-----------------------|
| Dibromofluoromethane  | 30.0                          | 28.8                         | 96                           | 96                               | 0                     |
| 1,2-Dichloroethane-d4 | 30.0                          | 30.3                         | 101                          | 101                              | 0                     |
| Toluene-d8            | 30.0                          | 30.1                         | 100                          | 100                              | 0                     |
| 4-Bromofluorobenzene  | 30.0                          | 29.7                         | 99                           | 99                               | 0                     |

**VALIDATION FINDINGS WORKSHEET**  
**LCS Results Verification**

METHOD: GC/MS VOA (EPA SW 846 Method 8260D)

The percent recoveries (%R) and relative percent differences (RPD) of the laboratory control sample and laboratory control duplicate were recalculated for the compounds identified below using the following calculation:

SSC = (Area spike) (Conc IS) / (Area IS) (average RRF spike)

%Recovery = 100 \* SSC/SA

Where:

SSC = Spiked concentration

LCS = Laboratory control spike recovery

SA = Spike added

LCSD = Laboratory control spike duplicate recovery

RPD =  $|LCS - LCSD| * 2 / (LCS + LCSD)$

LCS/LCSD ID: 3866110

| Compound           | SA<br>(ug/L) |      | SSC<br>(ug/L) |      | LCS              |         | LCSD             |         | LCS/LCSD |         |
|--------------------|--------------|------|---------------|------|------------------|---------|------------------|---------|----------|---------|
|                    |              |      |               |      | Percent Recovery |         | Percent Recovery |         | RPD      |         |
|                    | LCS          | LCSD | LCS           | LCSD | Reported         | Recalc. | Reported         | Recalc. | Reported | Recalc. |
| 1,1-Dichloroethene | 20           | N/A  | 22.3          | N/A  | 111              | 112     |                  |         |          |         |
| Trichloroethene    | 20           |      | 19.2          |      | 96               | 96      |                  |         |          |         |
| Benzene            | 20           |      | 19.9          |      | 99               | 100     |                  |         |          |         |
| Toluene            | 20           |      | 19.5          |      | 98               | 98      |                  |         |          |         |
| Chlorobenzene      | 20           |      | 19.3          |      | 97               | 97      |                  |         |          |         |

**VALIDATION FINDINGS WORKSHEET**  
**Sample Results Verification**

METHOD: GC/MS VOA (EPA SW 846 Method 8260D)

Compound results for all Level IV samples reported with a positive detect were recalculated and verified using the following equation:

$$\text{Concentration} = \frac{(A_x)(C_i)(V_p)(D_f)}{(A_i)(RRF)(V_o)(\%S)}$$

Where:

Ax = Area or height of the peak for the compound to be measured

Ais = Area or height of internal standard

Ci = Concentration of internal standard

RRF = Average relative response factor

DF = Dilution factor

Vp = Volume purged

Vo = Volume or weight of sample

| Sample # | Compound        | Ax    | Ais    | Ci (ug/L) | RRF   | DF     | Vp (mL) | Vo (mL) | % Solids | Calculated Concentration (ug/L) | Reported Concentration (ug/L) | % Diff |
|----------|-----------------|-------|--------|-----------|-------|--------|---------|---------|----------|---------------------------------|-------------------------------|--------|
| 1        | Trichloroethene | 22632 | 925656 | 30.0      | 0.269 | 1.0000 | 5.0     | 5.0     | NA       | 2.7                             | 2.7                           | 0      |
|          |                 |       |        |           |       |        |         |         |          |                                 |                               |        |
|          |                 |       |        |           |       |        |         |         |          |                                 |                               |        |
|          |                 |       |        |           |       |        |         |         |          |                                 |                               |        |
|          |                 |       |        |           |       |        |         |         |          |                                 |                               |        |
|          |                 |       |        |           |       |        |         |         |          |                                 |                               |        |
|          |                 |       |        |           |       |        |         |         |          |                                 |                               |        |
|          |                 |       |        |           |       |        |         |         |          |                                 |                               |        |

**Laboratory Data Consultants, Inc.**  
**Data Validation Report**

**Project/Site Name:** Johnson City NY AFP-59  
**LDC Report Date:** October 1, 2024  
**Parameters:** 1,4-Dioxane  
**Validation Level:** Stage 4  
**Laboratory:** ALS Environmental, Middletown, PA  
**Sample Delivery Group (SDG):** AUC074/3372684

| <b>Sample Identification</b> | <b>Laboratory Sample Identification</b> | <b>Matrix</b> | <b>Collection Date</b> |
|------------------------------|-----------------------------------------|---------------|------------------------|
| JC-3                         | 3372684001                              | Water         | 08/05/24               |
| URS-2S                       | 3372684002                              | Water         | 08/07/24               |

## **Introduction**

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the U.S. Department of Defense (DoD)/Department of Energy (DoE) Consolidated Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.4 (2021) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

1,4-Dioxane by Environmental Protection Agency (EPA) SW 846 Method 8270E in Selected Ion Monitoring (SIM) mode

All sample results were subjected to Stage 4 data validation, which is comprised of the quality control (QC) summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

- J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.
- U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).
- UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.
- X (Exclusion of data recommended): The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Exclusion of the data is recommended.
- NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

## **I. Sample Receipt and Technical Holding Times**

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

## **II. GC/MS Instrument Performance Check**

A decafluorotriphenylphosphine (DFTPP) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

## **III. Initial Calibration and Initial Calibration Verification**

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0%.

Average relative response factors (RRF) were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 20.0%.

## **IV. Continuing Calibration**

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0%.

The percent differences (%D) of the ending continuing calibration verifications (CCVs) were less than or equal to 50.0%.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

## **V. Laboratory Blanks**

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

## **VI. Field Blanks**

No field duplicates were identified in this SDG.

## **VII. Surrogates**

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

## **VIII. Matrix Spike/Matrix Spike Duplicates**

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

## **IX. Laboratory Control Samples**

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

## **X. Field Duplicates**

No field duplicates were identified in this SDG.

## **XI. Internal Standards**

All internal standard areas and retention times were within QC limits.

## **XII. Target Analyte Quantitation**

All target analyte quantitations met validation criteria.

## **XIII. Target Analyte Identification**

All target analyte identifications met validation criteria.

## **XIV. Overall Assessment of Data**

The analysis was conducted within all specifications of the method. No results were recommended for exclusion in this SDG.

**Johnson City NY AFP-59**

**1,4-Dioxane - Data Qualification Summary - SDG AUC074/3372684**

No Sample Data Qualified in this SDG

**Johnson City NY AFP-59**

**1,4-Dioxane - Laboratory Blank Data Qualification Summary - SDG  
AUC074/3372684**

No Sample Data Qualified in this SDG

**Johnson City NY AFP-59**

**1,4-Dioxane - Field Blank Data Qualification Summary - SDG AUC074/3372684**

No Sample Data Qualified in this SDG

LDC #: 59760A2b **VALIDATION COMPLETENESS WORKSHEET**

SDG #: AUC074/3372684

Stage 4

Laboratory: ALS Environmental, Middletown, PA

Date: 9/27/24

Page: 1 of 1

Reviewer: MN

2nd Reviewer: A

**METHOD:** GC/MS 1,4-Dioxane (EPA SW-846 Method 8270E-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

|       | Validation Area                        |      | Comments                      |
|-------|----------------------------------------|------|-------------------------------|
| I.    | Sample receipt/Technical holding times | A, A |                               |
| II.   | GC/MS Instrument performance check     | A    |                               |
| III.  | Initial calibration/ICV                | A, A | RSD $\leq$ 20% ICV $\leq$ 20% |
| IV.   | Continuing calibration                 | A    | %D $\leq$ 20/50               |
| V.    | Laboratory Blanks                      | A    |                               |
| VI.   | Field blanks                           | N    |                               |
| VII.  | Surrogate spikes                       | A    |                               |
| VIII. | Matrix spike/Matrix spike duplicates   | N    |                               |
| IX.   | Laboratory control samples             | A    | LCS                           |
| X.    | Field duplicates                       | N    |                               |
| XI.   | Internal standards                     | A    |                               |
| XII.  | Target analyte quantitation            | A    |                               |
| XIII. | Target analyte identification          | A    |                               |
| XIV.  | Overall assessment of data             | A    |                               |

Note: A = Acceptable  
N = Not provided/applicable  
SW = See worksheet

ND = No compounds detected  
R = Rinsate  
FB = Field blank

D = Duplicate  
TB = Trip blank  
EB = Equipment blank

SB=Source blank  
OTHER:

|    | Client ID | Lab ID     | Matrix | Date     |
|----|-----------|------------|--------|----------|
| 1  | JC-3      | 3372684001 | Water  | 08/05/24 |
| 2  | URS-2S    | 3372684002 | Water  | 08/07/24 |
| 3  |           |            |        |          |
| 4  |           |            |        |          |
| 5  |           |            |        |          |
| 6  |           |            |        |          |
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| 10 |           |            |        |          |

Notes:

|   |         |  |  |  |  |  |
|---|---------|--|--|--|--|--|
| 1 | 3863522 |  |  |  |  |  |
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|   |         |  |  |  |  |  |
|   |         |  |  |  |  |  |

Method: SVOA (EPA SW 846 Method 8270)

| Validation Area                                                                                                             | Yes | No | NA | Findings/Comments |
|-----------------------------------------------------------------------------------------------------------------------------|-----|----|----|-------------------|
| <b>I. Technical holding times</b>                                                                                           |     |    |    |                   |
| Were all technical holding times met?                                                                                       | ✓   |    |    |                   |
| Was cooler temperature criteria met?                                                                                        | ✓   |    |    |                   |
| <b>II. GC/MS Instrument performance check (Not required)</b>                                                                |     |    |    |                   |
| Were the DFTPP performance results reviewed and found to be within the specified criteria?                                  | ✓   |    |    |                   |
| Were all samples analyzed within the 12 hour clock criteria?                                                                | ✓   |    |    |                   |
| <b>IIIa. Initial calibration</b>                                                                                            |     |    |    |                   |
| Did the laboratory perform a 5 point calibration prior to sample analysis?                                                  | ✓   |    |    |                   |
| Were all percent relative standard deviations (%RSD) ≤ 20% and relative response factors (RRF) ≥ 0.05?                      | ✓   |    |    |                   |
| Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990? |     |    | ✓  |                   |
| <b>IIIb. Initial Calibration Verification</b>                                                                               |     |    |    |                   |
| Was an initial calibration verification standard analyzed after each initial calibration for each instrument?               | ✓   |    |    |                   |
| Were all percent differences (%D) ≤ 20%?                                                                                    | ✓   |    |    |                   |
| <b>IV. Continuing calibration</b>                                                                                           |     |    |    |                   |
| Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?                            | ✓   |    |    |                   |
| Were all percent differences (%D) ≤ 20% and relative response factors (RRF) ≥ 0.05?                                         | ✓   |    |    |                   |
| <b>V. Laboratory Blanks</b>                                                                                                 |     |    |    |                   |
| Was a laboratory blank associated with every sample in this SDG?                                                            | ✓   |    |    |                   |
| Was a laboratory blank analyzed for each matrix and concentration?                                                          | ✓   |    |    |                   |
| Was there contamination in the laboratory blanks?                                                                           |     | ✓  |    |                   |
| <b>VI. Field blanks</b>                                                                                                     |     |    |    |                   |
| Were field blanks identified in this SDG?                                                                                   |     | ✓  |    |                   |
| Were target analytes detected in the field blanks?                                                                          |     |    | ✓  |                   |
| <b>VII. Surrogate spikes</b>                                                                                                |     |    |    |                   |
| Were all surrogate percent differences (%R) within QC limits?                                                               | ✓   |    |    |                   |
| If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?              |     |    | ✓  |                   |
| If any percent recoveries (%R) was less than 10 percent, was a reanalysis performed to confirm %R?                          |     |    | ✓  |                   |
| <b>VIII. Matrix spike/Matrix spike duplicates</b>                                                                           |     |    |    |                   |
| Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?                                               |     | ✓  |    |                   |
| Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?                    |     |    | ✓  |                   |

| Validation Area                                                                                                                             | Yes | No | NA | Findings/Comments |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----|----|----|-------------------|
| <b>IX. Laboratory control samples</b>                                                                                                       |     |    |    |                   |
| Was an LCS analyzed per extraction batch?                                                                                                   | ✓   |    |    |                   |
| Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?                                            | ✓   |    |    |                   |
| <b>X. Field duplicates</b>                                                                                                                  |     |    |    |                   |
| Were field duplicate pairs identified in this SDG?                                                                                          |     | ✓  |    |                   |
| Were target analytes detected in the field duplicates?                                                                                      |     |    | ✓  |                   |
| <b>XI. Internal standards</b>                                                                                                               |     |    |    |                   |
| Were internal standard area counts within -50% or +100% or % Recoveries within 50-200% of the associated calibration standard?              | ✓   |    |    |                   |
| Were retention times within + 30 seconds of the associated calibration standard?                                                            | ✓   |    |    |                   |
| <b>XII. Target analyte quantitation</b>                                                                                                     |     |    |    |                   |
| Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?                                                                                         | ✓   |    |    |                   |
| Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the target analyte?         | ✓   |    |    |                   |
| Were target analyte quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation? | ✓   |    |    |                   |
| <b>XIII. Target analyte identification</b>                                                                                                  |     |    |    |                   |
| Were relative retention times (RRT's) within + 0.06 RRT units of the standard?                                                              | ✓   |    |    |                   |
| Did compound spectra meet specified EPA "Functional Guidelines" criteria?                                                                   | ✓   |    |    |                   |
| Were chromatogram peaks verified and accounted for?                                                                                         | ✓   |    |    |                   |
| Were manual integrations reviewed and found acceptable?                                                                                     |     |    | ✓  |                   |
| Did the laboratory provide before and after integration printouts?                                                                          |     |    | ✓  |                   |
| <b>XIV. System performance</b>                                                                                                              |     |    |    |                   |
| System performance was found to be acceptable.                                                                                              | ✓   |    |    |                   |
| <b>XV. Overall assessment of data</b>                                                                                                       |     |    |    |                   |
| Overall assessment of data was found to be acceptable.                                                                                      | ✓   |    |    |                   |

**VALIDATION FINDINGS WORKSHEET**  
**Initial Calibration Calculation Verification**

METHOD: GC/MS SVOA (EPA SW 846 Method 8270E-SIM )

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$$RRF = (A_x)(C_{is}) / (A_{is})(C_x)$$

average RRF = sum of the RRFs/number of standards

$$\%RSD = 100 * (S/X)$$

 $A_x$  = Area of Compound $C_x$  = Concentration of compound,

S= Standard deviation of the RRFs,

 $A_{is}$  = Area of associated internal standard $C_{is}$  = Concentration of internal standard

X = Mean of the RRFs

| # | Standard ID | Calibration Date | Compound (IS)     | Reported RRF<br>(RRF 0.50 std) | Recalculated RRF<br>(RRF 0.50 std) | Reported Average RRF<br>(Initial) | Recalculated Average RRF<br>(Initial) | Reported %RSD | Recalculated %RSD |
|---|-------------|------------------|-------------------|--------------------------------|------------------------------------|-----------------------------------|---------------------------------------|---------------|-------------------|
| 1 | ICAL MS06   | 07/25/24         | 1,4-Dioxane (DCB) | 0.277                          | 0.277                              | 0.296                             | 0.296                                 | 13.2          | 12.8              |

LDC # 59760A2b

**VALIDATION FINDINGS WORKSHEET**  
**Continuing Calibration Calculation Verification**

Page: 1 of 1  
Reviewer: MN

METHOD: GC/MS SVOA (EPA SW 846 Method 8270E-SIM )

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

$$\% \text{ Difference} = 100 * (\text{ave. RRF} - \text{RRF}) / \text{ave. RRF}$$
$$\text{RRF} = (\text{Ax})(\text{Cis}) / (\text{Ais})(\text{Cx})$$

Where:

ave. RRF = initial calibration average RRF

RRF = continuing calibration RRF

Ax = Area of compound,

Cx = Concentration of compound,

Ais = Area of associated internal standard

Cis = Concentration of internal standard

| # | Standard ID | Calibration Date | Compound (IS)     | Average RRF (Initial) | Reported RRF (CCV) | Recalculated RRF (CCV) | Reported % D | Recalculated %D |
|---|-------------|------------------|-------------------|-----------------------|--------------------|------------------------|--------------|-----------------|
| 1 | 6081202Q.D  | 08/12/24         | 1,4-Dioxane (DCB) | 0.296                 | 0.310              | 0.310                  | 4.6          | 4.6             |
|   |             |                  |                   |                       |                    |                        |              |                 |

LDC # 59760A2b

**VALIDATION FINDINGS WORKSHEET**  
**Surrogate Results Verification**

Page: 1 of 1  
Reviewer: MN

METHOD: GC/MS SVOA (EPA SW 846 Method 8270E-SIM)

The percent recoveries (%R) of surrogate compounds were recalculated for the compounds identified below using the following calculation:

Surrogate Found = (Area surr) (Conc IS) / (Area IS) (average RRF surr)

%Recovery: Surrogate Found/Surrogate Spiked \* 100

Sample: 2

| Surrogate               | Surrogate<br>Spiked<br>(ug/L) | Surrogate<br>Found<br>(ug/L) | Percent Recovery<br>Reported | Percent Recovery<br>Recalculated | Percent<br>Difference |
|-------------------------|-------------------------------|------------------------------|------------------------------|----------------------------------|-----------------------|
| 2-Methylnaphthalene-d10 | 1                             | 0.92                         | 92                           | 92                               | 0                     |
| Fluoranthene-d10        | 1.00                          | 1.20                         | 119                          | 120                              | 1                     |

LDC # 59760A2b

**VALIDATION FINDINGS WORKSHEET**  
**LCS Results Verification**

Page: 1 of 1  
Reviewer: MN

METHOD: GC/MS SVOA (EPA SW 846 Method 8270E-SIM)

The percent recoveries (%R) and relative percent differences (RPD) of the laboratory control sample and laboratory control duplicate were recalculated for the compounds identified below using the following calculation:

$$\text{SSC} = (\text{Area spike}) (\text{Conc IS}) / (\text{Area IS}) (\text{average RRF spike})$$
$$\% \text{Recovery} = 100 * \text{SSC} / \text{SA}$$

Where:

SSC = Spiked concentration

SA = Spike added

LCS = Laboratory control spike recovery

LCSD = Laboratory control spike duplicate recovery

$$\text{RPD} = | \text{LCS} - \text{LCSD} | * 2 / (\text{LCS} + \text{LCSD})$$
LCS/LCSD ID: 3863523

| Compound    | SA<br>(ug/L) |      | SSC<br>(ug/L) |      | LCS              |         | LCSD             |         | LCS/LCSD |         |
|-------------|--------------|------|---------------|------|------------------|---------|------------------|---------|----------|---------|
|             |              |      |               |      | Percent Recovery |         | Percent Recovery |         | RPD      |         |
|             | LCS          | LCSD | LCS           | LCSD | Reported         | Recalc. | Reported         | Recalc. | Reported | Recalc. |
| 1,4-Dioxane | 1.00         | N/A  | 0.670         | N/A  | 67               | 67      |                  |         |          |         |

**VALIDATION FINDINGS WORKSHEET**  
**Sample Results Verification**

METHOD: GC/MS SVOA (EPA SW 846 Method 8270E-SIM)

Compound results for all Level IV samples reported with a positive detect were recalculated and verified using the following equation:

$$\text{Concentration} = \frac{(A_x)(C_i)(V_p)(D_f)}{(A_i)(RRF)(V_o)(\%S)}$$

Where:

Ax = Area or height of the peak for the compound to be measured

Ai = Area or height of internal standard

Ci = Concentration of internal standard

RRF = Average relative response factor

DF = Dilution factor

Vf = Volume final

Vi = Volume or weight of sample

| Sample # | Compound    | Ax   | Ais  | Ci      | RRF   | DF   | Vf (mL) | Vi (mL) | % Solids | Calculated Concentration (ug/L) | Reported Concentration (ug/L) | % Diff |
|----------|-------------|------|------|---------|-------|------|---------|---------|----------|---------------------------------|-------------------------------|--------|
| 2        | 1,4-Dioxane | 3010 | 1228 | 250.000 | 0.296 | 1.00 | 1.0     | 250.00  | NA       | 8.3                             | 8.3                           | 0      |
|          |             |      |      |         |       |      |         |         |          |                                 |                               |        |
|          |             |      |      |         |       |      |         |         |          |                                 |                               |        |
|          |             |      |      |         |       |      |         |         |          |                                 |                               |        |
|          |             |      |      |         |       |      |         |         |          |                                 |                               |        |
|          |             |      |      |         |       |      |         |         |          |                                 |                               |        |
|          |             |      |      |         |       |      |         |         |          |                                 |                               |        |
|          |             |      |      |         |       |      |         |         |          |                                 |                               |        |

**Laboratory Data Consultants, Inc.**  
**Data Validation Report**

**Project/Site Name:** Johnson City NY AFP-59  
**LDC Report Date:** October 1, 2024  
**Parameters:** Volatile Organic Compounds  
**Validation Level:** Stage 4  
**Laboratory:** ALS Environmental, Middletown, PA  
**Sample Delivery Group (SDG):** AUC075/3372685

| <b>Sample Identification</b> | <b>Laboratory Sample Identification</b> | <b>Matrix</b> | <b>Collection Date</b> |
|------------------------------|-----------------------------------------|---------------|------------------------|
| JC-3                         | 3372685001                              | Water         | 08/05/24               |

## **Introduction**

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the U.S. Department of Defense (DoD)/Department of Energy (DoE) Consolidated Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.4 (2021) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) SW 846 Method 524.2

All sample results were subjected to Stage 4 data validation, which is comprised of the quality control (QC) summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

- J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.
- U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).
- UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.
- X (Exclusion of data recommended): The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Exclusion of the data is recommended.
- NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

## **I. Sample Receipt and Technical Holding Times**

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

## **II. GC/MS Instrument Performance Check**

A bromofluorobenzene (BFB) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

## **III. Initial Calibration and Initial Calibration Verification**

An initial calibration was performed as required by the method.

For analytes where average relative response factors (RRFs) were utilized, the percent relative standard deviations (%RSD) were less than or equal to 20.0%.

In the case where the laboratory used a calibration curve to evaluate the analytes, all coefficients of determination ( $r^2$ ) were greater than or equal to 0.990.

Average relative response factors (RRF) for all analytes were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 30.0% for all analytes.

## **IV. Continuing Calibration**

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 30.0% for all analytes.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

## **V. Laboratory Blanks**

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

## **VI. Field Blanks**

No field blanks were identified in this SDG.

## **VIII. Matrix Spike/Matrix Spike Duplicates**

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

## **IX. Laboratory Control Samples**

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

## **X. Field Duplicates**

No field duplicates were identified in this SDG.

## **XI. Internal Standards**

Internal standard data were not reviewed for Stage 4 validation.

## **XII. Target Analyte Quantitation**

All target analyte quantitations met validation criteria.

## **XIII. Target Analyte Identification**

All target analyte identifications met validation criteria.

## **XIV. Overall Assessment of Data**

The analysis was conducted within all specifications of the method. No results were recommended for exclusion in this SDG.

**Johnson City NY AFP-59**  
**Volatile Organic Compounds - Data Qualification Summary - SDG**  
**AUC075/3372685**

No Sample Data Qualified in this SDG

**Johnson City NY AFP-59**  
**Volatile Organic Compounds - Laboratory Blank Data Qualification Summary -**  
**SDG AUC075/3372685**

No Sample Data Qualified in this SDG

**Johnson City NY AFP-59**  
**Volatile Organic Compounds - Field Blank Data Qualification Summary - SDG**  
**AUC075/3372685**

No Sample Data Qualified in this SDG

LDC #: 59760B1c

**VALIDATION COMPLETENESS WORKSHEET**

SDG #: AUC075/3372685

Stage 4

Laboratory: ALS Environmental, Middletown, PA

Date: 9/27/24

Page: 1 of 1

Reviewer: MW

2nd Reviewer: A

**METHOD:** GC/MS Volatiles (EPA Method 524.2)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

|       | Validation Area                        |       | Comments                  |
|-------|----------------------------------------|-------|---------------------------|
| I.    | Sample receipt/Technical holding times | A / A |                           |
| II.   | GC/MS Instrument performance check     | A     |                           |
| III.  | Initial calibration/ICV                | A / A | RSD ≤ 20% $r^2$ ICV ≤ 30% |
| IV.   | Continuing calibration                 | A     | Y.D ≤ 30                  |
| V.    | Laboratory Blanks                      | A     |                           |
| VI.   | Field blanks                           | N     |                           |
| VII.  | Surrogate spikes                       | A     |                           |
| VIII. | Matrix spike/Matrix spike duplicates   | N     |                           |
| IX.   | Laboratory control samples             | A     | LCS                       |
| X.    | Field duplicates                       | N     |                           |
| XI.   | Internal standards                     | A     |                           |
| XII.  | Target analyte quantitation            | A     |                           |
| XIII. | Target analyte identification          | A     |                           |
| XIV.  | Overall assessment of data             | A     |                           |

Notes: A = Acceptable  
N = Not provided/applicable  
SW = See worksheet

ND = No compounds detected  
R = Rinsate  
FB = Field blank

D = Duplicate  
TB = Trip blank  
EB = Equipment blank

SB=Source blank  
OTHER:

|    | Client ID | Lab ID     | Matrix | Date     |
|----|-----------|------------|--------|----------|
| 1  | JC-3      | 3372685001 | Water  | 08/05/24 |
| 2  |           |            |        |          |
| 3  |           |            |        |          |
| 4  |           |            |        |          |
| 5  |           |            |        |          |
| 6  |           |            |        |          |
| 7  |           |            |        |          |
| 8  |           |            |        |          |
| 9  |           |            |        |          |
| 10 |           |            |        |          |

Notes:

|   |         |  |  |  |  |
|---|---------|--|--|--|--|
| 1 | 3865799 |  |  |  |  |
|   |         |  |  |  |  |
|   |         |  |  |  |  |
|   |         |  |  |  |  |

**Method:** Volatiles (EPA Method 524.2)

| Validation Area                                                                                                                                          | Yes | No | NA | Findings/Comments |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|----|-------------------|
| <b>I. Technical holding times</b>                                                                                                                        |     |    |    |                   |
| Were all technical holding times met?                                                                                                                    | X   |    |    |                   |
| Was cooler temperature criteria met?                                                                                                                     | X   |    |    |                   |
| <b>II. GC/MS Instrument performance check</b>                                                                                                            |     |    |    |                   |
| Was a tune check performed prior to establishing and/or re-establishing an initial calibration?                                                          | X   |    |    |                   |
| Were the BFB performance results reviewed and found to be within the specified criteria?                                                                 | X   |    |    |                   |
| <b>III. Initial calibration</b>                                                                                                                          |     |    |    |                   |
| Did the laboratory perform at least 5 point calibration prior to sample analysis?                                                                        | X   |    |    |                   |
| Were all percent relative standard deviations (%RSD) < 20%?                                                                                              | X   |    |    |                   |
| <b>IIIa. Initial calibration verification</b>                                                                                                            |     |    |    |                   |
| Was an initial calibration verification standard analyzed after each initial calibration for each instrument?                                            | X   |    |    |                   |
| Were all percent differences (%D) < 30%?                                                                                                                 | X   |    |    |                   |
| <b>IV. Continuing calibration</b>                                                                                                                        |     |    |    |                   |
| Was a continuing calibration standard analyzed at the beginning of each analysis batch?                                                                  | X   |    |    |                   |
| Were all percent differences (%D) of continuing calibration < 30%?                                                                                       | X   |    |    |                   |
| <b>V. Laboratory blanks</b>                                                                                                                              |     |    |    |                   |
| Was a laboratory blank associated with every sample in this SDG?                                                                                         | X   |    |    |                   |
| Was a laboratory blank analyzed with each analysis batch?                                                                                                | X   |    |    |                   |
| Was there contamination in the laboratory blanks?                                                                                                        |     | X  |    |                   |
| <b>VI. Field blanks</b>                                                                                                                                  |     |    |    |                   |
| Were field blanks identified in this SDG?                                                                                                                |     | X  |    |                   |
| Were target analytes detected in the field blanks?                                                                                                       |     |    | X  |                   |
| <b>VII. Surrogate spikes</b>                                                                                                                             |     |    |    |                   |
| Were all surrogate %R within the QC limits?                                                                                                              | X   |    |    |                   |
| If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria? |     |    | X  |                   |
| <b>VIII. Matrix spike/Matrix spike duplicates</b>                                                                                                        |     |    |    |                   |
| Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?                                                                            |     | X  |    |                   |
| Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?                                                 |     |    | X  |                   |
| <b>IX. Laboratory control samples</b>                                                                                                                    |     |    |    |                   |
| Was an LCS analyzed per analytical batch?                                                                                                                | X   |    |    |                   |
| Were the LCS percent recoveries (%R) within 70-130%?                                                                                                     | X   |    |    |                   |
| <b>X. Field duplicates</b>                                                                                                                               |     |    |    |                   |
| Were field duplicate pairs identified in this SDG?                                                                                                       |     | X  |    |                   |

| Validation Area                                                                                                                                                                 | Yes | No | NA | Findings/Comments |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|----|-------------------|
| Were target analytes detected in the field duplicates?                                                                                                                          |     |    | X  |                   |
| <b>XI. Internal standards</b>                                                                                                                                                   |     |    |    |                   |
| Were internal standard area counts within +/-30% of the area of the most recent continuing calibration standard and +/-50% of the average peak area in the initial calibration? | X   |    |    |                   |
| Were retention times within +/-30 seconds of the associated calibration standard?                                                                                               | X   |    |    |                   |
| <b>XII. Target analyte quantitation/CRQLs</b>                                                                                                                                   |     |    |    |                   |
| Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?                                                                                                                             | X   |    |    |                   |
| Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) or regression equations used to quantitate the analyte?                            | X   |    |    |                   |
| Were analyte quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?                                          | X   |    |    |                   |
| <b>XIII. Target analyte identification</b>                                                                                                                                      |     |    |    |                   |
| Were relative retention times (RRT's) within + 0.06 RRT units of the standard?                                                                                                  | X   |    |    |                   |
| Did analyte spectra meet specified EPA "Functional Guidelines" criteria?                                                                                                        | X   |    |    |                   |
| Were chromatogram peaks verified and accounted for?                                                                                                                             | X   |    |    |                   |
| Were manual integrations performed and found acceptable?                                                                                                                        |     |    | X  |                   |
| Did the laboratory provide before and after printouts?                                                                                                                          |     |    | X  |                   |
| <b>XIV. System performance</b>                                                                                                                                                  |     |    |    |                   |
| System performance was found to be acceptable.                                                                                                                                  | X   |    |    |                   |
| <b>XV. Overall assessment of data</b>                                                                                                                                           |     |    |    |                   |
| Overall assessment of data was found to be acceptable.                                                                                                                          | X   |    |    |                   |

LDC #: 59760B1c

**VALIDATION FINDINGS WORKSHEET**  
**Initial Calibration Calculation Verification**

Page: 1 of 1  
Reviewer: MN

METHOD: GC/MS VOA (EPA Method 524.2)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$$RRF = (A_x)(C_{is}) / (A_{is})(C_x)$$

average RRF = sum of the RRFs/number of standards

$$\%RSD = 100 * (S/X)$$

 $A_x$  = Area of Compound $C_x$  = Concentration of compound, $S$  = Standard deviation of the RRFs, $A_{is}$  = Area of associated internal standard $C_{is}$  = Concentration of internal standard $X$  = Mean of the RRFs

| # | Standard ID | Calibration Date | Compound (IS)   | Reported RRF<br>(RRF 5 std) | Recalculated RRF<br>(RRF 5 std) | Reported Average RRF<br>(Initial) | Recalculated Average RRF<br>(Initial) | Reported %RSD | Recalculated %RSD |
|---|-------------|------------------|-----------------|-----------------------------|---------------------------------|-----------------------------------|---------------------------------------|---------------|-------------------|
| 1 | ICAL MS05   | 8/14/2024        | 1,1,1-TCA (FBZ) | 0.171                       | 0.171                           | 0.168                             | 0.168                                 | 13.20         | 13.11             |
|   |             |                  |                 |                             |                                 |                                   |                                       |               |                   |
|   |             |                  |                 |                             |                                 |                                   |                                       |               |                   |

LDC # 59760B1c

**VALIDATION FINDINGS WORKSHEET**  
**Continuing Calibration Results Verification**

Page: 1 of 1  
Reviewer: MN

METHOD: GC/MS VOA (EPA Method 524.2)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

$$\% \text{ Difference} = 100 * (\text{ave. RRF} - \text{RRF}) / \text{ave. RRF}$$
$$\text{RRF} = (\text{Ax})(\text{Cis}) / (\text{Ais})(\text{Cx})$$

Where:

ave. RRF = initial calibration average RRF

RRF = continuing calibration RRF

Ax = Area of compound,

Cx = Concentration of compound,

Ais = Area of associated internal standard

Cis = Concentration of internal standard

| # | Standard ID | Calibration Date | Compound (IS)   | Average RRF (Initial) | Reported RRF (CC) | Recalculated RRF (CC) | Reported % D | Recalculated %D |
|---|-------------|------------------|-----------------|-----------------------|-------------------|-----------------------|--------------|-----------------|
| 1 | 524081501.D | 08/15/24         | 1,1,1-TCA (FBZ) | 0.168                 | 0.134             | 0.134                 | 20.314       | 20.238          |
|   |             |                  |                 |                       |                   |                       |              |                 |
|   |             |                  |                 |                       |                   |                       |              |                 |

LDC#: 59760B1c

**VALIDATION FINDINGS WORKSHEET**  
**Surrogate Results Verification**

Page: 1 of 1  
Reviewer: MN

METHOD: GC/MS VOA (EPA Method 524.2)

The percent recoveries (%R) of surrogate compounds were recalculated for the compounds identified below using the following calculation:

Surrogate Found = (Area surr) (Conc IS) / (Area IS) (average RRF surr)

%Recovery: Surrogate Found/Surrogate Spiked \* 100

Sample: 1

| Surrogate             | Surrogate<br>Spiked<br>(ug/L) | Surrogate<br>Found<br>(ug/L) | Percent Recovery<br>Reported | Percent Recovery<br>Recalculated | Percent<br>Difference |
|-----------------------|-------------------------------|------------------------------|------------------------------|----------------------------------|-----------------------|
| 1,2-Dichloroethane-d4 | 5.0                           | 4.7                          | 94                           | 94                               | 0                     |
| 4-Bromofluorobenzene  | 5.0                           | 4.8                          | 95                           | 96                               | 1                     |

**VALIDATION FINDINGS WORKSHEET**  
**LCS Results Verification**

METHOD: GC/MS VOA (EPA Method 524.2)

The percent recoveries (%R) and relative percent differences (RPD) of the laboratory control sample and laboratory control duplicate were recalculated for the compounds identified below using the following calculation:

$SSC = (\text{Area spike}) (\text{Conc IS}) / (\text{Area IS}) (\text{average RRF spike})$

$\% \text{Recovery} = 100 * SSC/SA$

Where:

SSC = Spiked concentration

SA = Spike added

LCS = Laboratory control spike recovery

LCSD = Laboratory control spike duplicate recovery

$RPD = |LCS - LCSD| * 2 / (LCS + LCSD)$

LCS/LCSD ID: 3865801

| Compound           | SA<br>(ug/L) |      | SSC<br>(ug/L) |      | LCS              |         | LCSD             |         | LCS/LCSD |         |
|--------------------|--------------|------|---------------|------|------------------|---------|------------------|---------|----------|---------|
|                    |              |      |               |      | Percent Recovery |         | Percent Recovery |         | RPD      |         |
|                    | LCS          | LCSD | LCS           | LCSD | Reported         | Recalc. | Reported         | Recalc. | Reported | Recalc. |
| 1,1-Dichloroethene | 5.0          | N/A  | 5.6           | N/A  | 112              | 112     |                  |         |          |         |
| Trichloroethene    | 5.0          |      | 4.3           |      | 86               | 86      |                  |         |          |         |
| Benzene            | 5.0          |      | 4.5           |      | 90               | 90      |                  |         |          |         |
| Toluene            | 5.0          |      | 4.5           |      | 100              | 90      |                  |         |          |         |
| Chlorobenzene      | 5.0          |      | 4.5           |      | 90               | 90      |                  |         |          |         |

**VALIDATION FINDINGS WORKSHEET**  
**Sample Results Verification**

METHOD: GC/MS VOA (EPA Method 524.2)

Compound results for all Level IV samples reported with a positive detect were recalculated and verified using the following equation:

$$\text{Concentration} = \frac{(A_x)(C_i)(V_p)(D_f)}{(A_i)(RRF)(V_o)(\%S)}$$

Where:

Ax = Area or height of the peak for the compound to be measured

Ais = Area or height of internal standard

Ci = Concentration of internal standard

RRF = Average relative response factor

DF = Dilution factor

Vp = Volume purged

Vo = Volume or weight of sample

| Sample # | Compound  | Ax    | Ais     | Ci (ug/L) | RRF    | DF     | Vp (mL) | Vo (mL) | % Solids | Calculated Concentration (ug/L) | Reported Concentration (ug/L) | % Diff |
|----------|-----------|-------|---------|-----------|--------|--------|---------|---------|----------|---------------------------------|-------------------------------|--------|
| 1        | 1,1,1-TCA | 18142 | 1003804 | 5.0       | 0.1680 | 1.0000 | 5.0     | 5.0     | NA       | 0.54                            | 0.54                          | 0      |
|          |           |       |         |           |        |        |         |         |          |                                 |                               |        |
|          |           |       |         |           |        |        |         |         |          |                                 |                               |        |
|          |           |       |         |           |        |        |         |         |          |                                 |                               |        |
|          |           |       |         |           |        |        |         |         |          |                                 |                               |        |
|          |           |       |         |           |        |        |         |         |          |                                 |                               |        |
|          |           |       |         |           |        |        |         |         |          |                                 |                               |        |
|          |           |       |         |           |        |        |         |         |          |                                 |                               |        |

## Laboratory Data Consultants, Inc. Data Validation Report

**Project/Site Name:** Johnson City NY AFP-59  
**LDC Report Date:** October 1, 2024  
**Parameters:** Volatile Organic Compounds  
**Validation Level:** Stage 2A  
**Laboratory:** ALS Environmental, Middletown, PA  
**Sample Delivery Group (SDG):** 3372682

| Sample Identification | Laboratory Sample Identification | Matrix | Collection Date |
|-----------------------|----------------------------------|--------|-----------------|
| DW-9                  | 3372682001                       | Water  | 08/05/24        |
| DW-3                  | 3372682002                       | Water  | 08/06/24        |
| SW-9                  | 3372682003                       | Water  | 08/06/24        |
| SW-4R                 | 3372682004                       | Water  | 08/06/24        |
| URS-3D                | 3372682005                       | Water  | 08/06/24        |
| URS-3DC               | 3372682006                       | Water  | 08/06/24        |
| SW-7RE                | 3372682007                       | Water  | 08/06/24        |
| URS-2D                | 3372682008                       | Water  | 08/06/24        |
| FB-080624             | 3372682009                       | Water  | 08/06/24        |
| EB-080624             | 3372682010                       | Water  | 08/05/24        |
| Trip-Blank            | 3372682014                       | Water  | 08/05/24        |
| SW-4RMS               | 3372682004MS                     | Water  | 08/06/24        |
| SW-4RMSD              | 3372682004MSD                    | Water  | 08/06/24        |

## **Introduction**

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the U.S. Department of Defense (DoD)/Department of Energy (DoE) Consolidated Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.4 (2021) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) SW 846 Method 8260D

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

- J (Estimated): The analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.
- U (Non-detected): The analyte was analyzed for and positively identified by the laboratory; however the analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).
- UJ (Non-detected estimated): The analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.
- X (Exclusion of data recommended): The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Exclusion of the data is recommended.
- NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

## I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

## II. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

## III. Field Blanks

Sample Trip-Blank was identified as a trip blank. No contaminants were found.

Sample EB-080624 was identified as an equipment blank. No contaminants were found with the following exceptions:

| Blank ID  | Collection Date | Analyte            | Concentration (ug/L) | Associated Samples                                                     |
|-----------|-----------------|--------------------|----------------------|------------------------------------------------------------------------|
| EB-080624 | 08/05/24        | Acetone<br>Toluene | 5.1<br>0.42          | DW-9<br>DW-3<br>SW-9<br>SW-4R<br>URS-3D<br>URS-3DC<br>SW-7RE<br>URS-2D |

Sample FB-080624 was identified as a field blank. No contaminants were found with the following exceptions:

| Blank ID  | Collection Date | Analyte            | Concentration (ug/L) | Associated Samples                                                     |
|-----------|-----------------|--------------------|----------------------|------------------------------------------------------------------------|
| FB-080624 | 08/06/24        | Acetone<br>Toluene | 5.6<br>0.40          | DW-9<br>DW-3<br>SW-9<br>SW-4R<br>URS-3D<br>URS-3DC<br>SW-7RE<br>URS-2D |

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated field blanks.

#### IV. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

#### V. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits with the following exceptions:

| Spike ID<br>(Associated Samples) | Analyte                     | MS %R<br>(Limits)              | MSD %R<br>(Limits) | Flag                                         | A or P |
|----------------------------------|-----------------------------|--------------------------------|--------------------|----------------------------------------------|--------|
| SW-4RMS/MSD<br>(SW-4R)           | Bromomethane<br>Iodomethane | 51.1 (53-141)<br>26.9 (69-131) | -<br>41.1 (69-131) | UJ (all non-detects)<br>UJ (all non-detects) | A      |

Relative percent differences (RPD) were within QC limits with the following exceptions:

| Spike ID<br>(Associated Samples) | Analyte                     | RPD<br>(≤20)   | Flag | A or P |
|----------------------------------|-----------------------------|----------------|------|--------|
| SW-4RMS/MSD<br>(SW-4R)           | Bromomethane<br>Iodomethane | 21.40<br>41.60 | NA   | -      |

#### VI. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

#### VII. Field Duplicates

Samples URS-3D and URS-3DC were identified as field duplicates. No results were detected in any of the samples with the following exceptions:

| Analyte                | Concentration (ug/L) |         | RPD<br>(≤35) | Difference<br>(≤1.0) | Flag | A or P |
|------------------------|----------------------|---------|--------------|----------------------|------|--------|
|                        | URS-3D               | URS-3DC |              |                      |      |        |
| 1,1,1-Trichloroethane  | 0.86                 | 0.87    | -            | 0.01                 | -    | -      |
| cis-1,2-Dichloroethene | 0.63                 | 0.59    | -            | 0.04                 | -    | -      |
| Trichloroethene        | 0.51                 | 0.53    | -            | 0.02                 | -    | -      |

#### VIII. Internal Standards

Internal standard data were not reviewed for Stage 2A validation.

## **IX. Target Analyte Quantitation**

Raw data were not reviewed for Stage 2A validation.

## **X. Target Analyte Identification**

Raw data were not reviewed for Stage 2A validation.

## **XI. Overall Assessment of Data**

The analysis was conducted within all specifications of the method. No results were recommended for exclusion in this SDG.

Data qualified due to MS/MSD %R are summarized and presented in the Data Qualification Summary.

**Johnson City NY AFP-59**

**Volatile Organic Compounds - Data Qualification Summary - SDG 3372682**

| Sample | Analyte                     | Flag                                         | A or P | Reason                                       |
|--------|-----------------------------|----------------------------------------------|--------|----------------------------------------------|
| SW-4R  | Bromomethane<br>Iodomethane | UJ (all non-detects)<br>UJ (all non-detects) | A      | Matrix spike/Matrix spike<br>duplicates (%R) |

**Johnson City NY AFP-59**

**Volatile Organic Compounds - Laboratory Blank Data Qualification Summary -  
SDG 3372682**

No Sample Data Qualified in this SDG

**Johnson City NY AFP-59**

**Volatile Organic Compounds - Field Blank Data Qualification Summary - SDG  
3372682**

No Sample Data Qualified in this SDG

**METHOD:** GC/MS Volatiles (EPA SW-846 Method 8260D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

|       | Validation Area                        |       | Comments               |
|-------|----------------------------------------|-------|------------------------|
| I.    | Sample receipt/Technical holding times | A / A |                        |
| II.   | GC/MS Instrument performance check     | N     |                        |
| III.  | Initial calibration/ICV                | N/N   |                        |
| IV.   | Continuing calibration                 | N     |                        |
| V.    | Laboratory Blanks                      | A     |                        |
| VI.   | Field blanks                           | SW    | TB = 11 FB = 9 EB = 10 |
| VII.  | Surrogate spikes                       | A     |                        |
| VIII. | Matrix spike/Matrix spike duplicates   | SW    |                        |
| IX.   | Laboratory control samples             | A     | LCS                    |
| X.    | Field duplicates                       | SW    | Dup = 5 + 6            |
| XI.   | Internal standards                     | N     |                        |
| XII.  | Target analyte quantitation            | N     |                        |
| XIII. | Target analyte identification          | N     |                        |
| XIV.  | Overall assessment of data             | A     |                        |

Note: A = Acceptable  
N = Not provided/applicable  
SW = See worksheet

ND = No compounds detected  
R = Rinsate  
FB = Field blank

D = Duplicate  
TB = Trip blank  
EB = Equipment blank

SB = Source blank  
OTHER:

|     | Client ID    | Lab ID        | Matrix | Date     |
|-----|--------------|---------------|--------|----------|
| 1   | DW-9         | 3372682001    | Water  | 08/05/24 |
| 2   | DW-3         | 3372682002    | Water  | 08/06/24 |
| 3   | SW-9         | 3372682003    | Water  | 08/06/24 |
| 4   | SW-4R        | 3372682004    | Water  | 08/06/24 |
| 5   | URS-3D       | 3372682005    | Water  | 08/06/24 |
| 6   | URS-3DC      | 3372682006    | Water  | 08/06/24 |
| 7   | SW-7RE       | 3372682007    | Water  | 08/06/24 |
| 8   | URS-2D       | 3372682008    | Water  | 08/06/24 |
| 9   | FB-080624    | 3372682009    | Water  | 08/06/24 |
| 10  | EB-080624    | 3372682010    | Water  | 08/05/24 |
| 11  | Trip-Blank   | 3372682014    | Water  | 08/05/24 |
| 12  | SW-4RMS      | 3372682004MS  | Water  | 08/06/24 |
| 13  | SW-4RMSD     | 3372682004MSD | Water  | 08/06/24 |
| 14  |              |               |        |          |
| MB1 | 3866109 (MB) |               |        |          |

## TARGET COMPOUND WORKSHEET

**METHOD: VOA**

|                              |                                 |                                            |                                   |                            |                                |
|------------------------------|---------------------------------|--------------------------------------------|-----------------------------------|----------------------------|--------------------------------|
| A. Chloromethane             | AA. Tetrachloroethene           | AAA. 1,3,5-Trimethylbenzene                | AAAA. Ethyl tert-butyl ether      | A1. 1,3-Butadiene          | A2. 1,2,4,5-Tetramethylbenzene |
| B. Bromomethane              | BB. 1,1,2,2-Tetrachloroethane   | BBB. 4-Chlorotoluene                       | BBBB. tert-Amyl methyl ether      | B1. Hexane                 | B2. n-Octane                   |
| C. Vinyl chloride            | CC. Toluene                     | CCC. tert-Butylbenzene                     | CCCC. 1-Chlorohexane              | C1. Heptane                | C2. n-Propyl alcohol           |
| D. Chloroethane              | DD. Chlorobenzene               | DDD. 1,2,4-Trimethylbenzene                | DDDD. Isopropyl alcohol           | D1. Propylene              | D2. n-Pentane                  |
| E. Methylene chloride        | EE. Ethylbenzene                | EEE. sec-Butylbenzene                      | EEEE. Acetonitrile                | E1. Freon 11               | E2. n-Decane                   |
| F. Acetone                   | FF. Styrene                     | FFF. 1,3-Dichlorobenzene                   | FFFF. Acrolein                    | F1. Freon 12               | F2. Chlorodifluoromethane      |
| G. Carbon disulfide          | GG. Xylenes, total              | GGG. p-Isopropyltoluene                    | GGGG. Acrylonitrile               | G1. Freon 113              | G2. cis-Decahydronaphthalene   |
| H. 1,1-Dichloroethene        | HH. Vinyl acetate               | HHH. 1,4-Dichlorobenzene                   | HHHH. 1,4-Dioxane                 | H1. Freon 114              | H2. trans-Decahydronaphthalene |
| I. 1,1-Dichloroethane        | II. 2-Chloroethylvinyl ether    | III. n-Butylbenzene                        | IIII. Isobutyl alcohol            | I1. 2-Nitropropane         | I2. nNonane                    |
| J. 1,2-Dichloroethene, total | JJ. Dichlorodifluoromethane     | JJJ. 1,2-Dichlorobenzene                   | JJJJ. Methacrylonitrile           | J1. Dimethyl disulfide     | J2. n-Undecane                 |
| K. Chloroform                | KK. Trichlorofluoromethane      | KKK. 1,2,4-Trichlorobenzene                | KKKK. Propionitrile               | K1. 2,3-Dimethyl pentane   | K2. Chloroprene                |
| L. 1,2-Dichloroethane        | LL. Methyl-tert-butyl ether     | LLL. Hexachlorobutadiene                   | LLLL. Ethyl ether                 | L1. 2,4-Dimethyl pentane   | L2. n-Butanol                  |
| M. 2-Butanone                | MM. 1,2-Dibromo-3-chloropropane | MMM. Naphthalene                           | MMMM. Benzyl chloride             | M1. 3,3-Dimethyl pentane   | M2. n-Butyl acetate            |
| N. 1,1,1-Trichloroethane     | NN. Methyl ethyl ketone         | NNN. 1,2,3-Trichlorobenzene                | NNNN. Iodomethane                 | N1. 2-Methylpentane        | N2. Nitrobenzene               |
| O. Carbon tetrachloride      | OO. 2,2-Dichloropropane         | OOO. 1,3,5-Trichlorobenzene                | OOOO. 1,1-Difluoroethane          | O1. 3-Methylpentane        | O2. Methyl bromide             |
| P. Bromodichloromethane      | PP. Bromochloromethane          | PPP. trans-1,2-Dichloroethene              | PPPP. Tetrahydrofuran             | P1. 3-Ethylpentane         | P2. Methyl chloride            |
| Q. 1,2-Dichloropropane       | QQ. 1,1-Dichloropropene         | QQQ. cis-1,2-Dichloroethene                | QQQQ. Methyl acetate              | Q1. 2,2-Dimethylpentane    | Q2. Methyl iodide              |
| R. cis-1,3-Dichloropropene   | RR. Dibromomethane              | RRR. m,p-Xylene                            | RRRR. Ethyl acetate               | R1. 2,2,3- Trimethylbutane | R2. Methylene bromide          |
| S. Trichloroethene           | SS. 1,3-Dichloropropane         | SSS. o-Xylene                              | SSSS. Cyclohexane                 | S1. 2,2,4-Trimethylpentane | S2.                            |
| T. Dibromochloromethane      | TT. 1,2-Dibromoethane           | TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane | TTTT. Methylcyclohexane           | T1. 2-Methylhexane         | T2.                            |
| U. 1,1,2-Trichloroethane     | UU. 1,1,1,2-Tetrachloroethane   | UUU. 1,2-Dichlorotetrafluoroethane         | UUUU. Allyl chloride              | U1. Nonanal                | U2.                            |
| V. Benzene                   | VV. Isopropylbenzene            | VVV. 4-Ethyltoluene                        | VVVV. Methyl methacrylate         | V1. 2-Methylnaphthalene    | V2.                            |
| W. trans-1,3-Dichloropropene | WW. Bromobenzene                | WWW. Ethanol                               | WWWW. Ethyl methacrylate          | W1. Methanol               | W2.                            |
| X. Bromoform                 | XX. 1,2,3-Trichloropropane      | XXX. Di-isopropyl ether                    | XXXX. cis-1,4-Dichloro-2-butene   | X1. 1,2,3-Trimethylbenzene | X2.                            |
| Y. 4-Methyl-2-pentanone      | YY. n-Propylbenzene             | YYY. tert-Butanol                          | YYYY. trans-1,4-Dichloro-2-butene | Y1. 2-Propanol             | Y2.                            |
| Z. 2-Hexanone                | ZZ. 2-Chlorotoluene             | ZZZ. tert-Butyl alcohol                    | ZZZZ. Pentachloroethane           | Z1. p-Diethylbenzene       | Z2.                            |

LDC #: 59760C1a

**VALIDATION FINDINGS WORKSHEET**  
**Field Blanks**Page: 1 of 1  
Reviewer: MN

METHOD: GC/MS VOA (EPA SW 846 Method 8260D )

☒ Y ☐ N ☐ N/A

Were field blanks identified in this SDG?

☒ Y ☐ N ☐ N/A

Were target compounds detected in the field blanks?

Blank units: ug/L Associated sample units: ug/L

Sampling date: 8/6/24

Field blank type: (circle one) Field Blank / Rinsate / Trip Blank / Other: Associated Samples: 1-8 (ND)

| Compound | Blank ID | Sample Identification |  |  |  |  |  |  |  |
|----------|----------|-----------------------|--|--|--|--|--|--|--|
|          | 9        |                       |  |  |  |  |  |  |  |
| F        | 5.6      |                       |  |  |  |  |  |  |  |
| CC       | 0.40     |                       |  |  |  |  |  |  |  |
|          |          |                       |  |  |  |  |  |  |  |
|          |          |                       |  |  |  |  |  |  |  |
|          |          |                       |  |  |  |  |  |  |  |
|          |          |                       |  |  |  |  |  |  |  |
|          |          |                       |  |  |  |  |  |  |  |
|          |          |                       |  |  |  |  |  |  |  |

Blank units: ug/L Associated sample units: ug/L

Sampling date: 8/5/24

Field blank type: (circle one) Field Blank / Rinsate / Trip Blank / Other: EB Associated Samples: 1-8 (ND)

| Compound | Blank ID | Sample Identification |  |  |  |  |  |  |  |
|----------|----------|-----------------------|--|--|--|--|--|--|--|
|          | 10       |                       |  |  |  |  |  |  |  |
| F        | 5.1      |                       |  |  |  |  |  |  |  |
| CC       | 0.42     |                       |  |  |  |  |  |  |  |
|          |          |                       |  |  |  |  |  |  |  |
|          |          |                       |  |  |  |  |  |  |  |
|          |          |                       |  |  |  |  |  |  |  |
|          |          |                       |  |  |  |  |  |  |  |
|          |          |                       |  |  |  |  |  |  |  |
|          |          |                       |  |  |  |  |  |  |  |



**VALIDATION FINDINGS WORKSHEET**  
**Field Duplicates****METHOD: GC/MS Volatiles (EPA SW-846 Method 8260D)**

| Compound | Concentration ( ug/L ) |      | RPD<br>( $\leq 35\%$ ) | Difference<br>( ug/L ) | Limits<br>(LOQ) | Qualifications<br>(Parent only) |
|----------|------------------------|------|------------------------|------------------------|-----------------|---------------------------------|
|          | 5                      | 6    |                        |                        |                 |                                 |
| N        | 0.86                   | 0.87 |                        | 0.01                   | 1.0             |                                 |
| QQQ      | 0.63                   | 0.59 |                        | 0.04                   | 1.0             |                                 |
| S        | 0.51                   | 0.53 |                        | 0.02                   | 1.0             |                                 |

## Laboratory Data Consultants, Inc. Data Validation Report

**Project/Site Name:** Johnson City NY AFP-59

**LDC Report Date:** October 1, 2024

**Parameters:** 1,4-Dioxane

**Validation Level:** Stage 2A

**Laboratory:** ALS Environmental, Middletown, PA

**Sample Delivery Group (SDG):** 3372682

| Sample Identification | Laboratory Sample Identification | Matrix | Collection Date |
|-----------------------|----------------------------------|--------|-----------------|
| DW-9                  | 3372682001                       | Water  | 08/05/24        |
| DW-3                  | 3372682002                       | Water  | 08/06/24        |
| SW-9                  | 3372682003                       | Water  | 08/06/24        |
| SW-4R                 | 3372682004                       | Water  | 08/06/24        |
| URS-3D                | 3372682005                       | Water  | 08/06/24        |
| URS-3DC               | 3372682006                       | Water  | 08/06/24        |
| SW-7RE                | 3372682007                       | Water  | 08/06/24        |
| URS-2D                | 3372682008                       | Water  | 08/06/24        |
| FB-080624             | 3372682009                       | Water  | 08/06/24        |
| EB-080624             | 3372682010                       | Water  | 08/05/24        |
| JC-2                  | 3372682011                       | Water  | 08/05/24        |
| JC-2C                 | 3372682012                       | Water  | 08/05/24        |
| Post-Treatment        | 3372682013                       | Water  | 08/05/24        |
| SW-4RMS               | 3372682004MS                     | Water  | 08/06/24        |
| SW-4RMSD              | 3372682004MSD                    | Water  | 08/06/24        |

## **Introduction**

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the U.S. Department of Defense (DoD)/Department of Energy (DoE) Consolidated Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.4 (2021) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

1,4-Dioxane by Environmental Protection Agency (EPA) SW 846 Method 8270E in Selected Ion Monitoring (SIM) mode

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

- J (Estimated): The analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.
- U (Non-detected): The analyte was analyzed for and positively identified by the laboratory; however the analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).
- UJ (Non-detected estimated): The analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.
- X (Exclusion of data recommended): The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Exclusion of the data is recommended.
- NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

## I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

## II. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

## III. Field Blanks

Sample EB-080624 was identified as an equipment blank. No contaminants were found.

Sample FB-080624 was identified as a field blank. No contaminants were found.

## VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

## VIII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

## IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

## X. Field Duplicates

Samples URS-3D and URS-3DC and samples JC-2 and JC-2C were identified as field duplicates. No results were detected in any of the samples with the following exceptions:

| Analyte     | Concentration (ug/L) |         | RPD<br>(≤35) | Difference<br>(≤0.50) | Flag | A or P |
|-------------|----------------------|---------|--------------|-----------------------|------|--------|
|             | URS-3D               | URS-3DC |              |                       |      |        |
| 1,4-Dioxane | 2.5                  | 2.6     | 4            | -                     | -    | -      |

| Analyte     | Concentration (ug/L) |       | RPD<br>(≤35) | Difference<br>(≤0.50) | Flag | A or P |
|-------------|----------------------|-------|--------------|-----------------------|------|--------|
|             | JC-2                 | JC-2C |              |                       |      |        |
| 1,4-Dioxane | 0.23                 | 0.37  | -            | 0.14                  | -    | -      |

#### **XI. Internal Standards**

Internal standard data were not reviewed for Stage 2A validation.

#### **XII. Target Analyte Quantitation**

Raw data were not reviewed for Stage 2A validation.

#### **XIII. Target Analyte Identification**

Raw data were not reviewed for Stage 2A validation.

#### **XIV. Overall Assessment of Data**

The analysis was conducted within all specifications of the method. No results were recommended for exclusion in this SDG.

**Johnson City NY AFP-59**

**1,4-Dioxane - Data Qualification Summary - SDG 3372682**

No Sample Data Qualified in this SDG

**Johnson City NY AFP-59**

**1,4-Dioxane - Laboratory Blank Data Qualification Summary - SDG 3372682**

No Sample Data Qualified in this SDG

**Johnson City NY AFP-59**

**1,4-Dioxane - Field Blank Data Qualification Summary - SDG 3372682**

No Sample Data Qualified in this SDG

LDC #: 59760C2b

**VALIDATION COMPLETENESS WORKSHEET**

SDG #: 3372682

Stage 2A

Laboratory: ALS Environmental, Middletown, PA

Date: 9/30/24

Page: 1 of 1

Reviewer: MN

2nd Reviewer: CL

**METHOD:** GC/MS 1,4-Dioxane (EPA SW-846 Method 8270E-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

|       | Validation Area                        |       | Comments         |
|-------|----------------------------------------|-------|------------------|
| I.    | Sample receipt/Technical holding times | A / A |                  |
| II.   | GC/MS Instrument performance check     | N     |                  |
| III.  | Initial calibration/ICV                | N/N   |                  |
| IV.   | Continuing calibration                 | N     |                  |
| V.    | Laboratory Blanks                      | A     |                  |
| VI.   | Field blanks                           | ND    | FB=9 EB=10       |
| VII.  | Surrogate spikes                       | A     |                  |
| VIII. | Matrix spike/Matrix spike duplicates   | A     |                  |
| IX.   | Laboratory control samples             | A     | LCS              |
| X.    | Field duplicates                       | SW    | Dup = 5+6, 11+12 |
| XI.   | Internal standards                     | N     |                  |
| XII.  | Target analyte quantitation            | N     |                  |
| XIII. | Target analyte identification          | N     |                  |
| XIV.  | Overall assessment of data             | A     |                  |

Note: A = Acceptable  
N = Not provided/applicable  
SW = See worksheet

ND = No compounds detected  
R = Rinsate  
FB = Field blank

D = Duplicate  
TB = Trip blank  
EB = Equipment blank

SB=Source blank  
OTHER:

|    | Client ID      | Lab ID        | Matrix | Date     |
|----|----------------|---------------|--------|----------|
| 1  | DW-9           | 3372682001    | Water  | 08/05/24 |
| 2  | DW-3           | 3372682002    | Water  | 08/06/24 |
| 3  | SW-9           | 3372682003    | Water  | 08/06/24 |
| 4  | SW-4R          | 3372682004    | Water  | 08/06/24 |
| 5  | URS-3D D       | 3372682005    | Water  | 08/06/24 |
| 6  | URS-3DC D      | 3372682006    | Water  | 08/06/24 |
| 7  | SW-7RE         | 3372682007    | Water  | 08/06/24 |
| 8  | URS-2D         | 3372682008    | Water  | 08/06/24 |
| 9  | FB-080624      | 3372682009    | Water  | 08/06/24 |
| 10 | EB-080624      | 3372682010    | Water  | 08/05/24 |
| 11 | JC-2 D         | 3372682011    | Water  | 08/05/24 |
| 12 | JC-2C D        | 3372682012    | Water  | 08/05/24 |
| 13 | Post-Treatment | 3372682013    | Water  | 08/05/24 |
| 14 | SW-4RMS        | 3372682004MS  | Water  | 08/06/24 |
| 15 | SW-4RMSD       | 3372682004MSD | Water  | 08/06/24 |

MBI 3863522

**VALIDATION FINDINGS WORKSHEET**  
**Field Duplicates****METHOD: GC/MS 1,4-Dioxane (EPA SW-846 Method 8270E-SIM)**

| <b>Compound</b> | Concentration ( ug/L ) |     | RPD<br>( $\leq 35\%$ ) | Difference<br>( ug/L ) | Limits<br>(LOQ) | Qualifications<br>(Parent only) |
|-----------------|------------------------|-----|------------------------|------------------------|-----------------|---------------------------------|
|                 | 5                      | 6   |                        |                        |                 |                                 |
| 1,4-Dioxane     | 2.5                    | 2.6 | 4                      |                        |                 |                                 |

| <b>Compound</b> | Concentration ( ug/L ) |      | RPD<br>( $\leq 35\%$ ) | Difference<br>( ug/L ) | Limits<br>(LOQ) | Qualifications<br>(Parent only) |
|-----------------|------------------------|------|------------------------|------------------------|-----------------|---------------------------------|
|                 | 11                     | 12   |                        |                        |                 |                                 |
| 1,4-Dioxane     | 0.23                   | 0.37 |                        | 0.14                   | 0.50            |                                 |

**Laboratory Data Consultants, Inc.**  
**Data Validation Report**

**Project/Site Name:** Johnson City NY AFP-59  
**LDC Report Date:** October 1, 2024  
**Parameters:** Volatile Organic Compounds  
**Validation Level:** Stage 2A  
**Laboratory:** ALS Environmental, Middletown, PA  
**Sample Delivery Group (SDG):** 3372683

| <b>Sample Identification</b> | <b>Laboratory Sample Identification</b> | <b>Matrix</b> | <b>Collection Date</b> |
|------------------------------|-----------------------------------------|---------------|------------------------|
| JC-2                         | 3372683001                              | Water         | 08/05/24               |
| JC-2C                        | 3372683002                              | Water         | 08/05/24               |
| Post-Treatment               | 3372683003                              | Water         | 08/05/24               |
| Trip-Blank                   | 3372683004                              | Water         | 08/05/24               |

## **Introduction**

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the U.S. Department of Defense (DoD)/Department of Energy (DoE) Consolidated Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.4 (2021) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) SW 846 Method 524.2

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

- J (Estimated): The analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.
- U (Non-detected): The analyte was analyzed for and positively identified by the laboratory; however the analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).
- UJ (Non-detected estimated): The analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.
- X (Exclusion of data recommended): The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Exclusion of the data is recommended.
- NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

## **I. Sample Receipt and Technical Holding Times**

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

## **II. Laboratory Blanks**

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

## **III. Field Blanks**

Sample Trip-Blank was identified as a trip blank. No contaminants were found.

## **IV. Surrogates**

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

## **V. Matrix Spike/Matrix Spike Duplicates**

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

## **VI. Laboratory Control Samples**

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

## **VII. Field Duplicates**

Samples JC-2 and JC-2C were identified as field duplicates. No results were detected in any of the samples.

## **VIII. Internal Standards**

Internal standard data were not reviewed for Stage 2A validation.

## **IX. Target Analyte Quantitation**

Raw data were not reviewed for Stage 2A validation.

## **X. Target Analyte Identification**

Raw data were not reviewed for Stage 2A validation.

## **XI. Overall Assessment of Data**

The analysis was conducted within all specifications of the method. No results were recommended for exclusion in this SDG.

**Johnson City NY AFP-59**

**Volatile Organic Compounds - Data Qualification Summary - SDG 3372683**

No Sample Data Qualified in this SDG

**Johnson City NY AFP-59**

**Volatile Organic Compounds - Laboratory Blank Data Qualification Summary - SDG 3372683**

No Sample Data Qualified in this SDG

**Johnson City NY AFP-59**

**Volatile Organic Compounds - Field Blank Data Qualification Summary - SDG 3372683**

No Sample Data Qualified in this SDG

**METHOD:** GC/MS Volatiles (EPA Method 524.2)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

|       | Validation Area                        |       | Comments    |
|-------|----------------------------------------|-------|-------------|
| I.    | Sample receipt/Technical holding times | A / A |             |
| II.   | GC/MS Instrument performance check     | N     |             |
| III.  | Initial calibration/ICV                | N/N   |             |
| IV.   | Continuing calibration                 | N     |             |
| V.    | Laboratory Blanks                      | A     |             |
| VI.   | Field blanks                           | ND    | TB = 4      |
| VII.  | Surrogate spikes                       | A     |             |
| VIII. | Matrix spike/Matrix spike duplicates   | N     |             |
| IX.   | Laboratory control samples             | A     | LCS         |
| X.    | Field duplicates                       | ND    | Dup = 1 + 2 |
| XI.   | Internal standards                     | N     |             |
| XII.  | Target analyte quantitation            | N     |             |
| XIII. | Target analyte identification          | N     |             |
| XIV.  | Overall assessment of data             | A     |             |

Note: A = Acceptable  
N = Not provided/applicable  
SW = See worksheet

ND = No compounds detected  
R = Rinsate  
FB = Field blank

D = Duplicate  
TB = Trip blank  
EB = Equipment blank

SB = Source blank  
OTHER:

|    | Client ID      | Lab ID     | Matrix | Date     |
|----|----------------|------------|--------|----------|
| 1  | JC-2           | 3372683001 | Water  | 08/05/24 |
| 2  | JC-2C          | 3372683002 | Water  | 08/05/24 |
| 3  | Post-Treatment | 3372683003 | Water  | 08/05/24 |
| 4  | Trip-Blank     | 3372683004 | Water  | 08/05/24 |
| 5  |                |            |        |          |
| 6  |                |            |        |          |
| 7  |                |            |        |          |
| 8  |                |            |        |          |
| 9  |                |            |        |          |
| 10 |                |            |        |          |

Notes:

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